THE PRINCIPLES

OF

MEDICAL PSYCHOLOGY

BEING THE

OUTLINES OF A COURSE OF LECTURES

BY

BARON ERNST VON FEUCHTERSLEBEN, M.D.

(VIENNA, 1845)

TRANSLATED FROM THE GERMAN

BY THE LATE

H. EVANS LLOYD, ESQ.

REVISED AND EDITED BY

B. G. BABINGTON, M.D. F.R.S.

ETC.

LONDON

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As a general rule, the Council of our Society is unwilling to present its members with works which have not received the stamp of public approbation. Newly published books, like newly discovered ores, may be rich or poor; but to test their value, they require that the stream of time should flow over them, which fails not to carry away what is light and worthless, and leave the sterling metal alone behind. I ventured to suggest a departure from our rule in the present instance on account of the great interest which medical psychology at this time excites; and in justification of that suggestion I may state, first, that such was the avidity with which our author's production was sought at Vienna, that the publisher found it necessary to recall all those copies which had been distributed to the trade, in order to supply his own customers, a fact which I learned on endeavouring in vain to procure a duplicate copy for myself; and, secondly, that the author is no new

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It may not be out of place if I here give so much of his history as is connected with his professional writings and official character. Baron Ernst von Feuchtersleben was born at Vienna in 1806. His father was a nobleman holding office under the Austrian government, and would easily have been able to give him the opportunity of pursuing a more brilliant career than medicine offers to its votaries, had not a love of independence, and a thirst for natural science, led him to make choice of our profession. He took his degree of Doctor of Physic at the University of Vienna, in 1833. In 1840 he was chosen Secretary to the Imperial and Royal Society of Physicians, then just formed in that metropolis, and not long after turned his attention to the revival of the study of psychiatric medicine, at that time much neglected in the Austrian dominions. To this end he commenced a course of lectures on the subject, and had the satisfaction of finding, not only that he himself was borne out in his views, by obtaining general support, but also that a new lunatic institution was forthwith planned and built in consequence of his exertions. Two years ago he had the honour of being elected Dean of the Faculty at Vienna, and in the Hamburgh Correspondent and other German newspapers of last month we find the following notice: "Baron von Feuchtersleben, Dean of the Medical Faculty at Vienna, who is well known as a profound literary character, has just received an autograph letter from his Majesty the Emperor of Austria, nominating him Vice-Director of Medical and Chirurgical studies at the University of that metropolis. This nomination has given the liveliest satisfaction, as being a marked proof of the high sense entertained by the Emperor of the eminent qualifications of Baron Feuchtersleben." The Prussian States Gazette pays our author a still higher compliment by observing that "this is an appointment which, as is

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Our Council having, after due deliberation, founded upon the usual examination and recommendation of a sub-committee, adopted my suggestion that this work should be presented to the Society, I offered to become responsible for the English version as its medical editor, with a proviso, which was readily acceded to, that I should be permitted to avail myself of the services of Mr. H. E. Lloyd in the translation. I was induced to make this proposal because I felt that I had neither leisure nor knowledge sufficient to undertake the task alone, and because I was well aware that, for a critical acquaintance with German literature, and with the niceties of the German language, I could find no one more deservedly esteemed than the gentleman whom I have named.[1] Both Mr. Lloyd and myself soon found that we had undertaken a more arduous task than we had anticipated; and it is my earnest hope, as it was that of my late able coadjutor, that the difficulties which we experienced may not be apparent in the result of our labours. If our united efforts have not always proved adequate to render our author easy of comprehension, this depends in part, at least, on the abstruse nature of the subject. I would therefore entreat the reader not to set out with a supposition that this book can be estimated by a cursory perusal. Nay, I shall not consider him fairly entitled to criticise it, until he shall have given the whole his deliberate attention, re-studying every section to which the author, in elucidation of his subject, has referred. I would further entreat him not to be discouraged or offended by the occasional occurrence of unusual words of clas-

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ERRATA.

Page 81, line 31, *for* 11 *read* 16.
92, 9 and 22, *for* cerebellum *read* pituitary gland.
140, 39, *insert* § 48.
144, 17, *omit* § 51.
223, 4, *for* normally *read* anomalously.
249, 35, *for* Linnich *read* Lippich.

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AUTHOR'S PREFACE.

INSTEAD of the allurements which usually abound in a Preface, I will only premise a few words for the purpose of pointing out the light in which this work should be viewed, in order that it may be properly understood.

The primary object contemplated by me has been to write a Compendium for a limited class of readers—Medical Students in a state of transition from theory to practice.

The chief aim of a compendium, in any branch of science, should be to furnish the pupil with its elements and fundamental principles as his guide; with the existing materials, critically selected, as his subject; and, with the whole duly confined within its proper limits, as matter for consideration.

The leading principles of such a compendium, enable the pupil to ascertain his exact position in the new territory; they are designed to qualify him to explore for himself, and to make further advances in knowledge, to conduct him on the first stages of the road he has to travel, merely noting the most important of those which are more remote, and to point out to him the distant goal. It is not the office of the preceptor to perform the journey in his stead; the elements are sketched out, but the details must be supplied by oral instruction, and by the reading, experience, and reflection of the pupil himself. These principles must be free from the impress of any particular school, and agreeable to the dictates of a sound and cultivated understanding; and they must conform, as closely as possible, to those on which other branches

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of the science (in this instance Medicine) are imparted to the pupil, in order that there may be no incongruity in his education. It is a hazardous attempt for a preceptor to develop his own individual views in a compendium. If he consider this incumbent upon him as a duty which he owes to science, he must at all events be most scrupulous and cautious in stating them. Generally speaking it is a sign of ignorance to allege, as a reproach to the author of such a work, that "he gives a compilation of existing opinions, and perhaps some of the arguments in their support, while he leaves the unfortunate pupil in uncertainty as to the views which he shall adopt." This uncertainty is in truth greatly to the advantage of the pupil, for it is a guarantee to him that further research is possible. Where all the arguments in a scientific investigation are exhausted, the preceptor should state the result; but where they are not, he should modestly and impartially represent to the pupil the progress that has hitherto been made, and not, by prematurely teaching hypotheses, increase and perpetuate error and confusion. Where, however, he feels himself called upon to decide a point, he should proceed according to the admirable advice of Goethe: "Let the inquirer consider himself as one summoned to sit upon a jury. His part is merely to see how far the indictment is borne out by the evidence." The preceptor therefore should judiciously compile what has been clearly established by the labours of his predecessors: he should use their own expressions, when there is no good reason for changing them; and never fail to point out what belongs to each as a matter of history. He should be original where he considers it necessary; and not promise to solve doubts, but explain them where it is requisite. If I might claim credit for anything in these lectures, it would be for the frequent repetition of the expression "This is undecided," and perhaps I might have introduced it with advantage still more frequently.

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The existing materials carefully sifted, should form the foundations of the doctrine which is to be propounded; and here much judgment is indispensable to discriminate between the essential and the accessory, the important and the insignificant, and to avoid oppressing and overwhelming the pupil by a superabundance of matter. The preceptor should give him as much information as possible in the smallest compass; *non multa, sed multum.* Problems must be laid before him as such. Truth and distinctness of object are here of primary importance; while here also, it is as prejudicial as it is ridiculous, to pretend to originality in a compendium. Nothing could be easier than to do so—it would only be to form a so-called new system out of old materials, and this merely by using new terms and a new arrangement—it would only be to draw on the imagination, that is (in science) to falsify. Originality in a compendium, is as absurd as a strict adherence to system is in a science founded on practical experience. Can we be original in teaching a youth geography? Why, yes, if we choose to multiply the fictions of travellers. Let the judicious preceptor be content with truth instead of novelty; let his merit consist in the selection and arrangement of his materials, and in the connexion and clearness of his style; let him not promise to fill up all the blanks of his science, but only to point them out; and his pupil will be more indebted to him than if he veiled them in hypothetical fables. How many entertaining stories might, for instance, be introduced here of the consentient, antagonist, organo-chemical, electro-magnetic, &c., actions of the nerves, and of the fanciful notions connected with each. Be it my humble merit not to have related them.

Lastly, the form and extent of the work must be determined by the comprehensiveness of its plan. All branches of human research and knowledge are naturally blended with each other. Whatever be the science under consideration, if we intend to give a complete view of it, we cannot avoid treating of what is

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ERRATA.

Page 81, line 31, *for* 11 *read* 16.
92, 9 and 22, *for* cerebellum *read* pituitary gland.
140, 39, *insert* § 48.
144, 17, *omit* § 51.
223, 4, *for* normally *read* anomalously.
249, 35, *for* Linnich *read* Lippich.

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AUTHOR'S PREFACE.

INSTEAD of the allurements which usually abound in a Preface, I will only premise a few words for the purpose of pointing out the light in which this work should be viewed, in order that it may be properly understood.

The primary object contemplated by me has been to write a Compendium for a limited class of readers—Medical Students in a state of transition from theory to practice.

The chief aim of a compendium, in any branch of science, should be to furnish the pupil with its elements and fundamental principles as his guide; with the existing materials, critically selected, as his subject; and, with the whole duly confined within its proper limits, as matter for consideration.

The leading principles of such a compendium, enable the pupil to ascertain his exact position in the new territory; they are designed to qualify him to explore for himself, and to make further advances in knowledge, to conduct him on the first stages of the road he has to travel, merely noting the most important of those which are more remote, and to point out to him the distant goal. It is not the office of the preceptor to perform the journey in his stead; the elements are sketched out, but the details must be supplied by oral instruction, and by the reading, experience, and reflection of the pupil himself. These principles must be free from the impress of any particular school, and agreeable to the dictates of a sound and cultivated understanding; and they must conform, as closely as possible, to those on which other branches

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of the science (in this instance Medicine) are imparted to the pupil, in order that there may be no incongruity in his education. It is a hazardous attempt for a preceptor to develop his own individual views in a compendium. If he consider this incumbent upon him as a duty which he owes to science, he must at all events be most scrupulous and cautious in stating them. Generally speaking it is a sign of ignorance to allege, as a reproach to the author of such a work, that "he gives a compilation of existing opinions, and perhaps some of the arguments in their support, while he leaves the unfortunate pupil in uncertainty as to the views which he shall adopt." This uncertainty is in truth greatly to the advantage of the pupil, for it is a guarantee to him that further research is possible. Where all the arguments in a scientific investigation are exhausted, the preceptor should state the result; but where they are not, he should modestly and impartially represent to the pupil the progress that has hitherto been made, and not, by prematurely teaching hypotheses, increase and perpetuate error and confusion. Where, however, he feels himself called upon to decide a point, he should proceed according to the admirable advice of Goethe: "Let the inquirer consider himself as one summoned to sit upon a jury. His part is merely to see how far the indictment is borne out by the evidence." The preceptor therefore should judiciously compile what has been clearly established by the labours of his predecessors: he should use their own expressions, when there is no good reason for changing them; and never fail to point out what belongs to each as a matter of history. He should be original where he considers it necessary; and not promise to solve doubts, but explain them where it is requisite. If I might claim credit for anything in these lectures, it would be for the frequent repetition of the expression "This is undecided," and perhaps I might have introduced it with advantage still more frequently.

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The existing materials carefully sifted, should form the foundations of the doctrine which is to be propounded; and here much judgment is indispensable to discriminate between the essential and the accessory, the important and the insignificant, and to avoid oppressing and overwhelming the pupil by a superabundance of matter. The preceptor should give him as much information as possible in the smallest compass; *non multa, sed multum.* Problems must be laid before him as such. Truth and distinctness of object are here of primary importance; while here also, it is as prejudicial as it is ridiculous, to pretend to originality in a compendium. Nothing could be easier than to do so—it would only be to form a so-called new system out of old materials, and this merely by using new terms and a new arrangement—it would only be to draw on the imagination, that is (in science) to falsify. Originality in a compendium, is as absurd as a strict adherence to system is in a science founded on practical experience. Can we be original in teaching a youth geography? Why, yes, if we choose to multiply the fictions of travellers. Let the judicious preceptor be content with truth instead of novelty; let his merit consist in the selection and arrangement of his materials, and in the connexion and clearness of his style; let him not promise to fill up all the blanks of his science, but only to point them out; and his pupil will be more indebted to him than if he veiled them in hypothetical fables. How many entertaining stories might, for instance, be introduced here of the consentient, antagonist, organo-chemical, electro-magnetic, &c., actions of the nerves, and of the fanciful notions connected with each. Be it my humble merit not to have related them.

Lastly, the form and extent of the work must be determined by the comprehensiveness of its plan. All branches of human research and knowledge are naturally blended with each other. Whatever be the science under consideration, if we intend to give a complete view of it, we cannot avoid treating of what is

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partially discussed in other departments. This is especially the case with a subject which has hitherto been scarcely treated independently, and the individual parts of which have been occasionally handled in examining other collateral branches. The question here is to give to every division that which appertains to it, and each must be so arranged as to afford a clear scientific view.

This is my idea of the light in which a compendium should be considered; whether I have applied these principles to my own essay, must, of course, be left to the judgment of the reader, and especially of one who has himself studied the same subject.

He will form a just estimate when he compares the plan with the performance, and bears in mind that what I have written was intended to form the basis of a course of lectures. The work is a mere skeleton, to which symmetry and vitality must be imparted by *viva voce* instruction; indeed the language throughout bears evident traces of this colloquial style, which I have not endeavoured to obliterate, and I therefore beg that the whole may be considered as an outline only of my lectures, which remains to be filled up by future labours.

The treatment of that branch of medicine, the principles of which are sketched in the following work, is alike important and difficult; and the endeavours of an individual can at most only fix the limits and the direction of the whole. The united labours of many must be added to fill up, to correct, to continue, and to complete what he has begun. Germany is the country of all others where, from a combination of the ample results of experience, with profound thought and indefatigable diligence, we may hope for the success of such united labours.

It has become the fashion whenever conversation turns on these subjects, or whenever a work on mental diseases is brought under consideration, to lament with affected humility that these studies are unfortunately too much neglected, and

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that we are consequently in comparative ignorance of them. These complaints have become so trite that this fashion, like every other, must go out, because it is antiquated and unsuitable to the present times. Sheer ignorance of many excellent works, which have appeared of late on this subject, or the inability duly to appreciate their value, can alone lead to the renewal of such complaints. Every science has its peculiar difficulties. It may be affirmed that this branch, considering its obscurity, has advanced with as much activity as others; nay, even during the short time that these sheets have been going through the press, much has arisen which demands further attention. Instead therefore of lamenting that we know so little, let us rather seek to profit by what others have gained, and use our best endeavours to add, however gradually, further acquisitions of our own.

F.

1844.

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INTRODUCTION.

BEFORE entering upon these lectures I feel it incumbent on me to explain their subject, object, and advantage, as well as the manner in which I intend to treat them.

The title, 'Medical Psychology,' has not been adopted without mature consideration. It expresses neither more nor less than it ought, and it shall be my business to develop all that this title comprehends, and to exclude, as foreign to our purpose, all that it does not comprise.

If we consider the science of medicine in general, and especially its present state, there is perhaps nothing so essential to its advancement as psychology, carefully adapted to medical purposes. The study of psychology in itself, both the rational and the empirical, forms a portion of the study of philosophy, in which no regard is, or can be had to the special requirements of the physician. In the study of medicine, the psychical element is almost obscured by the abundance and prominence of the somatic portion, and its claims to attention are more imperatively felt, when we come to the study of psychiatrics proper — the doctrine of the diseases of the mind,—to the treatment of which few young physicians turn their attention; and one of the principal objects of these lectures is to encourage and qualify them for this branch of their profession. It is owing to this preponderance of the somatic, that such an important, fundamental doctrine of medical study has been far less attended to than its importance demands. According to Hartmann, who was indisputably the most learned of medical psychologists, and whose memory it will ever be the pride of our University to cherish, the reason of this neglect, is the fact that philosophers by profession are no physicians, and on the other hand that physicians are seldom

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enough of philosophers to handle this subject successfully. Everything that can serve to effect this union of characters for medical purposes is a part of our object. The boundaries of our doctrine are, on the one side, philosophy,—in the stricter meaning of the word, metaphysics and ethics, which we only take for granted, but whose domain we dare not encroach upon any further than to mark its confines; and on the other side, practical medicine, for one branch of which it is our intention to prepare you. The whole of our subject, therefore, bears the same relation to psychiatrics proper, as what we call theoretical medicine does to clinical medicine, by which comparison the scope, and even the divisions of the subject to be illustrated in the sequel will be clearly understood.

Hence too the subject of these lectures explains itself, namely, to form psychological physicians. It is superfluous to demonstrate that such a course of instruction as is here contemplated is indispensable not only to the psychiatric practitioner in lunatic asylums, but to physicians in general, every one of whom ought to have a clear view of the relations of the body to the mind. Nay this is so obvious, that even the unprofessional public express their sense of this necessity by designating an able physician as a thinking, psychological physician.

The advantage of these studies is comprised in their object, but they are also the source of some secondary benefits. The study of medicine has been branded with the reproach that it favours a disposition to materialism, that is, to a view which denies the independent rights of the mind; and our age, especially with regard to medicine, has been taxed with favouring this tendency. The first of these reproaches is unjust. No one has more occasion than the physician, to recognise the power of mind and the perishable nature of matter; and if he do not attain to this recognition, the fault is not in the science, but in himself, in not having thoroughly studied it, for here, we may say as Bacon did of philosophy, "when superficially studied it excites doubt, when thoroughly explored it dispels it."

The second reproach regarding our age is perhaps not quite so ill-founded: the extraordinary advance of experimental science, has directed attention only to what is perceptible to

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the senses, and the errors of speculation, which have been but lately surmounted, have verified the good old proverb, "extremes meet." On this subject I am of opinion that in the domain of physiology the empirical mode of inquiry, whether by chemical reagents, by the microscope, or by physical aids, can never be prosecuted too zealously, because it has definite limits; whereas the too early determination of these limits by intellectual powers checks the possibility of further research. Be this as it may, the two above-mentioned reproaches can never be so honorably and triumphantly controverted, as by the diligent cultivation of the psychological branch of our science; and in fact, if we find that, in some instances, too exclusive a regard is paid to material changes in diseases, the more earnest attention, which is beginning again to be directed to psychiatrics, especially in Germany, proves, on the other hand, that the necessity of which we have spoken is felt and acknowledged. As, however, we have not to treat merely of mental disorders, separately considered, we may be permitted to show more in detail the importance of the doctrines which we have to expound to the general physician; though, as we cannot here anticipate, their value will not be completely understood till after they have been fully developed.

The idea of an organism in general consists in this, that it can only be understood teleologically, that is, with reference to an object to which all the parts are subservient; while the idea of the human organism in particular, can be duly comprehended only in relation to the higher destination of man and his spiritual nature. Even his material nature is not wholly material; his very organisation is calculated for his higher destination; and, it may be affirmed, that not only the philosopher but the naturalist, if he would duly understand the physical nature of man, must be strongly impressed with this truth, the evidence of which will appear in the course of the following observations. What is meant by *understanding* but translating into ideas? and the idea belongs to the mind. This notion is applicable to theory, with reference to refined physiology. Therapeutics make its utility much more evident with reference to practice. Body and mind are most intimately blended in every part of the structure of the living individual; and as the disorders of the mind are often removed by pharmaceutical remedies, so,

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on the other hand, the diseases of the body as frequently require the aid of the psychological physician. In disorders of the nerves especially, the physician can often effect nothing, if he do not in the first place direct his treatment to the mind. The numerous varying symptoms which, under the name of spasms, act so conspicuous a part in pathology, and unhappily a still more conspicuous part in real life, are often removed most successfully and effectually by judiciously directing, controlling, and taking advantage of the state of the mind; and how few disorders are there of any organic system in which the nerves do not at least symptomatically suffer. We see, therefore, how extensive is the application of psychical methods of cure throughout the whole domain of the healing art. Numerous examples in proof of what has been advanced may be found in the writings of psychological physicians, and especially in the admirable work of Marcus Herz, on 'Vertigo' (1791, pp. 6-22); but our present business is only to point out the use of psychological medicine in general, and to confirm the words of Schiller.[1] "A physician whose horizon is bounded by an historical knowledge of the human machine, and who can only distinguish terminologically and locally, the coarser wheels of this piece of intellectual clockwork, may perhaps be idolised by the mob; but he will never raise the Hippocratic art above the narrow sphere of a mere bread-earning craft."

It now only remains for me to state more in detail, the plan and the division which I mean to adopt in these lectures, and the spirit in which I hope to deliver them. After I shall have said something more for the purpose of exactly defining the subject, and the limits of our task, as well as its relation to other branches of learning, and shall have touched upon its difficulties, and on the qualifications which are requisite in a psychological physician, such as preliminary education and methodical arrangement, I shall prefix a concise history of psychological medicine from its first traces to its present state; so that when we come to our proper subject, we may at once find ourselves in a position to understand it, and not build without a foundation; for it may be said emphatically of this department, which, considered

[1] See his inaugural dissertation on the Connexion of the Animal Nature of Man with the Intellectual. 1780.

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as a whole, is altogether new, that the history of a science is the science itself.

The work, according to the above statement of its contents, separates naturally into three divisions: The first, namely, the physiology of the mind, contains a phenomenology, genetically developed, of all the healthy states of the mind, that is, to a certain extent, a practical psychology treated with reference to medicine. The second part, namely, the pathology of the mind, is again divided into the pathogeny, which endeavours to trace the causality existing between the diseases of the mind and the body, and the nosography, which aims at exhibiting the phenomena, the natural history, and the so-called system of psychoses. The third part, namely, the therapeutics (the theory of psychological medicine), develops the means by which mental diseases may be prevented—the dietetics of the mind, and those means by which they are removed, in which the institutions for the insane will be especially considered. By way of appendix, the relation of this subject to regulations for the public health, and to forensic medicine, as the most important objects of all medical efforts, is briefly treated, and thus, I believe, that I shall have done all that is in my power to complete the whole, and to assign to each part its proper place.

Finally, with respect to the spirit and the method pursued in these lectures, I beg your attention to the following points: we do not aim at amusement, but at complete and, as far as possible, solid instruction. Far from metaphysical reasoning and half poetical tittle-tattle (a side path which, in these regions of research, is particularly attractive to many, and these the most highly-gifted, labourers), we must attach ourselves to approved facts rather than to hypotheses, to observation, rather than to reflection, and never forget that we have to satisfy, not the requirements of the philosopher, but those of the practical physician. If we would derive true and real profit from our inquiries, we must renounce the vain pride of having exhausted the whole subject, and where these inquiries in their present state afford no result, we are not to invent any, but honestly to acknowledge the blanks which exist in our knowledge, and to point out those barren spots of the domain which are to be rendered productive by future labourers. We must pay less regard to the uncommon and wonderful, than

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to that which is of daily and common occurrence, (because the latter affords more abundant and safer materials for induction than the former, because laws may be more easily deduced from it, and because the key to what appears to be wonderful is often to be found in what is obvious,) a procedure which, to the great detriment of true knowledge, has been too often overlooked in medicine as well as in other sciences. Excursions for pleasure, rather than voyages of discovery, have been made in the domain of medical psychology, and a department of our science, which is as real and practically important as any other, has been treated as an amusement, and as if it had no connexion with the rest. We cannot refrain on this occasion from warning you against an error so dangerous in all serious researches, and especially in ours, I mean that *dilettante* spirit, unhappily so common, which loves to prate without an object, to confuse without improving, and to flatter with an appearance of knowledge. In what department has it more ample opportunity to practise its pernicious arts than here, where so much is still unexplored, so much inscrutable, and where the endless variety of intellectual energies so easily tempts us to pass the boundary of ascertained truth? Yet there are some meritorious inquirers who have been eminently successful in this branch, and it is our present business to appropriate to ourselves the fruits of their researches and meditations. Let us then set about it with earnestness and perseverance, deeply impressed with a sense of its great importance.

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MEDICAL PSYCHOLOGY.

CHAPTER I.

PRELIMINARY OBSERVATIONS.

Though I have already stated in the Introduction the subject and the limits of our investigations in general, and can only support them by proofs as we proceed in the inquiry, it is yet necessary to be as precise as possible at its commencement. The success of our researches depends on the clearness of perception with which we begin them, the solidity of the building on the soundness of the foundation. In this respect we cannot proceed with too much caution, and I request your especial attention, because I must enter at the outset into some philosophical discussions, that I may be able in the sequel to pursue more certainly and uninterruptedly the thread of my observations. Every science is in itself a complete whole, and in giving instructions in it always presents the difficulty that what is to be proved must first be assumed for the understanding of the proofs, and can be only half developed because the general and the particular must be reciprocally comprehended and explained by each other. Thus the pupil must bring with him to the sick bed the general idea of fever, in order to understand fever as it actually occurs, and, *vice versâ*, it is only the careful abstract consideration of a fever as it actually occurs, which furnishes the general idea of fever. In our field of inquiry, therefore, we will endeavour to obviate this difficulty by premising what is general, and recapitulating it when we descend to particulars.

If we would treat of a science systematically and profitably, it is above all things necessary duly to isolate it. Nothing

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causes so much confusion and useless trouble as attempting to do more than is needful, and this, in our department, is the chief source of the errors of even the most ingenious observers, and consequently of the mass of uncertainty with which it is not unjustly reproached. Fearing to be blamed for partiality, they desired to have the credit of comprehensiveness in principle, and thus overstepped the limits here laid down, which is worse than falling short of them. They drew metaphysics, ethics, and theology into the circle of their contemplations, and thus diverted them from their legitimate and proper object. That blame, however, which originates in ignorance should be despised, while that partiality which arises from a rigorous distinction of ideas has always produced the greatest and most beneficial results to the human race.

When we speak of the physiology, pathology, and therapeutics of mental life, we would observe at the outset that we are not here treating of the mind except at most in a figurative sense, for this would be what is called metaphysics, a distinction which is clearly indicated by the etymology. But if any one should infer from this that, like the mystics of the ancient schools, and some natural philosophers of the modern, we here assume three distinct principles, the triad, spirit, soul, and body, we must protest against this inference, though this view is founded on a sense of a truth which is here concealed (the presentiment of the problem). What constitutes the corporeal world is sufficiently known to us, and though we are not acquainted with all its laws,—which it is the business of physics to know,—the idea of them is clear, and we can determine their limits. This is not the case with the mind. That its laws are beyond those limits is a bare negation, and gives us no positive information respecting them. We only know that physical observation here terminates, and that another domain (*μετα τα φυσικὰ*), metaphysics, begins. The word spirit (Geist) is one of those words which we have been accustomed to hear from infancy, and which are always and everywhere present where man has attained to a consciousness of himself,—which every one pronounces, repeats, and understands without further inquiry, and does not call in question, because he does not see them called in question by others. It is nevertheless one of those ideas which Kant calls "surreptitious," and of which he

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says: "that they sometimes deceive, and sometimes may be true, because obscure conclusions are not always erroneous." It would therefore be our best way, in order to come to a right consideration of the word "spirit," to inquire into its source, and to go back to the point at which it may have crept in.

If we make this historical retrospection attentively, and without prejudice, we shall find that it has certainly not come in the course of physical research, but in a precisely contrary direction. People did not begin by examining anatomically the nature of man, and it was not until a late period that they were thus ultimately led by the functions of the brain to the notion of a spirit (Geist), but the facts of consciousness as well as those higher manifestations of the mind, its relations to the Good, the True, and the Beautiful, the law of duty, the belief in something more exalted than that which is earthly, existed, and that in their fairest form, long before the thought was conceived of seeking the source of such wonderful effects in the organisation of the human frame. Two worlds, the one intellectual, the other sensual, were equally given to us from the beginning, and all attempts to deduce them from one principle (except the Deity) have failed. This duality is the boundary line of humanity; to have drawn it is the triumph of philosophy; to efface it, if that were possible, would be its destruction. All we can say is, that an intellectual world reveals itself to us, by the law of the true, the good, and the beautiful, and that a physical world manifests itself by those laws which act in space and time. What lies beyond these laws, as it were the substance of both worlds, we know not; we only call that of the physical world, matter or body in the abstract, that of the super-physical, we call spirit (Geist), and must never forget that hereby we have only pronounced an abstraction.

But now we ask further, wherein does this higher law manifest itself to us, as the physical law does in the material world? Nowhere but in man,[1] and in him only through the

[1] "Nature never becomes spirit (Geist), but spirit and nature are two divine spheres, which, from the beginning of all things, presuppose each other, which reflect each other, but only in man combine as factors of a new and third element, which is man himself." Had this principle pervaded the work in which it is laid down (Klencke, 'System of Organic Psychology,' page 216), many analogies and their consequences would have been brought forward less boldly.

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medium of his cultivated and refined reason. What we feel, what we remember, nay, the very inmost sensations of our individual existence, may be referred to the world which surrounds us. Thought alone, exalted to the highest degree, shows us another world. We are ourselves therefore not spirit, but we watch, as it were, what we call by that name, and which manifests itself to us only by its laws. (Est Deus in nobis.) Man, therefore, should be the link which connects the two worlds; and this is the problem, this is the enigma, which never can be solved: for it is wholly inconceivable how two essentially different principles, each of which obeys different laws, can be combined in one being; for though there is one law for both, that of self-preservation, yet the operations of this law practically contradict each other, in the two spheres. The self-preservation of the spirit may interfere with that of the body. Duty may demand the sacrifice of life, while of the reverse, daily experience affords us too many examples; but, apart from this, it is inconceivable how a causality can exist between the two, how the ideal can be felt, how the impression on the nerves can be conceived. But the inconceivable ceases to be inconceivable for the purposes of science so soon as we conceive why it is inconceivable, and that is precisely the case here. We cannot conceive the *ego* because it is ourselves, any more than a hand can take hold of itself. Happily we need no more, since the law of the mind suffices us to think and to will, and that of the body to direct its action; the real thinker is content with having founded and marked the limits of thought, which none but the never-satisfied visionary oversteps—"Truth has its limits, Absurdity has none."

It was conceivable enough that man's ever restless spirit of inquiry would not be so easily satisfied, but its very efforts afforded the most convincing proofs that those efforts were vain. The history of psychology gives more precise information on the subject. We shall here notice only that which is most essential.[1] Spinosa declares mind and body to be

[1] Materialism, that is, the view which will not allow the separation of the intellectual principle from the corporeal, but looks upon the former as a higher power of the latter, not only explains nothing, but makes the enigma still more obscure. In duality we at least conceive the existence of each principle in itself, though not the

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modifications of one and the same substance; by which mode of representation (though there may be no better, for that which cannot be represented) the knot is cut, but not untied. Neither Fichte's attempt to treat the body as a phenomenon only, of the mind, which it certainly is to us, but by which we do not advance one step towards an explanation,—nor Schelling's ingenious view, which so unites the two worlds, that each ceases to exist for itself,—nor Hegel's acuteness, which has most profoundly analysed, and described consciousness, but has not deduced its origin, has solved the enigma. Kant alone has clearly defined this enigma, and declared the impossibility of solving it, and what have all his followers done more, than overstep those limits, for the discovery of which, mankind owe him an eternal debt of gratitude? A false conception of the continual progress of the human mind has misled them; but there is a definite truth in perception, and a limit to this perception as respects man, and this limit has been fixed by a wise Providence, because where he ceases to think he should begin to act, which is, in fact, the purpose of his being. I have always been struck with Kant's remark on the subject of similar investigations: "Let not him who is in possession of superior knowledge, refuse to impart instruction to the inquirer who is desirous to receive information, and who, in the prosecution of his studies, fancies that mountains rise before him, while the initiated sees a plain path, in which he wanders, or fancies he may wander, securely and leisurely."

Such was the language of the man, who, in profundity and acuteness, far excelled all of us, who have mounted upon his shoulders. Excuse this digression, to which I have been led by the memory of one, who, though often misunderstood, was the greatest of all German thinkers. To return to my subject:

We have thus represented spirit and matter as distinct from each other; we see hence that neither matter, the investigation of which appertains to the domain of physics, nor spirit, the laws of which are the province of ethics and logic, comes before

mode of their connexion, which, however, is proved by the fact; and besides the object of our existence, is thereby established and explained. In materialism we do not conceive how matter can think, and our whole existence loses all sense and meaning. Materialism annihilates itself when it subtilises so far as to exalt body into mind, and this is the only way to make it think and will.

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the tribunal of our consideration. But in man spirit is united, in a manner inconceivable by us, to matter. In this state of union, through which inert matter becomes an animated body, we call it mind, and the denominations above chosen are justified without our being obliged to recognise three different principles. Now it is this mind that constitutes the proper subject of our inquiries—spirit in its relations to corporeal life, organism in its relations to psychical life. Thus I think I have sufficiently indicated the nature of our subject. So much and no more, by way of lemmas, I found it necessary at the outset to borrow from philosophy properly so called, in order to lay a foundation for the understanding of what will follow. In like manner, I must, on the material side of the question, presuppose a knowledge of anatomy and physiology, especially that of the brain and nerves.

Although the bounds of medical psychology are thus duly fixed, it is nevertheless mixed up with every branch of human knowledge, so that some sciences stand to it in the relation of foundations; some of sources; some of auxiliaries; and some again of consequences; and lastly, others, in common with all the ramifications of human action and knowledge, are in further reciprocal relations to it and to each other.

With regard to all these relations, the rule is to avoid partiality on the one hand, and confusion on the other, and everywhere to have regard to the whole, while we adhere to the individual parts. The foundations of medical psychology, as we have already shown, are philosophy and physiology, which treat, the former of the spirit, the latter of the organism, while the subject of medical psychology is the relation of each to the other. A partial preponderance of the philosophical basis leads to a false spiritualism, and a partial preponderance of the physiological basis, to an equally erroneous materialism, of both of which the history of our subject will furnish examples.

As sources of medical psychology, we may mention history and ethnography, and, above all, biography,[1] especially autobiographies, which, however, are of value only to the competent judge, because we must see in them not so much what they

[1] The important biographies of insane patients by Ideler, published at Berlin in 1841 by Schroeder, deserve to be especially noticed here.

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relate as what, by their manner of relation, is undesignedly betrayed;[1] and further, what is called a practical knowledge of mankind, such as we find displayed in the writings of Montaigne, La Bruyère, and similar writers, and the observation of man in general in a state of health and of disease.

The study of animal psychology (zoo-psychology, comparative psychology) may, it is justly hoped, throw much light on human psychology, especially with regard to instinctive impulses, but in using it we must never forget that man, even with respect to his organism, is not to be understood without reference to his higher destination, and that while the teleology of animal organism has reference to itself; that of man refers to something above himself. The inferior animals, strictly speaking, have not even that *analogon rationis*, which is commonly assigned to them, and which, in fact, is only another expression for thought or reason in its lower state of development. If we more closely examine those actions of animals which have given occasion to this expression, we shall find that in them the body always acts upon the mind by means of impulses, and that these impulses are ruled by instinct and, as it were, by an innate law of nature which is manifested in them, as are other laws of nature, by the phenomena to which they give rise.[2] Since, therefore, the higher spontaneous power of man's mind acts downwards on his body, and descends even to the most material functions, we must be very cautious in the use of this comparative psychology, and must consult it only when there appears in man, whether in a physiological or pathological state, something of the nature of instinct.

Among the auxiliaries to our study it is usual, and not without reason, to class poetry, inasmuch as it represents the human character, exaggerated, indeed, in degree, yet in kind true to nature. We must, however, take care not to make too much use of this aid, lest we run into the danger of substituting poetry for research, and of taking quotations from poets for axioms, a proceeding of which history, even that of the latest era, furnishes numerous examples. A more advisable auxiliary is logic, which teaches us duly to arrange a given

[1] Jeitteles, in the Med. Jahrb., n. f., 22 bd., s. 180.

[2] See Graevell, Mensch. p. 227.

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subject and carefully to criticise it, and guards us against needless digressions. That all the sciences which are fundamentally auxiliary to philosophy and physiology, such as mathematics, physics, anatomy, and anthropo-chemistry, are likewise so many aids to the understanding of our subject, is of course self-evident.

Medical psychology does not indeed form the foundation, yet it furnishes important doctrines, which are applicable to several sciences; for instance, to education, of which one of its sections, mental education makes a part,—to special pathology and therapeutics, to which the subject of mental diseases belongs,—and to forensic medicine. Its other relations are more general and more remote, and will be self-evident in their proper places.

I. Even a superficial glance shows the great and peculiar difficulties with which the subject of our study is beset. On closer inspection they seem to multiply, and we only acquire a fundamental knowledge of it, in the first instance, by an accurate investigation of what passes within ourselves. But how few men are capable of taking such a view of themselves as is neither prejudiced nor hypochondriacally exaggerated, nor superficial? We do not observe the springs of our psychical functions when they are in active operation, but only when they are quiescent and cannot be investigated. Self-love, habit, the almost insensible influences of the external world, and of our social relations, render it extremely difficult to obey the precepts of the Delphic Oracle, "γνωθι σεαυτον."

II. The observations we make on others are partly rendered uncertain by the same causes, and partly impeded by preconceived opinions.

III. The physiology of the nervous system, with the organic function of which we are compelled to associate, in the most immediate connexion, the psychical function, does not unfortunately, in its present state, afford us the requisite degree of certainty, while on its part, it is not duly supported by anthropo-chemistry, and, if I may use the expression, by anthropo-physics; for we shall see in the sequel, that the changes of somatic life, which accompany the psychical processes, affect not only the structure of organs, but the organic processes going on in them.

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IV. With respect to the more practical part of our science, which is chiefly derived from the observance of persons afflicted with mental diseases, we meet with new obstacles. Most lunatics are distinguished by the greatest cunning and dissimulation; the results of observation on them in public establishments are unsatisfactory, because the attention is divided among so many individuals; the representations of others cannot always be depended on; and, finally, it is precisely this obscure enigmatical state of the mind which awaits its solution from our science.

V. Lastly the application of the psychical mode of cure is particularly difficult. Supposing us, notwithstanding the above-mentioned obstacles, to have obtained a thorough insight into the character, the peculiarities, and the actual state of a lunatic patient, we are nevertheless still in want of a comparative standard by which we might accurately determine the degree of every affection which we intend to employ as a remedy, so that this mode of treatment becomes very uncertain, and, from the delicate operation of such mental influences, we may do as much harm, as we mean to do good. We know that one or two grains of ipecacuanha will allay spasms, and that from 10 to 30 grains will excite them (namely vomiting); but we do not know how many grains of pleasure are necessary for a melancholy patient, that he may be cheered and not made still more sullen. In no department of medicine is it more necessary to individualise; while in none is this left so entirely to the tact of the physician as in the treatment of mental diseases.

These difficulties sufficiently indicate the endowments which are especially required in a good psychological physician. In enumerating the qualifications necessary for the practice of any art or science, the mistake is generally committed of naming all those that might be desirable. Now, it is true that it is most beneficial to every art, that such men should devote themselves to it as are eminent beyond the rest of mankind for perfections of all sorts; but, it is evident that by such a requirement, the great majority of well-meaning men who might be inclined to devote themselves to those pursuits, for which, without being such beau-ideals of perfection, they felt themselves most qualified, would be left in uncertainty as to the choice of an employment. That we may not fall into this error, we will

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here mention only those qualifications which are peculiarly requisite in the psychological physician.

I. To acquire a knowledge of this most delicate and recondite branch of medical science, he must possess, together with that quick apprehension and correct judgment, which are equally indispensable in all the other branches, a refined perspicacity and a philosophically cultivated understanding; for, as we have already intimated, man is not to be understood, even organically, without reference to his higher destination.

II. The application of this knowledge to the psychological patient, requires a very rare and peculiar combination of natural qualities, namely, as much sympathy on the one hand, as firmness, capable of assuming the expression of inflexible sternness, on the other. He who is not able to act this twofold part, must not be a psychological physician, lest his patients, nay, he himself, should become victims to a mistaken choice of his profession. Besides this, his circumstances must be such as to allow him to devote himself more or less exclusively to this branch of medicine, that is, to give it the greater portion of his time, which is more necessary in this than in other branches, because the treatment, in most instances, demands a second education. He must be able, by his personal demeanour, to obtain influence over the minds of other men, which, though in fact an essential part of the psychical mode of cure, is a gift that Nature often refuses to the most distinguished men, and yet without which, mental diseases, however thoroughly understood, cannot be successfully treated.

Lastly. He ought to possess a high moral character, which, indeed, no person should be without in any branch of science, but which is here especially needed. It will appear in the sequel of these lectures, what he who is versed in this branch has daily opportunities of observing, how indispensable are the requirements (and particularly the last) which we have demanded of those who desire to qualify themselves as psychological physicians. Let every one, therefore, sincerely and carefully examine his conscience, his powers, and his wishes, before he devotes himself to this most difficult of all the departments of medicine; for more confusion has been produced in the world by careless and incomplete efforts than by total inertness.

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CHAPTER II.

HISTORY.

"ALL professional men," says a profound writer,[1] "labour under a great disadvantage in not being allowed to be ignorant of what is useless.... Every one fancies that he is bound to transmit what is believed to have been known."—If we more closely examine this complaint, which is made with reference to the history of the sciences (and this in truth is but too often a history of errors), we find a great difference in different departments. In some of them a knowledge of everything that has been previously supposed or conjectured respecting their objects, may be well dispensed with; such are the sciences which are purely empirical. If the facts necessary for the attainment of their practical objects be once ascertained, the erroneous opinions previously held may, with advantage to progressive improvement, be consigned to oblivion. In other departments, which themselves consist chiefly of opinions, the knowledge and examination of previous opinions are not only desirable, but indispensable to a thorough study of them. Such are the philosophical doctrines, the progress of which is marked by a regular arrangement, and represents epochs of the development of the human mind. To these may be applied the maxim: "The history of a science is properly the science itself." With respect to medical psychology it belongs, as I have already shown, to both spheres, since it is a compound of both elements. That part of it which is philosophical, contains an abstract of the state of philosophy in every age, while that which is empirical has by no means attained such precision and clearness as to render a knowledge of previous opinions superfluous, on the contrary, even at this mo-

[1] Goethe, 50, pp. 129 and 153.

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ment, the opinions of some are diametrically opposed to those of others.

I am therefore obliged to treat the history of our branch of the profession, though this is not the chief object of my work, in a concise outline it is true, yet with more earnestness and depth of research than is usual at the commencement of a course of lectures; for by this sketch we at once obtain a preliminary delineation, or profile, if I may so call it, of the whole science. In order to give you a view of this ample and interesting subject, without having recourse to hypothetical fancies and analogies, I shall arrange it in the following manner: I shall divide the whole history, up to the present day, conformably with the usual arrangement (for there is absolutely no internal ground for division in the organic members of a chain of transitions) into—I, The primeval and pre-historical epoch, to the development of the sciences in Greece; II, The ancient epoch, by which I understand the state of the sciences among the Greeks and the Romans; III, The medieval epoch, which falls under two sections—A, the scholastic, which accompanies the decline of ancient art and science, and B, the revival, the dawn of a new era; and IV, The new epoch, to which we are compelled to add the most recent, in order to maintain a due proportion in our materials, and to comprehend the present subject of the science as a whole. In each of these epochs we have to premise—1st, the general character of the age, so far as it is necessary to understand our subject; 2dly, the history of the health and diseases of the age, sketched with a psychical view; 3dly, the history of the science, i. e. of the theory of our doctrine; 4thly, that of the art, i. e. of its exercise, both given as succinctly and simply as possible; and 5thly, a critical recapitulation with respect to each epoch. I must here premise that an exposition of the manner in which nosologists, who do not treat of psychical conditions exclusively, introduced them into their systems, and again systematised these conditions, has appeared to me entirely useless. I shall speak more particularly on this subject when treating of the classification of mental diseases. Considering further, however, that every division is arbitrary so long as the basis of that division is so far from being clearly ascertained, as is here the case, I shall deal only with

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generalities, referring for particulars to Friedereich's[1] works on this subject. Almost all the divisions are too full, that is, they lay down far too many species and varieties, by making the symptoms or objects of Insanity especial reasons for division. These few preliminary remarks may suffice.

I. 1. The most ancient period furnishes us with a phenomenon which is in every respect remarkable; for while, on the one hand, his rude sensual wants led man, prior to all theorising, to practical efforts, an innate, religious poetical sense led him, on the other, to those presentiments, which are, as it were, preparatory symbols, to all subsequent knowledge.

2. The state of health during that period we may imagine to have been perfect, and that it gradually deteriorated, by the conflict of social circumstances, to a state of relative health, till diseases, which began with wounds, spread more widely, and became more intense. Psychical sufferings must have been as rare in that infant state of society, as they are in the infancy of every individual man. Yet solitary examples are not wanting. Saul's disorder[2] is considered as the representation of a psychical malady, consisting of melancholy combined with rage. Nebuchadnezzar's condition[3] bore a resemblance to lycanthropy, nay, even to pellagra. Many of the narrations recorded in the Old Testament, and some of the δαιμονίζομενοι in the New, are ascribed to madness. Greek mythology, in the stories of Hercules, Ajax, Orestes, Athamas, and Alcmæon, touches on these phenomena and on lycanthropy, and the madness of the daughters of Prœtus and the uterine disease of the Scythians are even quoted as examples of epidemical psychopathies.[4]

3. It is evident that during this period there was nothing like science or theory, the idea of which originated with the Greeks, among whom the existence of self-consciousness was first conceived by Aristotle.

[1] Litteratur-Geschichte der Pathologie und Therapie der Psych. Krankheiten; Würzburg, 1830. Systematische Litteratur der Aerztlichen Psychologie; Berlin, 1833.

[2] 1 Sam. xvi, 23. [3] Daniel iv, 13-33.

[4] Frieder. Litt. Gesch. 17, &c. &c. With respect to the disease of the Scythians, I agree with Hippocrates in opposition to the moderns, and find in his opinion, which is that of phrenology with regard to the cerebellum, his usual perspicuity,

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The childlike simplicity of that first age ascribed every important phenomenon to the immediate operation of higher powers, which it poetically personified as living Gods, and regarded the revelations of spiritual existence as miracles.

4. But the claims of practical necessity were acknowledged prior to all theory. Fathers of families first performed the office of physician among their own circle, in a rude empirical manner; and in the first dawning of the above-mentioned religious notions, this office was most naturally blended with that of the priest, in whose hands it remained, till the Greek philosophers took it on themselves as belonging to their province. Some cures of psychical affections are mentioned by the medical historians of this period; nay, it is interesting that the first cures which they record were psychical. The cure of Saul by music, and that of the Prœtides, which was effected by Melampos, partly by psychical remedies (?), partly, as Sprengel,[1] relying on Herodotus, relates, by hellebore (veratrum album), may be quoted here as examples.

5. Where there is no science, there can be no result, and no criticism. We pass on, therefore, to the second period.

II. 1. In the lovely and salubrious climate of Greece, under circumstances which do not concur a second time, there arose, in the purest sense of the expression, a golden age, not only for the development of the arts and sciences, but likewise for humanity. That gradual transition from an uncorrupted state of nature to a state of free, great, and universal education, rendered possible the existence of a moment when, without over-refinement and without coarseness, the highest intellectual culture was in one nation simultaneously combined with original simplicity and purity—a moment which stands unparalleled in the history of the world, a combination which, as it cannot be attained by design, gave birth to works such as no subsequent age has ever been able to equal. But it was only a moment; as the purely beautiful style in art is followed by the voluptuous, so was culture succeeded by refinement, and simplicity by luxury, and, when the Romans, a people naturally alien from the Muses, contrary to their innate dis-

[1] Vol. i, p. 118.

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position, imitated the refinement of the conquered Greeks, and, as is usual with all imitations, exaggerated what they copied, it degenerated into that effeminate luxury, which was not the least among the causes that led to the downfall of the ancient world.

2. It is susceptible of proof that, with the increase of refinement, the occurrence of nervous and mental disorders increased in a proportion which has been maintained to the present day. So long as Greek heroism continued to echo the natural simplicity of the Homeric age, so long as the unsophisticated manners of the old Romans subsisted, there was no occasion to notice the occurrence of such diseases. With the advance of civilization in Hellas they appeared now and then, though in truth but rarely. But so soon as civilization degenerated into voluptuousness, they increased in number and intensity; and, when at Rome, unbridled debauchery and insane luxury surpassed even the pomp of Athens, from which the Graces had not wholly departed, then did those psychical anomalies increase, and such in particular as are frequently mentioned in Galen's work on Diseases of the Mind. The monomania for suicide of the Milesian maidens,[1] and the feverish psychical excitement of the inhabitants of Abdera, after witnessing the performance of the Andromache of Euripides, are adduced as being in some degree instances of an epidemic psychopathy.

3. Here science commences. The human power of thought developed itself in all directions, and, diverging in numberless radii, filled that circle assigned to it by Providence, beyond which it cannot pass.

An inquirer into the history of philosophy who is well acquainted with its labyrinthine ramifications, must be struck by the remarkable fact, that all modes of thought, which have subsequently appeared, and have been repeated even in the most modern times, so far as they rest on specific fundamental differences, may be recognised as anticipated in the systems of the Greek philosophers. It is the province of the history of philosophy to point this out in detail, and to show that, however the forms may change, the human mind was always obliged to entertain essentially the same thoughts, and the human heart to cherish the same feelings. Here we have only to point out the most important

[1] Plutarch de virtut. mulierum.

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views, those which were most influential in determining men's notions of the relation of the soul to the body; as such, we have, in Greece, the philosophical systems of Plato and Aristotle, and, in Rome, those of the Stoics and of the Epicureans. In these four types, the entire philosophy of Antiquity is represented, and if we pursue them to their whole depth and extent, we may with truth affirm that they symbolise every direction of human thought which has assumed a complete and consistent character. If we would express their general scope in a few words, we might perhaps say, that Plato represents the freedom of rational ideality; Aristotle the legality of intelligible realism; Zeno the intellectual view of the world; Epicurus the material view; tendencies which are repeated at all times and in all places. Since I am not here giving a history of philosophy, I must content myself with these few hints, which I intend only as a basis for the observations which I shall now proceed to make on the relations of those philosophical systems to our subject.

In representing the merits of Plato,[1] it is usual to repeat the notion frequently expressed by him of two souls; the more noble of which is inclosed in the spherical form of the head, while the earthly is subdivided into two—its better part, the Will, being seated in the breast, and its inferior part, the Appetites, in the organs of the abdomen. Hence we may make out the relations which psychical life bears to the combined functions of the brain, of the circulation, and of the abdominal organs, and may draw particular inferences respecting the morbid alterations of these relations, as Plato has in fact done in several places.[2] When a large and rather cold body is combined with weak intellectual power, or, when excessive mental exertions weaken the head, the source of disease arises in that organ. When excessive pleasure, or melancholy, or violent passions agitate the breast, the disease arises there. It springs from the lowest region, when sexual desire, or an accumulation of diseased matter in the abdomen, impedes the free action of the mind. Madness (*μανία*), or imbecility (*ἀμαθία*) ensues. A patient thus afflicted must not be looked upon as wicked, for he is only ill. The health of the body,

[1] Born, 429 B. C., ob. 348 B. C.

[2] Phaedr. Tim.

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as well as of the mind, consists in this, that neither be excited without the other; that they reciprocally support each other, and remain in a state of health by preserving the equilibrium. Let him, therefore, who devotes himself to mathematics or other profound studies, which demand the whole energy of the mind, take care duly to strengthen the body by gymnastics or other exercise, and let him who is called to use much bodily exercise, not forget to strengthen the mind by music and philosophy.

All this is excellent, but there is something quite peculiar in Plato's theoretical dogmas. We must never forget that his works are poetical, and that he is enabled, by adopting the style of free dialogue, to set forth with playful pointedness, and even with irony, the most various and opposite notions, leaving the reader, whom he merely stimulates to think for himself, to make his own conclusions. The same form, which is based upon the free ideality of the Platonic mind, necessitates his poetical figurative language, from which we gather a hint that there is much which we are to understand, as being, not a formal declaration, but rather stated in the way of comparison or symbol. The want of attention to this circumstance has given occasion to great errors in the explanation of the Platonic philosophy. I think it advisable in this place to observe that whatever is known to us as appertaining to the opinions of that age, furnishes no precise information respecting Plato's views of them, for he has only made use of them as of any other material; but whatever is brought forward by him as new, must be examined with reference to his whole train of thought, and, when it agrees with this, deserves the greatest attention. In this sense there is a passage in Philebus which appears to me especially worthy of observation. It is the key to his psychology which has justly been designated as teleological, and which, as it is quite in accordance with the ideality of his ethical mode of thinking, authorises me to consider him as having in fact anticipated Stahl. The passage is as follows: "The hungry man, as such, i. e. in so far as he longs to appease his appetite, feels in a state opposite to that in which he really is; the hungry man can only feel pain—only the present disorder of his body, but not what will relieve it, no desire for food, unless previous experience has taught him that

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the pain will be removed by food. But appetite scents, seeks, and finds its object previous to all experience; it perceives what is positively not found in the subject of its perception. Thus, desire sees further than sensation reaches; it perceives what the opposite sensation can produce, to save an existence which is threatened with destruction. This *internal physician*, this counsellor and aid, is the power itself which, in every individual being, binds and holds together, in a suitable manner, the finite and the infinite—THE SOUL. It cannot have derived the knowledge which it evinces from its body, of whose existence and life it is the cause; nor from the experience which it has had in common with the body, for that knowledge, in fact, preceded this experience, and in the first instance made it possible." This passage seems to contain more clearly than any other, Plato's psychological creed. At all events, it is extremely remarkable in itself; according to the axiom, that "nothing new and peculiar has been said, which had not been previously thought," it confirms our remark on the preformation of Stahl's doctrine, and justifies the designation of modern medical historians, who call Plato's physiology "Telcological." This appears sufficiently to determine the position which this great philosopher occupies in relation to our department, and did it not do so, the above-mentioned difficulties remaining in the way, still a Plato was well worthy a slight digression.

The opposite mode of thought is represented by Aristotle.[1] This extraordinary man may be considered as the real founder, not only of philosophy, but of science in general. The immense influence which he exercised for above a thousand years, and which has so often been condemned as blind idolatry, was not without a profound cause. For independently of the rich materials which he, far more abundantly than any other ancient writer, transmitted to posterity, he furnished to all ages a handle, as it were, for employing the powers of the human understanding, so as to render it and its applications useful; inasmuch as he taught us how to study it in a methodical manner; it would, however, be out of place here to demonstrate this in any other department than that of psychology.

[1] Born 384 B. C., died 321 B. C.

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The mind, according to Aristotle, is distinct from the body, but inseparable from it, as a conjunctive form; as the regulating unity of its manifold uses (ἐντελέχεια). He separates, however, with remarkable precision the power of thought from everything material. Sensation, he says, "is a motion of the soul, through the intervention of the body." He develops in such order the relations of thought to objects, to the senses, and to common sensation (the idea of which he was the first to unfold), that his disciple and follower Theophrastus, of Eresus, was able to leave a critical treatise on the Theory of the Senses, as contained in his book 'On the Sensations.' The analytical investigation of nature, which Aristotle first prosecuted by means of autopsy and comparative anatomy, taught him that man has, in proportion to his size, the largest brain; and he gave a description, which was true to nature, of its membranous coverings. Thus we here find ourselves in the midst of a regularly arranged world of experience, and feel that Plato and Aristotle reciprocally complete each other's labours; that, combined from their foundations, they fill up on one plan the circle of human opinions.

Without stopping to examine the other philosophical schools of the Greeks,—the Ionian, Eleatic, &c., which in fact are either only modifications of the above types, or have no reference to our doctrine,—we will here mention only the Epicurean and the Stoic, as existing among the Romans. It is true that both these philosophical systems originally belonged to the Greeks, but they were chiefly developed by the Romans, were truly incorporated into their very flesh and blood, and are known to us with accuracy only through their representations; namely, the doctrine of Epicurus through the poem of Lucretius, 'De Rerum Natura;' that of Zeno, through Seneca and Marcus Aurelius.

Atomism (or as we now say, materialism, for the latter, if it proceeds methodically, must result from the former), in the doctrine of Epicurus, is carried through in the most decisive manner, and with a consistency for which his modern adherents have neither the courage nor, as it seems, the requisite self-knowledge. The ancient doctrine of Democritus, of representations through images (εἴδωλα) which emanate from bodies, and, through the medium of the æther, unite themselves with

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the soul, which differs from the body only in being more refined, remained as the psychological basis of the system. This union becomes a sensible image, and therefore every image corresponds with the object, and is true, so long as it is an object of sense. What is false proceeds only from those dark and confused ideas that differ more and more from the object in the imagination, which is too refined and volatile a matter.

It is well known with what acuteness, with what clearness, and with what accessory features, drawn from quick observation, Lucretius has treated, in the most poetical manner, this very unpoetical system. With respect to our subject, the Second and Third Books in particular, on the reciprocal relations of the psychical and physical world, afford most important and attractive representations. They may be characterised as tracing all freedom to intelligible mechanism, and seeking to merge all practice in theory.

Diametrically opposite to this is the aim of the Stoics, who, with the most exalted notions of the higher connexion of the universe, yet do not place the value and spirit of their doctrines in these notions, but solely in delivering the only possession which man really has, namely, his Identity, from all perishable forms and appendages. We may conceive that such a thoroughly practical system of philosophy was especially adapted to the Romans, whose life was all action, and must have been still adapted to them when the utter ruin of that immense empire compelled the noble-minded individual to fall back upon himself. It is not our business to pursue such reflections. Of the physiological theory of the Stoics, that doctrine may be of importance to us which teaches that even sensible images, the emotions of the mind (*παθη* and *ορμη*), resting as they do on the belief in their truth, and on the approval which the judgment of the mind gives them, belong to the power of thought which is an immediate emanation from the Divine Soul of the world. Hence arises the possibility of an empirical self-government, and of the accountability of the affections.[1]

Still more important to us are their practical directions, which, in a moral point of view, offer the best preservative

[1] Cic. Tusc. i, 9; iv, 6, et alib.

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against mental disease, and are real "dietetics of the mind." The notion *virtus*, which, among the Romans, signified both virtue and physical energy, was admirably adapted to them. Ideler[1] has explained in a masterly manner the result which these sentiments had on the practice of medical psychology; and this transition from theory to practice affords me the most suitable opportunity of passing on to the history of the practical part of medical psychology during the epoch of classical antiquity. But before doing so, I beg leave to justify my preceding remark,—that the four systems, of which we have given a brief sketch, represent general and permanent directions of human thought. Should any one, after duly reflecting on the foregoing sketch, hesitate to admit this justification, we would point out to him the fact that in the course of the history, of even the most recent times, a repetition of those views will appear with respect to our doctrine. Thus we find a parallel to the Platonic idealism in Heinroth's theory; to the criticism of Aristotle, in the reflections of Hofbauer and others; to the Epicurean view of nature, in the extreme of the so-called somatic theory of Psychopathy as it appears in Combe and Jacobi (not in Friedreich); lastly, to Stoicism, above all in the writings of the learned Groos. *Modificatis modificandis* of course in all these instances. Excuse this anticipatory remark, the propriety of which will appear in the sequel.

4. We left the rudiments of practical psychiatrics, if indeed this expression may be here applied, in the hands of the priests. Of the Greek philosophers Pythagoras was the first who practised medicine—who led it forth from the temples into active life, applied it to political economy and legislation, directed his especial attention to dietetics, and who, lastly, must be considered and honoured as the true founder of a system of psychical dietetics. The theories which are circulated under the name of this extraordinary man do not concern us in this place, and in fact not at all. They belong to the category which we designate by Plato's name, and whoever understands how to read the lessons of history, will comprehend that Pythagoras did not lay so much stress on theories, which he made use of at the utmost as incitements or symbols, as upon

[1] Ideler, I, 198—209.

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actions. I cannot refrain from giving here, as a specimen of the above-mentioned mental diet, an extract from the Pythagorean Order of the Day, as represented by Meiner.[1]

"As soon as they awoke in the morning, and rose from their beds, they walked in quiet retired places in the grove or the temple, not only to refresh their senses and their bodies, but also to compose their minds, and prepare for the business of the day. They had recourse to the sounds of the lyre in order to dispel all the mists of sleep, and to attune the soul to harmonious activity. They considered it as dangerous levity to consort with others before they had held communion with themselves. When they had ended their early walk, they met together, passed the most cheerful hours of the day in the temple or some similar place, and devoted their first energies to teaching or learning. Instructive conversation was succeeded by gymnastic exercises, in order to give strength and activity to the body. Many of them contended in running or wrestling, while others threw heavy weights at a mark, or performed certain dances which were accompanied with violent motions of all parts of the body, especially the hands. After these exercises they repaired to dinner, which, among the Greeks and Romans, was for the most part only a breakfast, but with the Pythagoreans of a yet more simple kind than among the other Greeks. They took neither meat nor wine; they refrained from the latter the whole day, eating only so much bread and honey as was necessary to satisfy the appetite. After finishing their repast they devoted the greater part of the afternoon to public affairs, and it was not till the evening that they walked out, not alone, but in parties of two or three, when they communicated to each other what they had heard or conversed upon throughout the morning. They concluded these evening walks with a cold bath, and then assembled in a general refectory, for supper, which, however, was always finished before sunset. These suppers, at which, in order to promote sociability, no more than ten brethren were ever seated at the same time, invariably began and ended with libation and sacrifice, and consisted of a greater variety of food and of a more substantial nature than their dinner. They ate

[1] Geschichte der Wissenschaft, in Griech. und Rom., i, 178-602.

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not only boiled and raw herbs and vegetables, but meat also, though rarely, and in small quantity. In wine, too, they sparingly indulged. After supper they spent some time in agreeable and instructive reading. The senior of the company proposed what should be read, and the junior read it aloud On breaking up for the night, the most important duties of life, and the rules of the order were concisely expounded. Before they lay down to sleep, they thought over what they had heard, seen, and done in the course of the day, and then relaxed their minds, which they lulled to rest with the sweetest harmonies of the lyre, thus preparing it for a refreshing, dreamless sleep." This routine of the day is in its principle so conformable with nature, and manifests such deep insight into the reciprocal relations of mind and body, that I consider it a better exposition of the views of Pythagoras on this subject than any half conjectural commentary that I could have given. "Harmony and regularity," adds a commentator, "produce in this daily course of life *mentem sanam, in corpore sano.*" It is reported that Pythagoras employed music in the cure of those chronic diseases which originated in mental excitement.[1] His disciples continued gradually to withdraw the art of Medicine from the hands of the priests; medical schools were formed, the Asclepiades began to reduce the results of their experience to principles; the Empiric school arose at Cnidos, the Philosophical school at Cos, and from the latter issued Hippocrates,[2] the Father of Medicine, and the most celebrated of the seven individuals known under that name.

The majority of the observations which Hippocrates has left us on the subject of Medical Psychology, relate rather to the psychical symptoms in various diseases, than to what we are in the habit of calling, diseases of the mind. The attention which the Father of Medicine paid to the psychical state of patients in general, is a proof of the enlarged views he entertained with respect to the whole art of medicine. (Epid. vi, et alib.) Among these psychical symptoms his attention is chiefly directed to delirium,[3] which however he does not distinguish from mania and phrenitis; but the few observations in his works relative to them, evidence that clear and correct view of

[1] Seneca, De Ir. iii, 9. [2] Born B. C. 460. [3] Neumann in Friedr. 44.

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disease which has made this first observer a model to all succeeding times. They refer to the physical insensibility of the insane,[1] to the appearance of mental diseases in spring,[2] to the occurrence of disorder of the intellect after a continuance of fear and grief,[3] to the union of melancholy and epilepsy,[4] to the critical importance of hemorrhoidal discharges in mania,[5] and the difficulty of curing madness which commences after the age of forty,[6] &c. His treatment of these states consists principally in evacuation, and this he most commonly effects by hellebore, for the use of which he gives many special directions. The books[7] falsely attributed to Hippocrates go more into detail on the subject of these disorders, and combine, in a singular manner, Platonic notions with traditional empiricism.

The psychical cure of Erasistratus is well known. Novelists and artists have vied with each other in representing the story of the fair Stratonice, and, in answer to Ideler's[8] inquiry why Erasistratus has had so few imitators among physicians, we may deny his premises, and reply that he has had his followers.[9]

The real founder of a psychical mode of cure seems however (according to Friedreich, 42) to have been Asclepiades. We are indeed obliged to say "seems," for his maxims are known to us only through Celsus and Cælius Aurelianus, since his writings have not descended to our times. His chief maxim, in most diseases, which, in his opinion, needed stimulating to excite the energy of life (and which has caused a comparison of his views with those of John Brown), was manifest also in his treatment of the insane. Music, love, wine, employment, exercising the memory, and fixing the attention, were his principal remedies. He recommended that bodily restraint should be avoided as much as possible, and that none but the most dangerous should be confined by bonds. He was peculiar in advising that the lunatic patient should be engaged in the self-regulation of his mental powers, for which purpose he recommended that books should be read to him in an

[1] Aph. ii, 6.
[2] Aph. iii, 20.
[3] Aph. vi, 23.
[4] Epid. vi, 8.
[5] Aph. vi, 21.
[6] Aph. vii, 82, or viii, 1.
[7] Comp. Fried. Litt., 39, 40.
[8] Medical Psychology, ii, 545.
[9] Z. B. Galen (d. præcogn. vi, s. Fried. 73), Ibn Sina (Herbel. Fried. 86), Forest (Obs. M. x, 30, Fried. 117).

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inaccurate manner, that he might be induced to correct the mistakes. The more exact diagnosis of improved science discovers cases in which a similar mode of proceeding is often useful; and it is usual to modify it by placing before the patient, without apparent design, letters, essays, notes, &c., composed by others for him to correct, whereby his own energy is increased and confirmed. Moreover, Asclepiades certainly did not withhold his well-known motto, *cito, tuto et jucunde,* from the therapeutics of insanity, although, notwithstanding Bird's advice, it can hardly ever be fully applied to them.

The schools of the Empirics, Dogmatists, Methodists, and Episynthetics had no appreciable influence, as such, over psychiatric science, which was not yet formed, and as our only concern is with the progress of our department, wherever this was important, we may proceed at once to A. Corn. Celsus,[1] who, as Friedreich justly observes, merits the name of the first writer on medical psychology. The eighteenth chapter of the third book of his admirable work, *De Tribus Insaniæ Generibus,* the earliest treatise on mental diseases, makes up pretty well for the loss of all that was scattered in older writings, since Celsus must be considered as the depository of ancient medicine. With judicious criticism, scrupulous completeness, and incomparable arrangement, Celsus gives a compressed recapitulation of all which, up to that period, had proved to be best and most correct; and, where no precise result had been obtained, he states pointedly and faithfully such problematical views as were entertained. He distinguishes three kinds of insania: phrenitis, which is a continued delirium; melancholy, which originates in an atrabilarian condition; and a third kind, which lasts longer than the other two, even sometimes throughout the whole course of life, and which may be divided into two species, according as the patient is deluded by merely false images, or by erroneous perception. The first and the last of these kinds of insanity are sometimes of a melancholy cast, sometimes cheerful, by which the psychical treatment is modified; the second is always melancholy. Phrenitis is treated according to individual indications; melancholy requires the

[1] Born B. C. 30.

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evacuant and sedative method. In the third kind, when it approaches more to melancholy, it requires purgatives, and when to phrenitis, emetics. Exercise, friction, and an unirritating diet must be resorted to, and psychical influence must never be forgotten. The further details of this treatise are highly worthy of attention.

We must here mention the Methodist, Thessalus of Tralles, who is of little importance in himself except as being the inventor of metasyncrisis (recorporatio), a method which still forms our principal and most essential corporeal means in the treatment of insanity. His object was, in obstinate chronic cases where other remedies failed, or were not indicated, to effect a thorough commotion in the fundamental constitution of the organism (σύγκρισις), and to this end he employed the method which he describes in a work expressly upon this subject. It commenced by the application both internally and externally of strong vegetable remedies, to the use of which, together with the strictest regimen and emetics administered at intervals, a period of three days was devoted. This treatment was preparatory to a system of fasting, and concluded with a course of restoratives. It is remarkable that the practical view which evidently dictated the discovery of this method originated with a man whom history represents as an ignorant, boastful, low-minded pretender—a charlatan in the worst sense of the term. And here the observation involuntarily obtrudes itself upon us, that the most efficacious of those methods to which the Thessali of modern times are indebted for their reputation and their riches, are, in fact, nothing more than such metasyncrises.[3]

From this equivocal system the inquirer turns with the greater delight to the admirable Aretæus of Cappadocia, that incomparable delineator of diseases, in whose praise all writers are justly unanimous, and whose correct perception, clear comprehension, sober reflection, and animated style, are evidenced also in our department. In the book on the 'Causes and Symptoms of Chronic Diseases' (chaps. v and vi), he describes melancholy and mania, and in that on the Treatment, his own mode of cure. According to the notions of his age, he attri-

[1] Le Roy, Morrison, Priesnitz.

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butes the origin of the former to black bile, but cautiously adds, that in some cases it arises from psychical causes alone. He defines melancholy as depression of the mind, without fever, from the constant predominance of a single idea; he describes its phenomena, and their reciprocal relation to mania; determines ætiologically that men, and youths near the age of manhood, are most disposed to it, but that females are more violently affected; that summer and autumn bring on these disorders, while spring alleviates them; he also represents their transition into imbecility and bodily decay. He is well acquainted with the unessential differences in the forms of mania, and judges them more accurately than many later system-mongers, (for, says he, there are a thousand kinds, and yet there is only one.) He defines it as permanent torpidity of intellect without fever. He carefully and expressly distinguishes febrile delirium, as well as the effects of intoxication, poison, &c., from insanity; directs attention to what is typical of its return, but, at the same time, remarks on the uncertainty of this type; determines with especial circumspection the conditional circumstances; quotes some instances worthy of being recorded, and sketches several varieties, among which it is remarkable that the subsequently so-called religious monomania has its place. His therapeutics were those that had been handed down to him from former times. Portal[1] attaches particular value to one observation which Aretæus makes on this occasion, respecting the pernicious influence of coloured walls in the chambers of the insane;[2] and confirms it by his own experience.[3] In fact, every one who has observed the effects of colours on the mind, and is acquainted with the doctrine of hallucination, of which we shall have to speak in the sequel, may be easily convinced of the truth of that observation.

Cælius Aurelianus agrees, in his ideas and delineation, with Aretæus, in his treatment, with Asclepiades. His authority is of importance in the history of psychiatrics, and has been already appreciated in this respect.[4]

Lastly: the ancient epoch of medicine concludes with Claudius Galenus. It is a remarkable circumstance, such, however, as

[1] Samml. Auserl. Abhandl. xix, 363. [2] De M. Acut., i, 1. [3] Fried. 66.
[4] Pinel, Phil. M. Abhandl. über Geisteskrankheiten. Transl. Vienna, 1803.

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repeatedly occurs in history, that this extraordinary man, whose efforts were directed to restoring the declining art of medicine from the subtleties of the schools to the Hippocratic method, became himself the idol of a school which was more subtle than any other, and which departed for centuries from the Hippocratic system. So little can an individual effect to stem the current of thought prevailing in his time, which, whether he will or not, he only helps to promote. This reflection teaches us another lesson, namely, that in all cases where that current has appeared to issue from an individual, the latter was only a product of the former; a conviction which we shall need in the sequel to enable us to understand Paracelsus. The general merits of Galenus have been set forth with great lucidity by C. G. Neumann.[1] His medical system is founded on this great truth, that the life of man is everywhere connected with that of the universe, and as one law governs all the phenomena, so disease and its cure depend upon available natural processes. In this sense—which also pervades his doctrine of temperaments, that has survived even to the present day—he likewise taught the dependence of psychical life on all the momenta of human and universal nature, without at all overlooking the reciprocal dependence of the latter on the former: for the man who could say of himself "Et nos ægros non paucos quotannis persanavimus, solis animi motibus ad debitum motum revocatis!" is not inferior to any psychological physician of the present times. Galenus may again be considered as a model, on account of his logical method, which rendered him to his age what Gaubius and Hartmann were to theirs. By his separation and definition of ideas, he directed attention to the relations of the mind to the several organs: the brain, heart and lungs, liver and spleen—as also to the gradations between relative health, which he called disposition (διάθεσις), and actual disease, which he called passion (πάθος), a distinction which will be found highly worthy of attention in the doctrine of mental diseases. We, however, find in his numerous works fewer psychiatric precepts than we should have expected, and they confirm, in essential particulars, the doctrines already handed down.

[1] J. J. Sachs, Medic. Almanach, 1839. Galenus, born 131 A. D.?

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Everything belonging to this epoch, including Galenus and his successors, is only a gleaning from Galenus himself and more ancient medical authorities.

5. If we look back on this whole period, in order, if possible, to comprehend its entire bearing upon medical psychology, the following may perhaps be taken as a correct view. The necessity for medical relief, afforded at first in an entirely empirical manner by the heads of families, and then in a simple religious spirit by the priests, led to experiments: these were first projected and carried out by the Greeks, when being taken up by the philosophical school they were brought to certain results, and, as among that happy people, action and thought mutually aided each other, an *art* was first formed, and then, as it were, an enlargement of it into a *science*. The relations of mind and body were recognised and discussed in their various bearings, and those problems which still form the nucleus of our knowledge, were even at that early period brought forward. At these problems, however, antiquity stopped. A methodically regulated, experimental investigation was still wanting.

III. 1. Henceforth the history of the world is covered with a vast nocturnal shadow, which was not dispelled by a rising dawn till towards the middle of this third period. We see with regret that the entire art and science of enlightened antiquity vanished in the darkness of this night, but we must not judge rashly and unjustly of the ways of Providence; for in this shadow future births were hidden, and, though we are unable to judge of them, such periods of incubation are perhaps as important to history as the germinating process going on below the surface of the soil, is to vegetable life. It was an age replete with fermentation: all nations were in commotion. The most diverse religions, modes of life, views, and traditions clashed and blended together, and the ancient forms were cast in a new mould, gradually imbuing them with a totally different spirit, till in the sixteenth century the age, roused by repeated impulses, became conscious of itself, embraced with freedom the ancient types, and reverentially preserved them, together with the new, for which it was gradually matured.

2. We may readily comprehend how contagious diseases of

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the most violent kind naturally resulted from those manifold collisions, chiefly of a warlike character, which took place among different nations.

Destructive epidemics, for the most part advancing from east to west, visited the whole of the known earth, manifesting themselves in the first half of this epoch more by affections of the cutaneous organs, and in the second more in the abdominal organs, and in the system of the motor nerves.[1] Of the latter we must especially notice the dancing mania[2] (pilgrimage mania?), which first appeared about the year 1212. Thousands of young people, mostly approaching the age of puberty, i. e. from 12 to 18, assembled together, and formed what were called "children's pilgrimages." They proceeded (for instance in 1237) till they sunk exhausted to the ground, so that many died, and the survivors were afflicted with tremors which continued as long as they lived. This disorder seized boys and girls suddenly, and, together with other phenomena, was combined with a morbid antipathy to red colours and to persons weeping, and, when the disease was at its height, tympanitic swellings of the abdomen ensued, and paroxysms of howling, screaming, leaping, and an excessive love of dancing set in. In the time of Paracelsus the form of this disorder became milder, and approached that of St. Vitus's dance. Häser compares this epidemic with the lycanthropy of the ancients. (See above.)

However hypothetical every notion may be which we are able to form of the nature of this disorder, a psychical momentum was certainly in operation, though I cannot subscribe to the view of a very able writer,[3] who treats even the Crusades as an epidemic mental disease, and consequently seems to deduce them immediately from the dancing mania, though something intermediate may well be supposed to have occurred. Webster speaks of an epidemic madness which prevailed in England in 1354, attacked the lower classes, and subsequently spread through France and Italy. "During periods of plague," he adds, as if by way of explanation, "some general influenza

[1] Häser, 145.

[2] Hecker. Die Tanzwuth: an admirable monograph, as Hecker always aims at generalisation and scientific unity.

[3] Wawruch, De Morb. Pop. an. (MS.)

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appears to have seized the brain, even of persons who were not attacked by the plague itself." I cannot by any means accede to the representation of the learned Leupold,[1] who considers that psychical disease was less prevalent and milder in the middle ages. To me, on the contrary, the powerfully operative momentum, which I have above noticed, as recorded in the history of those times, as well as the facts already related, and the numberless cases of demonomania in all its forms, which subsequently occurred, appear to prove the frequency and severity of disorders which affected the mental faculties of man in that epoch. I believe that the want, at that time, of a scientific comprehension of such disorders, and the prevalence of superstition, are the causes which now close against us any access to those phenomena, thus producing a false impression that mental disease was of rare occurrence.

3. The psychology of the middle ages, as well as their philosophy in general, was, in the first half of the period, scholastic or mystical, and it was not till towards the end of the second half, that in some intelligent minds it approached that perfection which it has attained only in modern times. But neither could those philosophical systems furnish a sufficient basis for rendering psychology available for the purposes of the physician, nor was the age sufficiently enlightened even to think of it. "The Arabs, an energetic people, devoted to Sabæism, had been transformed, by the religion of Mahomet, which addressed itself to the passions and to the understanding, into a religious warlike nation. In a short time they became masters of a great portion of the known world. By their contact with the conquered nations, and the increase of luxury, there arose a want—a demand for foreign medicine, astrology, and science, which the Caliphs did their utmost to supply by translations from Greek works, and by the foundation of schools and libraries. Thus from the most diverse elements—the Aristotelian, the Oriental, and the Theologico-Christian, arose that monster of philosophy, which I have named the Scholastic, in the more extended signification of the word. Ibn Sina (Avicenna), Ibn Rhuschd (Averrhoes), Moses Maimonides, Albertus Magnus, and subsequently Duns Scotus, who

[1] Gesch. d. Ges. u. Kkht. Erl. 1842, p. 108.

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died in 1308, may in some measure be said to be its representatives. We may with the greater propriety refrain from particularising their views, since they contributed to psychology only verbal subtleties, taking and retaining the materials for their formulæ, without addition, from the works which had been left as an inheritance by the ancients. A more substantial spirit developed itself in the second tendency of that epoch—the mystical. Yet here, too, the most heterogeneous ingredients were mingled together; Plato, Christianity, the Cabala, and an independent system of Metaphysics, so that anything like a consistent representation of the divergencies of these theories, would far exceed our limits. The representatives of this tendency are, Bonaventura, Thomas Aquinas, Nic. Cusanus, Marsil Ficinus, &c. With respect to our subject, it may be said in general, that the Scholastic philosophy, by splitting the mind into numerous distinctions of faculty and empty notions, promoted mere formalism; the mystic philosophy, by adhering throughout—like its later emanation, the doctrine of Ideality—to the one, final, divine substratum, promoted mere dogmatism; but neither of them forwarded a true knowledge of the mind, and, least of all, its relation to the body.

In Theophrastus Paracelsus,[1] the mystical school attained, if I may use the expression, its practical culminating point, being introduced into real life equipped with a chemical, medical and popular apparatus. We shall have to return to him in the sequel. After Paracelsus, as the dawn of a new morning evidently approached, mysticism gradually attained that philosophic purity which it manifested in Campanella and Giordano Bruno, till the sun of regenerated science itself arose. Two men above all others are worthy of historical mention as the heralds and messengers of that regeneration; *negatively* Bacon, and *positively* Des Cartes. Francis Bacon,[2] Lord Verulam, with a clear penetrating judgment, recognised and demonstrated the insufficiency of the current theories, pulled down their edifices, pointed out amid the ruins the simple way of sober observation, and showed the boundless field which he had thus laid open to view. He, therefore, was of negative importance. Des Cartes[3] boldly commenced with speculation, and

[1] Born A. D. 1493. [2] Born A. D. 1561. [3] Born A. D. 1596.

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founded his system of a pure dualism, which essentially contrasts thinking substances and matter; yet he assigned a seat to the soul, namely, in the pineal gland. The soul has *passiones* and *actiones*; among the latter are the functions of will, imagination, and thought; the vital spirits are distinct from the soul. His psychology, therefore, introduced something positive. The independent train of thought of his profound pupil Spinosa has had no influence on the adaptation of our doctrine to practical purposes, and we, therefore, here break off our delineation of the psychology of the middle ages, which, though on the whole too sketchy to be useful for any other purpose, is yet too diffuse for ours. But my motive for being thus brief is that—

4. The practice of medical psychology was upon a par with its theory, that is to say, it did not exist at all during the greater part of this epoch. The Arabs repeated and followed, with less and less happy additions, and with more or less genius, what had been taught by the Greeks, especially the later writers. Anecdotes of psychical cures, performed by their physicians, which are related in their praise, appear to be more suited to poets than to the history of medical psychology; they may be seen in Friedreich. Ibn Sina the Persian, as the best of these writers, deserves, however, distinct mention. He paints[1] to the life the nymphomania, arising from unhappy, unrequited love, adding some original reflections of his own; and he gives a contrivance for the cure of melancholy, which has much resemblance to our swing.[2]

A long pause in medical psychology ensued after this period. The Scholastic formalism furnished only names and distinctions, but no remedy for the cure of the patient. The ordinary practice was only a repetition, without further inquiry, of the prescriptions of Galenus and of the Arabs. The Mystic system had recourse to prayer and exorcism, and whether at this time of the early dawn of science Paracelsus was the man to whom our branch might look for its restoration, or, more properly speaking, its birth, I will, after furnishing you with some data, leave you to decide. This is not the place, nor do I think it

[1] Avicenna died 1036. De Morb. Ment. Tract. 1619; comp. Zimmermann, Von der Erfahrung, p. 679.

[2] Canon ii.

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necessary to enter more fully upon the doctrines of this author. Yet since, contrary to the judicious view of Karl Sprengel, the founder of historical research in medicine, several well-informed and thinking men, have latterly seen fit to attach some importance to the claims of this so-called reformer of Medicine, I am obliged to separate him from the age to which, in my opinion, he entirely belonged, and to consider him apart, which I should not otherwise have done. But, that while performing a duty to individual contemporaries I may not neglect my more important duty to the science, I shall confine myself to what practically concerns our department, and faithfully quote his own words, leaving them, without any additions of my own, to your individual judgment. I have already plainly expressed my opinion in another place[1] respecting his general position, which is perfectly clear to any one who has a knowledge of the state of the times, without any explanation of mine. Paracelsus has already become in some sense a mythical character to us, and hence, as well as from the various and frequently contradictory constructions put upon his rhapsodies (where all depends on the medium through which we view them), we may account for the pleasure which even clever men find in making his oracular dogmas the vehicles of their own views.

"That man," says he, "is sick in mind,[2] in whom the mortal and immortal, the sane and insane spirit do not appear in due proportion and strength. Men who go astray through weakness of the reasoning mind are called imbecile. The enraged, on the contrary, are called fools and persons out of their senses, because they have become mad from the excess of brute reason, having drunk more of the Astral wine than they can digest. Fools, however, sometimes manifest a degree of wisdom, which shines amid the confusion of their understanding, as light through a piece of horn; wherefore it is becoming a wise prince to keep a court fool, but he must not suffer him to be driven about by the servants, that his natural spirit may not be interrupted. Mania is a change in the reason, but not in the senses. Mania comes on with raving and senseless behaviour; is always restless, causes much disturbance, and is

[1] Comp. Med. Jahrbuch. n. f. vol. xx, p. 285; vol. xix, p. 133.

[2] Opera omn., ii, 169. (Freidr. 106.)

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recognised by the fact that it abates and ceases of itself, and returns to reason. One kind of mania is almost dull and stupid; the patient falls down, loses his appetite, is subject to vomiting, suffers from diarrhœa, mutters to himself, pays no attention to people or to their dwellings," &c. &c. For ætiology he has the over-exercise of the reason, the elements, influences, constellations, conjunctions, microcosm and macrocosm, in short, anything in the world. His therapeutics are conclusive: "What avails in mania, except opening a vein? then the patient will recover; this is the arcanum, not camphor, not sage and marjoram, not clysters, not this or that, but phlebotomy," &c. &c.

So much will suffice to enable you to determine what gain physiology on the one hand, and medical psychology on the other, could hope from the opinions of this man, who looked down upon Hippocrates and Galenus as dwarfs in comparison with himself. It was only to perform the duty mentioned above, as incumbent on the teacher, "who must not be ignorant even of what is useless," and from regard to the predilection of distinguished contemporaries, who would strengthen, by his authority, their own incomparably more scientific views, that I could be induced to tarry so long at this unfruitful spot.[1] Paracelsus might himself serve as a psychological example of the result of evidently considerable capabilities and independent energetic efforts, combined with the want of a well-regulated culture of the understanding, and with a confused, luxuriant imagination, under the influence of an age of agitation and an irregular mode of life. For the present, therefore, we must abide by the sober representation of Karl Sprengel, and we may now, without breaking the thread of our history, resume it, and say, as above, that the knowledge and treatment of the mind, so far as they fall under the cognisance of the physician, were not advanced in this period; Paracelsus not being, in our opinion, as he is in that of most historians, the commencement of a new, but rather one of the last supporters of a more ancient era.

In this spirit matters proceeded for some time after him, and

[1] Those who wish to obtain full information on this subject, either for or against Paracelsus, may read *Demarow*, *Parac.*, über Psych. Krankh., in *Heck.* Annal. vol. 28, *Lessing*, Leben *Parac.* Berlin, 1839.

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of which, as far as our department is concerned, particulars may be found in Friedreich and others. Towards the second half of this period, when, as we have before observed, the scholastic and mystical philosophies were gradually developed, thus producing a soil capable of nurturing the germs of general psychology, those of a medical psychology appeared simultaneously above the surface. Felix Plater first attempted a classification of mental diseases, which, though, as Heinroth[1] clearly proves, is wholly inadmissible, nevertheless indicates a real advance towards improvement, because it does not make use of any hypothetical assumptions, but takes the phenomena of mental action, as proved by experience, for the basis of the classification. It must be confessed that the persecution of witches, which was carried far beyond the second half of the middle ages, considerably lowers our expectations in favour of psychological science, but they are some of the most remarkable phenomena of a psychical contagion, which was become almost epidemic.[2] Helmont, the opponent of Paracelsus, though he unhappily fights with the same weapons, may be considered as at least the precursor of more enlightened views. Among these I would especially mention his notion that the mind of man itself can never become diseased, but that it is always the *anima sensitiva* alone, which he personifies under the name of Archæus, that suffers.[3] His observation on himself, on the occasion of a transitory hallucination after tasting aconite, when he fancied that he thought with his stomach,[4] may be welcome to the friends of animal magnetism. We may also mention, as particularly interesting to us as Germans, that in this epoch we find the first mention of Cretinism, and this in the work of an Austrian physician, Wolfgang Höfer,[5] afterwards physician to the court of Vienna, whose observations were made in the Styrian mountains. He traces the cause of this phenomenon to the

[1] Lehrbuch d. Seelenstör., i, 106.

[2] See on this subject Moehsen's Geschichte der Wissensch. in der Mark Brandenb. Berl. 1781. (Fried. 127.) In addition to Friedreich Lit., we may mention as yet more important, Bodin de Magor. dæmonomania. Francof. 1590. Henkelii cura obsessorum. Ibid. 1689.

[3] Op. p. 140.

[4] Ibid. p. 64.

[5] Hercul. Medic. Norimb., 1675.

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indolence of the poorer peasantry, and to the gross diet on which they feed.

The nosology and pathology of that age drew the doctrine of mental diseases more and more into their systems; some eminent men, such as Fabricius Hildanus,[1] collected observations; others, as Sennert,[2] endeavoured to make distinctions and divisions; and some even examined the brain and nerves, as Thomas Willis,[3] who, being the first that assigned to each particular part of the brain a special influence on the mind, may be considered as the father of phrenology. Some, as Etmüller,[4] collected and critically examined what had hitherto existed in a scattered form; others, as Bonnet,[5] ventured to attempt a pathological anatomy of the dead bodies of mentally diseased persons, and thus materials for our doctrine gradually became so abundant and various that G. E. Stahl was able to take it up, and, for the first time, to treat it scientifically. Advisedly, then, we begin with him the new and better era of medical psychology considered in a practical point of view.

5. We have now to look back on this short sketch of the state of our science in the middle ages, in order to see what is the result which it affords us. Even the most superficial glance shows us that it has, in fact, been already indicated in the statements which we have given. The intimate connexion of our science with philosophy appears most clearly and convincingly in this long period; with this it appeared and grew up, and with this it vanished. It made no real progress in the middle ages. The traditions of antiquity ran through all these centuries like an unbroken thread; during the first period it was so obscured by the web of superstition that it could scarcely be identified; in the second it was gradually disencumbered from it, till it again became visible, and ultimately, in modern times, was once more connected with nature herself, whence it had originally emanated.

IV. This modern epoch being so extensive and important, we must subdivide it, detaching from it the most recent,

[1] Observat. cent. vi, 1646.
[2] Born 1622.
[3] Sepulchret, tom. i, ii, 1679.
[4] Practica Medicina, i.
[5] Prax. Med. 1736.

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that is to say, the present century; and, finally, treating this by itself, as *the present state of our branch of the science.*

A. 1. After the discovery of a new world, the invention of printing, the reformation, and even wars and epidemics, had called forth that general excitement which became the cradle of a new age, there could not have been a more favorable epoch for gradually and uninterruptedly developing the powers of the infant science than that period of peace which followed the thirty years' war, a period when love for the arts and sciences awoke to new life. After so many violent struggles the age turned, as it were, inwardly upon itself, and an era of tranquil exertion arose, which was peculiarly favorable to the cultivation of the more grave and intellectual sciences. Galileo and Kepler directed their views towards the firmament; Torricelli and Guerike investigated the laws of physics; Newton laid down the mathematics of the universe; Harvey, by discovering the circulation of the blood, threw an equally bright light over the human mechanism; pathological anatomy was more and more practised, and from having been before used at most for the exhibition of curiosities, its importance became better understood; chemistry having been zealously followed up since the time of Boyle and Boerhaave, was maturing for its reform by Lavoisier. Gaubius gave to medicine logic, and Sauvages a system; Haller formed physiology: the literature of the ancients was studied in quiet retirement with equal advantage to the free sportive arts, and to the abstruse and profound sciences, and the undisturbed attempts of individual inquirers, to scan in every direction the empire of thought—the peculiar province of mind, at length enabled Kant to determine its boundaries, and to fix for ever a limit to the domain of philosophy. To these efforts of individuals were added the proceedings of entire corporate bodies, which, by uniting as academies, societies, and institutions, exercised an animating influence over the whole progress of human knowledge.

But this tranquil formation, according to settled laws, in which knowledge was, as it were, crystallised, did not remain undisturbed. New and mighty movements, unlike epidemics which advance from east to west, agitated all nations from west to east, awakening men from their dream of permanent repose, and convulsing the civilised world. After these storms had

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subsided commenced that new epoch of peace, the blessings of which we now enjoy, but which differs widely from all that preceded it, inasmuch as nations have come into contact, and have thus become acquainted with each other; they feel and recognise their common wants; manufactures and trade unite the most distant empires; the knowledge acquired by experience has taught them wonderfully to facilitate these communications, and what Goethe announced with respect to poetry only as universal literature, has at length embraced all the mutually connected regions of knowledge and action.

2. The history of health and disease is in conformity with these phases. During the first half of this period there existed, on the whole, a more than usually vigorous state of health, which partly necessitated the antiphlogistic mode of cure, as pursued, e. g. by Sydenham; and by its prevalence in later years, and especially, under local circumstances, in the organs of assimilation, helped to decide the distinguished Stoll, as well as Kümpf and others, to adopt their antigastric method. With the commencement of those storms in social life, by which many a victim was immolated, many a peaceful existence destroyed, an asthenic state of the general health visibly set in, and manifested itself at first, chiefly in the vascular system; this state was favorable to the diffusion of Brown's dogma, and especially to his generally stimulating mode of treatment, but it gradually affected the roots of life more deeply, and fixed itself in the nervous system. This nervous character is that of the present day, for neuroses of every form have become more and more developed, especially since the middle of the 18th century.[1] At the beginning of the eighth decennium, raphania, which often commenced with mania and terminated in imbecility, became particularly prevalent. In the closest connexion with these neuroses are mental diseases, which, in a psychical point of view, are fostered by an education calculated more for the world than for the formation of character, and in a somatic point of view, by that condition, of such frequent occurrence, known by the name of abdominal plethora. In fact, the nearer we approach to the present time, the more manifestly mental disorders increase. It is, however, affirmed that

[1] Leupholdt Gesch. d. Ges. u. Krankh. 136.

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since the establishment and improvement of institutions for the insane, a happier state of things has been observed, so that at present[1] the number of insane persons in Europe is to the population as 1 to 900 or 1000.

3. Philosophy assumed a more specific form, and it may be affirmed that a scientific psychology originated in this period. The germs were scattered at its commencement by John Locke, who considered the human mind as a *tabula rasa*, and then examined, by way of induction, how perceptions, notions, and judgments were portrayed on it. He followed this course with great acuteness and with beneficial results, except that, through the fear of losing his impartiality, and taking for granted something that could not be proved, he made the knowledge of the mind to flow into it solely from without, and laid down the maxim, "Nihil est in intellectu, quod non antea fuerat in sensu," to which Leibnitz appositely replied by adding, "Nisi ipse intellectus." In fact, all the materials of our knowledge come to us through experience; but, then, this is partly external and partly internal. The faculty, however, of perception is altogether internal, and belongs wholly to the intellect. Locke's theory, being quite in accordance with the impulse which Bacon had given to inquiry[2] spread rapidly and extensively. The French authors Condillac[3] and Bonnet[4] were distinguished by the judicious use which they made of this sensualism in its application to psychology; and their nation obtained the most refined results with reference to a practical knowledge of mankind, of which the Duke de Rochefoucault,[5] who is so often misunderstood, may serve as a proof. Contemporary with Locke, there appeared in Germany a kindred thinker, Gottfried Wilhelm Leibnitz,[6] of whom it may be said that it is more easy to confirm or refute his individual philosophical theories than it is thoroughly to define his general position as a philosopher. In a certain sense we may apply to him what we have already said of Plato, and call him, in the highest acceptation of the term, a philosophical dilettante; since, in surveying the systems of the dogmatic philosophers, he brought forward the strong points, sometimes of one, sometimes of

[1] Leuph. l. c. 138.
[2] Ibid. p. 42.
[3] Born 1715.
[4] Born 1720.
[5] Died 1680.
[6] Born 1646.

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another, and occasionally stated new doctrines of his own for the purpose of poetically (ποιέω) proving the capacity of the human mind for infinite development. Perhaps the most important of these, both generally, and with reference to our department, is his monadology. The analysis of the compound led him to the idea of the simple (monas), which, without the endowment of perception (body), with that endowment (mind), with indefinite consciousness (the mind of animals), and with definite consciousness (the mind of man), represents everything simultaneously existing (space), and everything successive (time), and has its root in the primeval basis of the highest monad, *God*. This boldest and most profound of all philosophical fictions, could not fail to excite, on the one hand, many and new elucidations and extensions, and, on the other hand, according to the law of contrast, to degenerate, as it did in the hands of the most celebrated of its advocates, Christian Wolf,[1] into a destructive formalism, which, with some exceptions that cannot be here explained, remained in vogue till Immanuel Kant,[2] indisputably the most profound of all thinkers, concluded the preceding epoch by a comprehensive criticism, and at the same time facilitated the introduction of every new system.

It is self-evident that it is neither possible nor opportune to furnish here a full account of Kant's merits and exertions; for who could undertake to give, in a few words, a summary of such immense labours, connected as they are with the most profound problems of science? A few general observations to facilitate the comprehension of the history of learning in general, and some results suited to our purpose, must suffice. Excited by Hume's scepticism, Kant proceeded boldly and immediately to the main question: Is it possible to arrive at a scientific cognition? He was thus led to an examination of the sources of cognition and of the cognitive faculty; and this examination, which he conducted to its termination with an acuteness never before known, and with perfect sincerity, constituted the business of his life, and the substance of what is called his critical philosophy. Kant has given, to human reason, its self-consciousness, but at the same time prescribing its limits he has assigned to every science its principle and its extent. In cases

[1] Born 1679. [2] Born 1724.

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which are beyond our reason, he proves that they are so, and why they are so; he has, as it were, vanquished philosophy by means of philosophy. He has given us by his criticism, the means of appreciating this very criticism; and it may be said with perfect truth, that philosophy has not made, and indeed cannot have made, any essential advance since his time. It may appear, at first sight, that this is limiting the infinity of the human intellect, which is eternally progressive; but when accurately viewed, the case assumes a different aspect. There either is or there is not a philosophical certainty, as there is a mathematical certainty. If this be once attained, research in that direction is concluded: 2 × 2 are 4, that is settled; to attempt to become more certain than certain, is to be uncertain. Truth is truth, and whatever is superadded is false. Certainty is a mould, and the matter which is to be put into it is infinitely various, and is furnished by the sensual and the moral world. Man was not made to think, but to act. He must be able to come to a final decision respecting the objects and the bounds of his thought, otherwise the purpose of his life is not attained. There must be a philosophy which is true, and which admits of being handed down, unless every man is to pass his life in re-examining all previous systems. To have fixed these boundaries, within which infinite progress is still possible, both ethically and empirically, is the immortal merit of Kant, a merit which will be duly appreciated only by posterity. In him, as above hinted, the knowledge of that epoch was, as it were, crystallised, and nothing but the storms that we have described could have disturbed the regularity of that crystallisation. The agitation of nations had extended to individuals; no repose was to be found. Fichte[1] took up a thought of Kant's, and carried it beyond its due limits; he endeavoured to prove that which Kant had shown to be undemonstrable, and created an absolute idealism, which destroyed itself; Schelling[2] felt this, and endeavoured to complete the impossible, by means of a second impossibility, adding to absolute idealism, an absolute realism—resolving all into unity, and thus destroying individuality. Hegel[3] perceived that this absolutism was not proved; and when, instead of turning back he

[1] Born 1762. [2] Born 1775. [3] Born 1770.

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proceeded further, the overblown bubble burst, his prodigious intentions dissolved into a formula.[1] Herbart[2] was the most careful of all to set bounds to his speculations, and treating his subject in a strictly methodical manner, adhered to given data. This brings us to the safe harbour of the present: when both political and philosophical storms have subsided; people are weary of them, they attach themselves to the empirico-real, to experimental science, which is valuable in its application to arts and manufactures; but I am happy to see that where a scheme of metaphysical science seems to be necessary, they begin to comprehend and to value that of Kant. If I appear to have digressed too much in this section, the importance of the subject may justify me; but the very best apology is, that I am sensible of having treated it in far too slight and unsatisfactory a manner.

4. The section which now follows is the most important in the history of our whole doctrine; nay, it may be said that medical psychology properly so called, that is to say, a union of psychology with practical medicine, did not begin till this period, and yet awaits its completion by the blending of both sciences, either at the present, or some future time. In order to understand the actual state of the science, we must here go somewhat more into detail.

The transition to this union of philosophical and physiological knowledge for the practical purposes of the physician was, properly speaking, effected by G. E. Stahl,[3] before the scientific developments of the second epoch of this period; the course of scientific improvement being opened, not as pseudo-philosophers usually represent by a systematic development, which they pretend, by the aid of historical evidence, to demonstrate on paper, but invariably by the eagle eye of genius and by the individual inquirer in calm retirement. The iatromechanical notions of the physicians of that time, urged

[1] Of course this is not the place to enter into deep reflections. The above-mentioned phases might be briefly expressed thus: Kant assumed an existence and an action, Fichte an action, Schelling an existence, Hegel an assumption.

[2] Herbart is unquestionably the most acute thinker among modern dogmatists, and one whose system affords the best halting-place, especially for the philosophy of nature and of the mind.

[3] Born 1660, died 1734.

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this profound thinker to a lively opposition; and this opposition led him to a deeper perception of the influence of the intellectual on all the events of human life. He thus became the first to give a decided and lively impulse to the investigation of their relation to each other, as well in application to physiological and pathological theory, as to the cure of bodily and mental diseases, and *in this sense* he must certainly be accounted the founder of our doctrine.[1] The essence of his system may be summed up, for our purpose, as follows. The collective processes of life cannot be comprehended, unless we comprehend its object. This object can be no other than the soul. The successive development of the epochs of life, and the curative efforts of nature in diseases, gradually bring to light all the destined purposes comprehended in the notion of the individual. This realisation of the notion is its object. Stahl's theory consists in tracing the relations, with reference to this object, whether in a state of health or disease, of all the individual organic processes. The identification of the soul with the basis of the phenomena of vitality, with which this theory was charged, a reproach which has been repeated by one historian after another, and furnishes a convenient excuse for neglecting a more thorough investigation of the theory itself, is owing partly to his first crude essays, which he subsequently indirectly revoked and modified, partly to the state of physiology in his time, which rendered many better explanations impossible, and partly, as is the case with so many theories, to the misconception of scholars, who are accustomed to swear *in verba magistri*, without having fully comprehended their meaning. This, however, was by no means an essential point of Stahl's theory. The medium between the organic movements and the psychological objects of them, was called by Stahl *motus tonico-vitalis*. This is, as it were, only an expression of that forming and inciting life (or principle of vitality) which is concealed behind the phenomena perceptible to our senses. It combines all single processes into one type, all organs and systems into one animal economy, facilitates the comprehension of the organism by a telcological investigation of it, and manifests

[1] Joh. Huarte (born 1520?) first carried out the notion of a medical psychology. Metzger Skiz. einer pragm. Litt. Gesch. p. 211.

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itself with respect to sensible perceptions, in a state of health as instinct, in that of sickness as the curative power of nature, by which the practical physician is furnished at one and the same time with a permanent maxim, and a guide to his treatment. The secretions and the excretions, nutrition, menstruation, habitual hemorrhages, inflammations, spasms, synergies, and the vicarious actions of the organs and functions, are explained by Stahl, often in the most ingenious manner, by the normal or abnormal condition, or by the excess or deficiency of the *motus tonico-vitalis*. He especially derives from them the reciprocal relations which exist between the passions and organic alterations. With respect, however, to mental diseases *in specie*, he will not have us understand thereby, as in the explanation of bodily sufferings, an injury of the substance of the mind; but only an abnormal relation of the mind to the body, from an impediment to its action. This impediment is caused by an extraneous motive (idea) pressing upon it, and this again proceeds either from the senses or other functions of the body, or from the mind. The former gives those powers of delirium, called by him sympathetic; the second, those called pathetic. The latter sometimes retain the fantastic representations (*phantasma*) in which they originated. Sometimes, especially in the insane, they deviate into others, but always retain the colouring of the character of their subject or object.[1] He explains the insensibility of the insane to cold to arise from the obstruction of their feeling, and from the development of warmth by the existing excitement; and distinguishes, for instance, the erotomania of psychical from that of somatic origin, by the circumstance that in the former the ideas are, from a predominance of imagination, directed towards a specific person, in the latter from a predominance of sexual desire towards the whole sex. In the sympathetic mental disorders, the morbid ideas which exist furnish Stahl with, what may be termed, teleological hints on the diseased functions of the body, and as in dreams, when plethora exists, the state of the body is often in a manner symbolised by fire, objects of a red colour, &c. &c., so in insanity, which in this sense often becomes elucidated by a critical sign

[1] Stahl everywhere seeks impartially to discover the causal relation between the body and mind.

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of the instinct of self-preservation. An impartial view of these fundamental principles is in many respects instructive. Every theory of the natural sciences is neither more nor less than a mode of perception, an attempt to translate the language of things into the language of the understanding. With respect to the investigation of organic nature, none of these attempts has yet carried us further than that of Stahl, namely, to take it up as an idea. He gave in symbolical representations, though not so definitely, the same that Kant afterwards developed in a scientific analysis. The organism is to be comprehended only teleologically; that is to say, as a whole, of which the parts are reciprocally related to each other as means and object. When, therefore, subsequent inquirers based that fundamental phenomenon—organism, sometimes on excitability, (susceptibility,) sometimes on a power of reproduction, (irritability and sensibility,) sometimes on a simple mobility, the essence of which was unknown, we may at least affirm that we gain little more than by Stahl's *motus tonico-vitalis*, which besides has the advantage of instituting, instead of divers energies, one motion, modified according to the nature of the organs, and visible in its effects. The self-preserving principle of organisms too, which, since the time of Hippocrates, has been the palladium, the religion as it were, of the practical physician, is here not only confirmed but followed out into further relations, and applied to useful maxims. The pathological relations of the mind appear at length to be appreciated on both sides, and thus a foundation is laid for further studies of much promise. Stahl's doctrines were received with equal enthusiasm and opposition,[1] yet continued to exercise a secret influence on subsequent researches; they reappeared long afterwards in Langermann, and are even now carried out and adapted to the times in Ideler. Among the great practical physicians and teachers of the first half of our epoch, some have enriched our knowledge of mental disorders, or the treatment of them, by many important results of that purer empiricism, which has been revived since the time of Sydenham. Some, like the inestimable Gaubius (*Serm. de reg. ment.*) (with whom none but our own Hartmann can be compared, for truly philosophical views

[1] The particulars of which may be seen in Friedreich's Litt. Gesch. p. 251, &c.

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in practice), endeavoured to clear up notions and principles, while others exerted themselves in their nosographical systems to assign to the disorders of the mind a positive place and classification. It would lead us too far to enter into a detail of these essays.[1] They did not afford any particularly instructive results, had no influence in advancing the therapeutics of the subject in question, and were directed according to the individual views and limited experience of their authors.

It was not till the second half of this period, when a great impulse was given, on the one hand to experimental physiology (in Germany by A. v. Haller), on the other hand to speculation (in Germany by Kant), that the practical part of our subject began gradually to acquire a more solid foundation. Anatomists and physiologists on their part were indefatigable in endeavouring to obtain, by multiplied dissections and experiments, a more accurate knowledge of the structure, composition, and functions of those organs which are manifestly instrumental in producing the actions of the mind: that is, the brain and nerves; and we are especially indebted, on this head, to the labours of S. T. Sömmering. He established that the size of the cerebrum compared with that of the nerves increases in proportion to the mental capacity, and is much larger in man than in animals; he proved that the sandy substance in the pineal gland belongs to the normal structure; he discovered the yellowish layer between the medullary and cortical substance of the cerebellum; determined the destination of the cerebral nerves, established by him as consisting of twelve pairs, and transferred the *sensorium commune* to the fluid of the cavities of the brain as the proper organ of the mind. We are greatly indebted to J. F. Meckel for a history of the development of the brain, to J. Gall for its anatomy, for a knowledge of the whole nervous system to Charles Bell, (who first endeavoured more strictly to prove the existence of a double class of nerves, the one for sensation and the other for motion,) and to J. Chr. Reil for the theory of its functions.

The detail of all these efforts belongs to the history of anatomy and physiology, and they are of importance here only

[1] They may be seen in Friedreich, Töltenyi's Critique, and elsewhere; a special mention, however, is due to Klöckhoff (see Friedreich, 339) on account of the remarkable riches of material and thought so rarely met with in his times (1753).

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so far as they offered to those architects of science, who were approaching from another direction, labourers and cement to erect an edifice, of which those who practised psychological medicine might take possession, and who according to their inclination or abilities, laid hold either of these empirical materials, or of the above-mentioned speculative views. Thus arose medical psychology in the form which it then assumed. Two men must, however, be specially distinguished in this period, one of whom (Joh. Christ. Reil,[1]) starting from the medical side, the other (J. G. Hoffbauer) from the philosophical side, became united in their efforts, marked the culminating point of this period, and exercised great influence on their successors. Reil, who was already provided with an ample store of anatomical researches on the brain and nerves, and of practical experience in the treatment of patients, subsequently combined with this the views of nature acquired by Schelling and his followers, and was the first who endeavoured, in this sense, to make a rational attempt to found a psychical mode of cure, in which he was successful, and obtained reputation as a psychological physician. Hoffbauer, who was not a physician, treating the practical and pathological department of psychology in a philosophical view, after the sober and solid manner of Kant, united with Reil, and to this union of the physician and philosopher (one most desirable for such labours) Germany was indebted for the first efforts which were made, and for many valuable improvements in this department.

To complete our view of this period we have to notice three half philosophical, half medical systems, which may be most properly introduced here. I mean the so-called animal magnetism, phrenology, and physiognomy. The actual development of these systems belongs to other chapters, but the history of their origin must be noticed here, and this genetic moment is often of the greatest consequence to explain the internal nature of a received tradition; at all events the history of the character of an individual, as blended with the system which he has founded, is of a degree of importance which must never be lost sight of. Antonius Mesmer[2] defended at Vienna, in the year 1766, the thesis, that there is a general influence

[1] Born 1758.

[2] Born 1733, died 1815.

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exercised by the planets over all living beings on the earth; and that this influence manifests itself chiefly in those functions of life which belong to the nervous system, such as sensation, motion, sleeping, waking, and mental operations. This view excited no interest, and Mesmer, therefore, endeavoured to promote it by joining P. Hell, an astronomer, who manufactured artificial magnets. Mesmer conjectured that the magnet was a symbol of those cosmical influences, and, in conjunction with Hell, tried to effect cures in what are termed nervous disorders, by friction with these magnets. The two friends disagreed, because Hell did not confirm some assertions of Mesmer, but they were afterwards reconciled. Mesmer, however, shortly declared that he did not require the magnet at all for his cures; for that he had the power within himself. He accordingly manipulated thenceforth without a magnet, and in 1775 announced his discovery, in a circular, to the most celebrated academies of Europe. From this period the term mesmerism is to be dated. The discoverer immediately set out on his travels. At Paris, where he at first refused to permit an examination of his mode of cure by a scientific commission, he subsequently gained over D'Eslon, a member of the medical faculty, to the support of his system, and at this time commenced its most brilliant period, and its propagation among all classes of society. This occasioned the issue of a royal mandate for the formation of two committees of inquiry, one out of the Academy, of which Franklin and Lavoisier were members, and the other out of the faculty, in which Jussieu took a part. The report of these commissions, after several months of observation, were alike unfavorable; Jussieu, however, gave a separate vote, in which he admitted the essential effects, and ascribed only the unessential secondary effects to the power of imagination. D'Eslon and Mesmer protested against the decisions of the commissioners, and the practice of magnetism continued to make its way. It was introduced into Germany by Lavater in 1787, and completely so by Wolfarth, a physician of Berlin, to whom Mesmer before his death communicated his doctrine and his mode of proceeding. In Germany it was, however, an object of science, rather than of fashion, and Kieser, Nasse and Eschenmayer, in particular, by the publication of their 'Archives of Animal Magnetism,' which

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appeared from 1817 to 1824, exerted themselves to promote, by observation and reasoning, the scientific investigation of these phenomena. Thus magnetism became the subject of divers interests and modes of treatment; to philosophers an object of speculative exercise, to enthusiasts an article of faith, to charlatans a source of profit, to the majority an object of curiosity or of contempt, to a small minority a remedy, which, as respects both its basis and consequences, requires further unprejudiced and cautious investigation, and awaits the judgment of continually progressive knowlege. Our business in this place is only to set before you its origin in its most general but faithful outlines.[1] We pass on to the second of the theories which we have noticed.

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What was only a secondary consideration in craniology, namely, the investigation of the internal human character from the external, was the main object of another doctrine, which was prior in its origin, but was mutually supported by, and did itself support, the later theory—we allude to physiognomy, which we mention here merely as an enlargement of the other. It is as natural in itself, as it is well known from history, that the language of man's countenance, in connexion with all the other expressions of his inward feelings, has from the most ancient times excited the attention of philosophical observers, as well with reference to the fine arts, as in a social and medical point of view. Aristotle, Theophrastus, Campanella, Porta, Huarte, and, above all, that able and original thinker, Scipio Chiaramonti (Claramontius), &c., had long since made and collected very important physiognomical observations, when in the year 1775, a work under the title of 'Physiognomical Fragments' represented this subject, which had hitherto been considered and treated as an aphoristic contribution to the knowledge of man, as the foundation of a science, and of importance to the human race. It announced the new doctrine with the enthusiasm of an article of faith, and was received in some instances with contradiction, in others with ecstacy, and everywhere with the most lively interest. J. C. Lavater, the author of this work, had already gained the esteem and affection of an extended circle, by his honorable and

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5thly. To state the result as applied to this period, which is unquestionably the most important in the whole history of our doctrine, and which, properly speaking, then first attained an independent existence. The period of peace with which it began afforded an opportunity for collecting an ample store of materials, and prepared men's minds by quiet research for the reception of comprehensive notions. The epoch of violent agitation which followed, set materials and ideas in rapid motion. The alternately excited and asthenic state of the public mind, which was a necessary consequence, was peculiarly calculated to direct attention to the morbid state of the intellectual faculties which then appeared more and more frequently. The impulse given, on the one hand, to philosophy by Kant, who discussed those fundamental questions which concern the operations of the mind with a profoundness and precision never before known, and the advance, on the other hand, of experimental physiology, which gave us hopes of being able to follow out to the minutest atom the organic apparatus of those operations, knit the two terminating threads of medical psychology together, and promised a durable union. Magnetism, physiognomy, and phrenology, in the form in which they appeared,—perhaps premature unripe fruits of this union —impelled the ardour of inquiry still further into enticing obscurity. The interest taken in these studies increased daily; periodical publications put the question under discussion into new and clearer forms; a philanthropically practical interest in the organisation of institutions for mental diseases was added, and thus all the elements were at length combined to facilitate the birth of a science, of which more wonders had hitherto been proclaimed than seen.

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B. Before closing this historical sketch, I will give, according to my promise, a preliminary idea of the present position of our doctrine, together with a history of its development to the latest period. It is now usual to distinguish, in a medical sense, three different views of the relation of the operations of the mind to those of the body—of intellectual to corporeal life.

1. That called *somatic* assumes the operations of the mind to be an emanation from those of the body, and considers mental disorders to be merely bodily ailments.

2. That called *psychical* assumes an independent operation of the mind, and considers its disorders as purely psychical derangements.

3. That called *mixed* assumes an independent operation (life) of the mind, and sees in its derangements a half psychical, half corporeal disease.

These three designations are, however, only collective terms for very different views comprised in them, and we should be doing much injustice to their representatives if we imputed to them all the consequences that may be deduced from these strongly expressed extremes. They are, besides, variously combined and blended by the most diverse limitations and transitions, according to the proportion of intellectual and sensitive qualities existing in their respective supporters; qualities which are different in every thinking individual. We must therefore never positively designate any one as belonging to either of these categories, unless he declare himself to that effect, for instance Friedreich, who adopts the somatic view, though many passages might be adduced against him where his view partakes of the psychical. A theory which alleges as one of the arguments *for* the somatic nature of all mental derangement that the mind is an independent, indivisible energy, and incapable of becoming diseased, cannot, according to the above designation, be properly called somatic. The preceding observations were necessary to obviate any misconception of what follows.

The able J. B. Friedreich[1] is generally regarded as the

[1] Vide P. R. Lippich, Tract. de Vesav. (Breit et Wieser), where several subdivisions and arguments on both sides are adduced.

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representative of the somatic view. According to him, all psychical disorders are a result of abnormal conditions of the body: 1, because the mind (see above) cannot become diseased; 2, because the greater part of the causes producing those conditions is somatic; 3, because in all mental disorders there are somatic symptoms in addition; 4, because they are too permanent for pure conditions of the mind; 5, because they are subject to cosmical and telluric states; 6, because their crises always take place in a material way; 7, because they are not unfrequently removed by strong material influences; 8, because the somatic mode of cure alone has a direct sanatory effect, the psychical at most an indirect effect on the body; 9, because the occurrence of psychical indisposition on one side only, must arise from the duality of the brain; 10, because the return of reason before death occurs in cases not only of psychical, but likewise of somatic diseases, and may be physically accounted for; 11, because mental disorders correspond with the temperaments; 12, because it may be proved that there are psychical conditions which depend on organic causes, and are therefore very analogous to psychical disorders; 13, because chronic delirium (mania) can be no other than febrile.[1]

Though this is by no means the place to decide on these weighty questions, the import of which can be rendered clear only by the development of the whole doctrine, yet some preliminary observations on the reasons alleged above may afford a clue calculated to guide us further on our way. 1. The notion conveyed in the words "become diseased" must be more fully defined before we can judge of it. 2. The "greater part" is not the whole; and moreover occasional causes, and what are called proximate causes, must be distinguished. 3. Will be called in question by the adherents of the psychical view. 4. It does not appear why a pure condition of the mind should not be permanent. 5. These conditions may act indirectly on the mind in the same manner as psychical remedies, according to the somatic view,

[1] Historisch-kritische Darstellung der Theorieen über den Wahnsinn. Leipzig, 1836. The special views of individuals—for instance, of the judicious and conscientious Jacobi and others—must be studied at their sources. What has cost the labour of a life to acquire, cannot be discussed in the compass of a page. Here we have to do only with some final points.

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These three designations are, however, only collective terms for very different views comprised in them, and we should be doing much injustice to their representatives if we imputed to them all the consequences that may be deduced from these strongly expressed extremes. They are, besides, variously combined and blended by the most diverse limitations and transitions, according to the proportion of intellectual and sensitive qualities existing in their respective supporters; qualities which are different in every thinking individual. We must therefore never positively designate any one as belonging to either of these categories, unless he declare himself to that effect, for instance Friedreich, who adopts the somatic view, though many passages might be adduced against him where his view partakes of the psychical. A theory which alleges as one of the arguments *for* the somatic nature of all mental derangement that the mind is an independent, indivisible energy, and incapable of becoming diseased, cannot, according to the above designation, be properly called somatic. The preceding observations were necessary to obviate any misconception of what follows.

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representative of the somatic view. According to him, all psychical disorders are a result of abnormal conditions of the body: 1, because the mind (see above) cannot become diseased; 2, because the greater part of the causes producing those conditions is somatic; 3, because in all mental disorders there are somatic symptoms in addition; 4, because they are too permanent for pure conditions of the mind; 5, because they are subject to cosmical and telluric states; 6, because their crises always take place in a material way; 7, because they are not unfrequently removed by strong material influences; 8, because the somatic mode of cure alone has a direct sanatory effect, the psychical at most an indirect effect on the body; 9, because the occurrence of psychical indisposition on one side only, must arise from the duality of the brain; 10, because the return of reason before death occurs in cases not only of psychical, but likewise of somatic diseases, and may be physically accounted for; 11, because mental disorders correspond with the temperaments; 12, because it may be proved that there are psychical conditions which depend on organic causes, and are therefore very analogous to psychical disorders; 13, because chronic delirium (mania) can be no other than febrile.[1]

Though this is by no means the place to decide on these weighty questions, the import of which can be rendered clear only by the development of the whole doctrine, yet some preliminary observations on the reasons alleged above may afford a clue calculated to guide us further on our way. 1. The notion conveyed in the words "become diseased" must be more fully defined before we can judge of it. 2. The "greater part" is not the whole; and moreover occasional causes, and what are called proximate causes, must be distinguished. 3. Will be called in question by the adherents of the psychical view. 4. It does not appear why a pure condition of the mind should not be permanent. 5. These conditions may act indirectly on the mind in the same manner as psychical remedies, according to the somatic view,

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These observations are by no means intended to refute the somatic theory, or to detract from the great merits of Friedreich in illustrating and enlarging the fundamental principles of medical psychology. It would be a great misapprehension so to consider them. On the contrary, he is as right in his positive propositions as his psychiatric opponents are in theirs. It will appear in the sequel that all parties are wrong only in negative points, by virtue of which they dispute the neutral ground that lies between them. We shall find that as many objections may be made to the so-called psychical theory, and still more serious ones to the mixed theory. This is a matter not to be settled by single propositions and proofs. The arguments must be weighed, not counted. The true relations must be established, not by means of demonstrations, but by a consideration of the mode of procedure in the organic development of the whole. My purpose was to prepare the way for this. To discuss the subdivisions and varieties of the somatic view in this place would lead us too far, and be anticipating our subject. They are amply detailed in the works quoted.

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tative of the psychical view. The diversity of opinions however, among the very eminent men who are generally ranged under this banner (Harper, Heinroth, Benecke, Ideler, &c. &c.) is much greater than in the preceding class.[1] It is therefore more difficult to lay down those general positions, in which they agree, than in the other case. The following may perhaps be assumed as such:—The mind is the immediate seat of the disease, the bodily suffering is secondary. Mental disorders may be clearly traced to their origin, SIN, ERROR, PASSION. Diseases of the brain, on the contrary and of all the organs, occur, even in their greatest intensity, without mental disturbance, as also the latter without the former. The psychical mode of cure is that which is properly efficient; the somatic remedies in reality act psychically; for instance, through pain, diversion of the thoughts, stupefaction, terror. Pathological anatomy has not discovered any decided relation between disorganisation of the brain and mental disorders.

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fearless sentiments, piety, and poetical talents, and also by his dignified and amiable manners. He spoke the energetic language then in fashion, and was soon joined by other high-spirited young men, among whom was Goethe; while men of matured reflection, like Lichtenberg, expressed their doubts. Both, however, contributed to promote the study, and to increase the interest felt in the science. The work was translated into foreign languages, and by its contents, style, and the addition of excellent copperplates, excited the attention of the public till exaggerations of another kind turned that attention into other channels. The zeal which Lavater created for his subject was personal; he had invested it with a mystical colouring, and made it the centre of a religious idea. When these interests, supported by his personal character, disappeared, the artificial structure dissolved into its natural elements, which will not fail, as they did before, to exercise a useful influence over the progress of the sciences.

To render the delineation of this division of our subject complete, we must consider the influence which the periodical press exercised over the practical part of our doctrine in this epoch. It was in Germany that this powerful instrument in the promulgation of such important labours was the most effective, and the above-mentioned connexion of Reil with professed philosophy (at first with Kaissler, then with Hoffbauer), was what set it in motion. It was this union which created the first psychological journal in Germany, the tendency of which was chiefly philosophical (1806-1808). The increasing and continually extending interest felt on the subject of lunacy, which proceeded from individual institutions and from the different states, called for a more decidedly medical organ for its representation; and there appeared, from the year 1818 to 1826, under the editorship of Nasse, the most important of the psychiatrical journals which had yet been published. This contained highly valuable contributions to all branches of medical psychology, and followed the general course adopted by Reil, only paying more regard to the specially practical requirements of the physician. Friedreich's Magazine, which followed (1829-1838), chiefly furnished extracts, notices, and critiques, which are of importance to a knowledge of the literature of this department; and a periodical published

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the Bicêtre for 800 male lunatics, and the Salpetrière for as many females, which, with their dependencies, present the appearance of a little town. Besides these, the institution at Charenton, near Paris, and the admirable one at Rouen are well known. In England, the fine asylum at Hanwell, for pauper lunatics of the county of Middlesex, which accommodates 1000 patients, the splendid New Bethlehem and St. Luke's hospitals, are the most distinguished. In Italy, there are noble establishments; namely, in Genoa, Ancona, Aversa, and at Palermo, under the direction of the philanthropic Baron Pisani. The establishment at St. Petersburg has become eminently useful. In Switzerland great service has been rendered by Dr. Tribolet, near Berne. Spain, torn by intestine troubles, is unfortunately by far the most backward nation in this respect.[1] In Germany, the opening of the Sonnenstein, near Pirna, in Saxony, was the dawn of a day which was thenceforth to cheer the most unfortunate of the human race. The able and energetic Langermann came from Baireuth to Berlin to regulate this institution, and to superintend the organisation of other lunatic asylums. The establishment connected with the Hôpital de la Charité in that city, now directed by Dr. Ideler, and the private institution of Horn, soon acquired deserved reputation. The other celebrated institutions in Germany are: in Halle (now under Damerow), in Marsberg for Westphalia (Ruer), in Siegburg for Rhenish Prussia (Jacobi), in Würtzburg, united with the Julius hospital (Narr), in Münich (Christmüller), in Leipzig, where Heinroth practised, near Achern (Roller), in Merxhausen, in Hesse (Gross), in Hofheim, likewise in Hesse (Amelung), in Winnenthal (Zeller). A splendid new building, which is not yet inhabited, has been erected at Erlangen, and Saxenberg, near Schwerin, offers the first model of a great establishment in which the treatment of curable and the care of incurable cases of insanity are combined. The principal institutions in the Austrian empire are: in Vienna (Dr. Viszänik), in Prague (Dr. Riedel), in Gratz (Dr. Schubert), in Brünn (Dr. Kroczak), in Laibach (Dr. Zhuber), in Clagenfurt (Dr. Jansekowich), in Hall (Dr. Tschallener).[2] In conclusion, we have still to notice the remarkable colony for

[1] Vide de Turc. in the Annal. de la Soc. d. Méd. d. Gand. 1841.

[2] Compare the works of Köstler, Viszänik, &c. &c.

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the insane at Gheel, near Antwerp, where between 400 and 500 lunatics are distributed for their cure among the 6000 inhabitants of the place, and the establishment of the philanthropic Dr. Guggenbühl on the Abendberg, in Switzerland, for the cure of cretinism. Even in Egypt Mehemet Ali has, under the direction of a European physician, appropriated the civil hospital, Esbekieh, to the reception of the insane, who had hitherto languished in that country in a state of helpless destitution.

This rather detailed, and yet slight sketch, was necessary in order—

5thly. To state the result as applied to this period, which is unquestionably the most important in the whole history of our doctrine, and which, properly speaking, then first attained an independent existence. The period of peace with which it began afforded an opportunity for collecting an ample store of materials, and prepared men's minds by quiet research for the reception of comprehensive notions. The epoch of violent agitation which followed, set materials and ideas in rapid motion. The alternately excited and asthenic state of the public mind, which was a necessary consequence, was peculiarly calculated to direct attention to the morbid state of the intellectual faculties which then appeared more and more frequently. The impulse given, on the one hand, to philosophy by Kant, who discussed those fundamental questions which concern the operations of the mind with a profoundness and precision never before known, and the advance, on the other hand, of experimental physiology, which gave us hopes of being able to follow out to the minutest atom the organic apparatus of those operations, knit the two terminating threads of medical psychology together, and promised a durable union. Magnetism, physiognomy, and phrenology, in the form in which they appeared,—perhaps premature unripe fruits of this union —impelled the ardour of inquiry still further into enticing obscurity. The interest taken in these studies increased daily; periodical publications put the question under discussion into new and clearer forms; a philanthropically practical interest in the organisation of institutions for mental diseases was added, and thus all the elements were at length combined to facilitate the birth of a science, of which more wonders had hitherto been proclaimed than seen.

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B. Before closing this historical sketch, I will give, according to my promise, a preliminary idea of the present position of our doctrine, together with a history of its development to the latest period. It is now usual to distinguish, in a medical sense, three different views of the relation of the operations of the mind to those of the body—of intellectual to corporeal life.

1. That called *somatic* assumes the operations of the mind to be an emanation from those of the body, and considers mental disorders to be merely bodily ailments.

2. That called *psychical* assumes an independent operation of the mind, and considers its disorders as purely psychical derangements.

3. That called *mixed* assumes an independent operation (life) of the mind, and sees in its derangements a half psychical, half corporeal disease.

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appeared from 1817 to 1824, exerted themselves to promote, by observation and reasoning, the scientific investigation of these phenomena. Thus magnetism became the subject of divers interests and modes of treatment; to philosophers an object of speculative exercise, to enthusiasts an article of faith, to charlatans a source of profit, to the majority an object of curiosity or of contempt, to a small minority a remedy, which, as respects both its basis and consequences, requires further unprejudiced and cautious investigation, and awaits the judgment of continually progressive knowlege. Our business in this place is only to set before you its origin in its most general but faithful outlines.[1] We pass on to the second of the theories which we have noticed.

J. Gall[2] had observed when at school that some boys, who, in spite of his attention, excelled him in committing subjects to memory, were distinguished by large eyes. He subsequently perceived the same peculiarity in celebrated actors. This led him to conjecture that this structure of the organs might indicate the faculty of memory. He afterwards indeed relinquished this conjecture, yet constantly returned to the idea that particular faculties actually depended upon the structure of certain corresponding parts of the head. He began to collect skulls, and carefully to compare their structure; extended this comparison to the skulls of animals, called to his aid a study of life and organisation, and became convinced that these physiognomical relations depended on something internal, and were not to be otherwise accounted for. This conviction led him to a more profound study of the structure of the brain, which he, by an improved method of dissection, chiefly invented by himself, (beginning from below upwards,) prosecuted with the greatest success, so that, according to Reil's testimony, he was in this department one of the first anatomists of Germany. Thus supported, phrenology, which, as well as mesmerism, had originated in Vienna, was nevertheless, like it, first propagated throughout the world from Paris, where Gall delivered lectures, and found a zealous coadjutor in Spurzheim. This doctrine, too, which, in its physiognomical part alone, set out with the position that the elevations and

[1] Vide Choulant, on An. Magn. Breslau, 1842.

[2] Born, 1758.

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depressions of the bony skull are impressions of the organs of the brain lying beneath, each of which represents a particular faculty of the mind, while it became the common property of the learned, became also the representation of the most diverse interests and notions. Degraded by the thoughtless to a childish toy, abused by enthusiasts, as a foundation for rash deductions, dishonoured by charlatanism, ridiculed by comic writers, despised by the many, investigated scientifically and impartially by the few, prosecuted in Germany physically, in England empirically, and, even in our days, as warmly opposed as defended, this doctrine, like that of Mesmer, awaits its due place in the domain of scientific development. Here, too, we have only to state its origin, and it appears, from what has been said, that it has been formed into a theory by observation, through the medium of empirical analogy and induction.

What was only a secondary consideration in craniology, namely, the investigation of the internal human character from the external, was the main object of another doctrine, which was prior in its origin, but was mutually supported by, and did itself support, the later theory—we allude to physiognomy, which we mention here merely as an enlargement of the other. It is as natural in itself, as it is well known from history, that the language of man's countenance, in connexion with all the other expressions of his inward feelings, has from the most ancient times excited the attention of philosophical observers, as well with reference to the fine arts, as in a social and medical point of view. Aristotle, Theophrastus, Campanella, Porta, Huarte, and, above all, that able and original thinker, Scipio Chiaramonti (Claramontius), &c., had long since made and collected very important physiognomical observations, when in the year 1775, a work under the title of 'Physiognomical Fragments' represented this subject, which had hitherto been considered and treated as an aphoristic contribution to the knowledge of man, as the foundation of a science, and of importance to the human race. It announced the new doctrine with the enthusiasm of an article of faith, and was received in some instances with contradiction, in others with ecstacy, and everywhere with the most lively interest. J. C. Lavater, the author of this work, had already gained the esteem and affection of an extended circle, by his honorable and

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[3] Sur l'Alién. m. Paris, 1791.

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the Bicêtre for 800 male lunatics, and the Salpetrière for as many females, which, with their dependencies, present the appearance of a little town. Besides these, the institution at Charenton, near Paris, and the admirable one at Rouen are well known. In England, the fine asylum at Hanwell, for pauper lunatics of the county of Middlesex, which accommodates 1000 patients, the splendid New Bethlehem and St. Luke's hospitals, are the most distinguished. In Italy, there are noble establishments; namely, in Genoa, Ancona, Aversa, and at Palermo, under the direction of the philanthropic Baron Pisani. The establishment at St. Petersburg has become eminently useful. In Switzerland great service has been rendered by Dr. Tribolet, near Berne. Spain, torn by intestine troubles, is unfortunately by far the most backward nation in this respect.[1] In Germany, the opening of the Sonnenstein, near Pirna, in Saxony, was the dawn of a day which was thenceforth to cheer the most unfortunate of the human race. The able and energetic Langermann came from Baireuth to Berlin to regulate this institution, and to superintend the organisation of other lunatic asylums. The establishment connected with the Hôpital de la Charité in that city, now directed by Dr. Ideler, and the private institution of Horn, soon acquired deserved reputation. The other celebrated institutions in Germany are: in Halle (now under Damerow), in Marsberg for Westphalia (Ruer), in Siegburg for Rhenish Prussia (Jacobi), in Würtzburg, united with the Julius hospital (Narr), in Münich (Christmüller), in Leipzig, where Heinroth practised, near Achern (Roller), in Merxhausen, in Hesse (Gross), in Hofheim, likewise in Hesse (Amelung), in Winnenthal (Zeller). A splendid new building, which is not yet inhabited, has been erected at Erlangen, and Saxenberg, near Schwerin, offers the first model of a great establishment in which the treatment of curable and the care of incurable cases of insanity are combined. The principal institutions in the Austrian empire are: in Vienna (Dr. Viszänik), in Prague (Dr. Riedel), in Gratz (Dr. Schubert), in Brünn (Dr. Kroczak), in Laibach (Dr. Zhuber), in Clagenfurt (Dr. Jansekowich), in Hall (Dr. Tschallener).[2] In conclusion, we have still to notice the remarkable colony for

[1] Vide de Turc. in the Annal. de la Soc. d. Méd. d. Gand. 1841.

[2] Compare the works of Köstler, Viszänik, &c. &c.

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the insane at Gheel, near Antwerp, where between 400 and 500 lunatics are distributed for their cure among the 6000 inhabitants of the place, and the establishment of the philanthropic Dr. Guggenbühl on the Abendberg, in Switzerland, for the cure of cretinism. Even in Egypt Mehemet Ali has, under the direction of a European physician, appropriated the civil hospital, Esbekieh, to the reception of the insane, who had hitherto languished in that country in a state of helpless destitution.

This rather detailed, and yet slight sketch, was necessary in order—

5thly. To state the result as applied to this period, which is unquestionably the most important in the whole history of our doctrine, and which, properly speaking, then first attained an independent existence. The period of peace with which it began afforded an opportunity for collecting an ample store of materials, and prepared men's minds by quiet research for the reception of comprehensive notions. The epoch of violent agitation which followed, set materials and ideas in rapid motion. The alternately excited and asthenic state of the public mind, which was a necessary consequence, was peculiarly calculated to direct attention to the morbid state of the intellectual faculties which then appeared more and more frequently. The impulse given, on the one hand, to philosophy by Kant, who discussed those fundamental questions which concern the operations of the mind with a profoundness and precision never before known, and the advance, on the other hand, of experimental physiology, which gave us hopes of being able to follow out to the minutest atom the organic apparatus of those operations, knit the two terminating threads of medical psychology together, and promised a durable union. Magnetism, physiognomy, and phrenology, in the form in which they appeared,—perhaps premature unripe fruits of this union —impelled the ardour of inquiry still further into enticing obscurity. The interest taken in these studies increased daily; periodical publications put the question under discussion into new and clearer forms; a philanthropically practical interest in the organisation of institutions for mental diseases was added, and thus all the elements were at length combined to facilitate the birth of a science, of which more wonders had hitherto been proclaimed than seen.

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B. Before closing this historical sketch, I will give, according to my promise, a preliminary idea of the present position of our doctrine, together with a history of its development to the latest period. It is now usual to distinguish, in a medical sense, three different views of the relation of the operations of the mind to those of the body—of intellectual to corporeal life.

1. That called *somatic* assumes the operations of the mind to be an emanation from those of the body, and considers mental disorders to be merely bodily ailments.

2. That called *psychical* assumes an independent operation of the mind, and considers its disorders as purely psychical derangements.

3. That called *mixed* assumes an independent operation (life) of the mind, and sees in its derangements a half psychical, half corporeal disease.

These three designations are, however, only collective terms for very different views comprised in them, and we should be doing much injustice to their representatives if we imputed to them all the consequences that may be deduced from these strongly expressed extremes. They are, besides, variously combined and blended by the most diverse limitations and transitions, according to the proportion of intellectual and sensitive qualities existing in their respective supporters; qualities which are different in every thinking individual. We must therefore never positively designate any one as belonging to either of these categories, unless he declare himself to that effect, for instance Friedreich, who adopts the somatic view, though many passages might be adduced against him where his view partakes of the psychical. A theory which alleges as one of the arguments *for* the somatic nature of all mental derangement that the mind is an independent, indivisible energy, and incapable of becoming diseased, cannot, according to the above designation, be properly called somatic. The preceding observations were necessary to obviate any misconception of what follows.

The able J. B. Friedreich[1] is generally regarded as the

[1] Vide P. R. Lippich, Tract. de Vesav. (Breit et Wieser), where several subdivisions and arguments on both sides are adduced.

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representative of the somatic view. According to him, all psychical disorders are a result of abnormal conditions of the body: 1, because the mind (see above) cannot become diseased; 2, because the greater part of the causes producing those conditions is somatic; 3, because in all mental disorders there are somatic symptoms in addition; 4, because they are too permanent for pure conditions of the mind; 5, because they are subject to cosmical and telluric states; 6, because their crises always take place in a material way; 7, because they are not unfrequently removed by strong material influences; 8, because the somatic mode of cure alone has a direct sanatory effect, the psychical at most an indirect effect on the body; 9, because the occurrence of psychical indi-position on one side only, must arise from the duality of the brain; 10, because the return of reason before death occurs in cases not only of psychical, but likewise of somatic diseases, and may be physically accounted for; 11, because mental disorders correspond with the temperaments; 12, because it may be proved that there are psychical conditions which depend on organic causes, and are therefore very analogous to psychical disorders; 13, because chronic delirium (mania) can be no other than febrile.[1]

Though this is by no means the place to decide on these weighty questions, the import of which can be rendered clear only by the development of the whole doctrine, yet some preliminary observations on the reasons alleged above may afford a clue calculated to guide us further on our way. 1. The notion conveyed in the words "become diseased" must be more fully defined before we can judge of it. 2. The "greater part" is not the whole; and moreover occasional causes, and what are called proximate causes, must be distinguished. 3. Will be called in question by the adherents of the psychical view. 4. It does not appear why a pure condition of the mind should not be permanent. 5. These conditions may act indirectly on the mind in the same manner as psychical remedies, according to the somatic view,

[1] Historisch-kritische Darstellung der Theorien über den Wahnsinn. Leipzig, 1-36. The special views of individuals—for instance of the celebrated and unfortunate Jacobi and others—must be studied at their sources. What has cost the labour of a life to acquire, cannot be discussed in the course of a page. Here we have to do only with some final points.

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act on the body. 6. Psychopathology has not yet acquired sufficient light respecting these critical processes. 7. "Not unfrequently" is not identical with "always;" these influences may likewise act indirectly on the mind. 8. A *circulus in probando:* mental diseases are somatic because the remedies act somatically, and the remedies act somatically because the diseases are somatic; the adherents of the psychical view may take the converse of these propositions. 9. What are we to understand by a mental disease affecting only one side, if the mind be simple and indivisible? Will the adherents of the psychical view allow the cases here adduced to be mental disorders? 10. Does this "*likewise*" prove anything? 11. Do not the temperaments correspond conversely with the qualities of the mind? 12. Can a proof be deduced from analogous conditions? 13. This proposition is warmly contested by the adherents of the psychical view.

These observations are by no means intended to refute the somatic theory, or to detract from the great merits of Friedreich in illustrating and enlarging the fundamental principles of medical psychology. It would be a great misapprehension so to consider them. On the contrary, he is as right in his positive propositions as his psychiatric opponents are in theirs. It will appear in the sequel that all parties are wrong only in negative points, by virtue of which they dispute the neutral ground that lies between them. We shall find that as many objections may be made to the so-called psychical theory, and still more serious ones to the mixed theory. This is a matter not to be settled by single propositions and proofs. The arguments must be weighed, not counted. The true relations must be established, not by means of demonstrations, but by a consideration of the mode of procedure in the organic development of the whole. My purpose was to prepare the way for this. To discuss the subdivisions and varieties of the somatic view in this place would lead us too far, and be anticipating our subject. They are amply detailed in the works quoted.

Heinroth,[1] who died in 1843, is considered as the represen-

[1] Lehrbuch der Seelenkunde. Leipzig, 1818. It is worthy of remark, however, that both Heinroth and Friedreich entertained different views at two different periods, only conversely.

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tative of the psychical view. The diversity of opinions however, among the very eminent men who are generally ranged under this banner (Harper, Heinroth, Benecke, Ideler, &c. &c.) is much greater than in the preceding class.[1] It is therefore more difficult to lay down those general positions, in which they agree, than in the other case. The following may perhaps be assumed as such:—The mind is the immediate seat of the disease, the bodily suffering is secondary. Mental disorders may be clearly traced to their origin, SIN, ERROR, PASSION. Diseases of the brain, on the contrary and of all the organs, occur, even in their greatest intensity, without mental disturbance, as also the latter without the former. The psychical mode of cure is that which is properly efficient; the somatic remedies in reality act psychically; for instance, through pain, diversion of the thoughts, stupefaction, terror. Pathological anatomy has not discovered any decided relation between disorganisation of the brain and mental disorders.

Here again I add a few remarks. 1. Can the modification of the mind in itself be called disease otherwise than *per analogiam?* Here, as before, the idea "Disease" is not precise. 2. We may very often see them proceed as clearly from bodily suffering; and sin, error, and passion exist without their following as a consequence. Here too occasional causes and what are termed proximate causes must be distinguished. 3 They occur also *with* mental disturbance, and the latter when it does not arise merely from sin, error, &c. hardly ever without them. 4. The adherents of the somatic view (see above) affirm the contrary of both. 5. Pathological anatomy will make further progress, and where anatomical preparations cannot be made, recourse will be had to the aid of Pathological chemistry and physics.

As the representatives of what is called the mixed view, we

[1] We may distinguish a religious, an ethical, and a psychological view, (Heinroth, Ideler, and Benecke.) The ethical is the most clearly, scientifically, and practically developed by Ideler, whose works breathe a pure, moral intellectual spirit; but as Ideler is more discursive than methodical in his writings, I would refer any one who desires to be acquainted with the essence of his views, especially to the chapter on the Pathogeny of Mental Diseases, in the second volume of his 'Grundriss der Seelenheilkunde,' pp. 114, 115.

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are not to look on some eclectic, empirical French writers, as for instance, Esquirol, that admirable observer, whom Lippich justly calls "Hippocratem pro morbis mentalibus dicendum," or Georget &c.; nor the English, as Haslam, Perfect, the profound Crichton, &c., but those who, like Groos or Blumröder, hope and endeavour to unite the principles of the two views. On reflection, however, it will appear evident that principles cannot be confounded, and that a question positively stated, must be either positively answered yea or nay, or a protest must be entered against the question itself.

There is something in the ever-recurring squabbles between the best writers on our subject which excites a compassionate smile in those who are in the habit of examining questions calmly and impartially. Who denies, who *can* deny that often, and independently of bodily causes, erroneous notions, unbridled passion, overpowering feelings, or a want of development may change the regular course of psychical operations in such a manner, that it may justly be said that such a mind is diseased? Who can deny that such a disease is not to be removed by cold shower-baths, tarter emetic, &c., but wholly and solely by an influence on the mind? But, if we impartially weigh the subject and extent of medical art and science, do we not immediately perceive that every psychological physician, who treats the above-mentioned condition in the above-mentioned manner, is called a physician only in a metaphorical sense? The question in dispute is, properly speaking, not whether the mind can become diseased, but whether the task of treating independent states of the mind by education, instruction, &c. is to be considered as belonging to the province of the physician or not? The present state of the world seems to reply in the negative, because, since these moral influences are confided to parents, teachers, the clergy, &c., and by diseases, in a non-figurative sense, only the somatic are understood, the physician has to do with them alone. But here, as in human knowledge in general, it happens occasionally that these moral and logical conditions, which, as well etiologically as therapeutically, are wholly independent, trench on the somatic, and enter into the domain of the physician, whose rule, therefore, extends over them. The confines, as in all human knowledge, touch without effacing each other, and this is the main substance and object of all medical psycho-

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logy, so that the physician, who is wholly unacquainted with the relations of intellectual to physical life will not be able to comprehend and treat the latter in all its various bearings.

Matter and spirit, when they are united to form body and mind, can no longer be considered otherwise than as unity. When therefore the so-called somatic theory affirms that every mental disorder has a purely corporeal origin, it speaks as partially as the psychical theory would in affirming that every bodily suffering proceeds from the mind. If, as Dubois justly observes in hypochondriacs, organic diseases are the most easily formed in those parts on which they bestow particular care, and if (as I have endeavoured in another place to show by many proofs) imagination may contribute as much to the prophylaxis and cure, as to the origin of bodily maladies, a psychical commencement of them is hereby admitted; while, on the other hand, no one who is acquainted with human nature will deny that those peculiar maladies of the mind, error and vice, originate frequently in states of the body. Here again we have only to do with the determination of the boundaries of the medical domain, not with theories. The end of the former, the beginning of the latter, lie in this domain, and the physician has to find the line of coincidence, the line where spirit and matter combine to form a living unity; he has to appreciate the mind, so far as it acts etiologically or therapeutically on the body. Its peculiar and proper pathology belongs to logic and ethics, for, as it has itself no seat, it cannot be the seat of substantial sufferings. The division hitherto most approved, of what are called mental diseases, according to the deranged functions of the mind, is therefore, at all events, only symptomatic—phenomenological. It may, however, answer our purpose as well as any other, till we shall have ascertained in every case of these deranged functions the causal relation between mind and organ, before which period many a long year will pass away.

If we now turn from these theoretical views to the practice of medical psychology, which is our proper concern, we shall perceive with pleasure, in considering its present state, that the importance of these theories is by no means so great in the application as might at first sight appear. Different as are the psychological and pathological doctrines of the mind, their adherents agree pretty well with respect to the therapeutics; a new

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and consolatory confirmation of the truth that the actions of man, as his most holy duty and most exalted task, may be performed without requiring certainty in all the problems of knowledge. As in the healing art in general, the most experienced and best-informed physicians pursue nearly the same treatment at the bed-side, and only explain in a different way, the effect of the same remedies, according to the difference of the schools to which they belong, so those who practise this branch of medicine in particular agree on the whole in the choice of remedies; the psychical employ likewise somatic; the somatic employ likewise psychical remedies; only, as we have seen above, the one party explain the effect of the psychical remedies somatically, and the other the effect of the somatic remedies psychically. Thus each employs both kinds of remedies, and the extravagances either way are so easily recognised as exceptions, that they cannot mislead the learner. All practical men in this branch are, however, especially unanimous in acknowledging the importance of public institutions for the cure of lunatic patients; all eyes are directed to them, and plans for their amusement and improvement are now the primary object of psychiatric science; and though the sanguine admirers of the psychical mode of cure, for instance, by theatrical representations, &c. undoubtedly go somewhat too far, it is nevertheless generally perceived, that these institutions and their proper organisation offer the only practicable mode of successfully treating mental disorders.

This is a general outline of the present state of the therapeutical part of our doctrine, and with it the sketch of its history is completed.

Instead of the notions of the somatic, psychical, and mixed views stated above, and the doubtful foundations upon which they rest, you will now naturally wish to be informed which of them are the views that these lectures adopt, or what others they will propose, in order that you may be guided by something not negative, but positive. A well-grounded answer to this point can only be furnished by the lectures themselves; but from our preliminary basis thus much may be premised. The maladies of the spirit alone, *in abstracto*, that is, error and sin, can be called diseases of the mind only *per analogiam*. They come not within the jurisdiction of the physician, but that of

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the teacher and clergyman, who again are called *physicians* of the mind only *per analogiam*. The maladies of the body alone, *in abstracto*, for instance, of the brain or the nerves, without mental alienation, are not diseases of the mind, but of the body. The notion, *mental disease*, must therefore be deduced, neither from the mind nor from the body, but from the relation of each to the other. The question does not turn here on the external cause of psychopathies, which may be either psychical or corporeal, nor upon what is called the proximate cause, which is inscrutable, because the relation between body and mind is inexplicable; the question is respecting the phenomenon itself. Where psychical phenomena appear *abnormal*, there is mental disorder which has its root in the mind, so far as this is manifested through the sensual organ, and has its root in the body, so far as this is the organ of the mind. To search after the phenomena in which these relations are revealed, with the unprejudiced eye of experience—to investigate them scientifically in every point that is of importance to the physician, and to collect them in one whole, is the province of medical psychology, upon which we are now about to enter.

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CHAPTER III.

PHYSIOLOGY.

§ 1. THERE are two modes or ways of treating the subject of our investigation—1st, the synthetical, which deduces the particular from the unity of the scientific idea; 2dly, the analytical, which takes given particulars as the starting-point, and aims at reaching scientific unity. The first gives the philosophical foundation; the second, the physical development, or natural history. The metaphysician takes the first course, the second is prescribed by our object, which requires a physiology of mental operations.

We shall, therefore, after determining the facts and notions from which we have to proceed, begin with the most simple operations of psychical life, and gradually advance to the more complex and elevated. The latter must be understood from the former, as in the sequel, the pathological from the physiological. When we have reached the highest functions, the reverse or synthetic method, which refers mental to bodily diseases, furnishes, as it were a proof and completion of the analytic, which again opens to our view many new points of the subject. An example of the first method is given in Hartmann's excellent work, 'The Physiology of Thought;'[1] which endeavours to develop the intellectual functions from the organs. An example of the second mode of proceeding is furnished by the able Nasse,[2] who seeks to deduce the relation to the several organs from the mental functions.

§ 2. How do we acquire the notions, *body, mind, spirit?* Fear not that I shall conduct you into the dangerous domain of metaphysics. We have nothing to do with it, though it would be well if we might take it for granted. We have only to seek a firm foundation and a definite terminology for our science, in order that we may be able to take every step with

[1] Der Geist des Menschen. Vienna, 1832, second edition.

[2] Zeitschrift. für ps. Aerzte (1822), and elsewhere.

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security and intelligence. If the practitioner think that he can do without any theoretical basis, and therefore without this, he is mistaken, and in the course of his practice will, alas! too late perceive his error; for every human action, even the most mechanical, rests upon, and ultimately requires, principles.

We attain the above-mentioned fundamental ideas by sensual perception and consciousness; the first reveals to us a material, the second an intellectual, world. We have, therefore, these two facts: the fact of perception and the fact of consciousness, from which we proceed.

The process in man himself, whereby he becomes aware of these facts is, as mentioned in § 1, first analytical, then synthetical. First, the material world is perceived by means of the feeling and senses. With the gradual development of man, he learns to analyse it more and more in detail, and thus attains, as it were, from below upwards, to abstractions and notions, and gradually to a notion of *notions*, which he designates by the word *mind*, which notion, however, at this stage of the process, is only negative, being "everything that is *not matter*." But here, uniting as it were two worlds, the fact of consciousness intervenes, which announces itself by the idea of unity and freedom. When this fact has occurred to man, he endeavours to combine, as it were, from above downwards synthetically, into one whole, the world with which he has become acquainted through his senses.

"Something for which man can find no analogy, combines with the organs which he has in common with the higher species of animals,—he calls it *mind*."[1]

§ 3. The union of the perception of both facts (§ 2) in one subject, every man designates as "*ego*." The *ego* of the mental physiologist is therefore not the *ego* of the metaphysician. That *ego* of which we speak, consists of body and mind,[2] the other is an abstraction of the most spiritual personality.[3] Let

[1] Neumann, d. Mensch. 1844, p. 23. [2] Vide Töltenyi. Kritik. i, 223.

[3] Fichte. Professor Lippich appears to agree with us, in his acute essay 'über die Verletzlichkeit der menschlichen Leibesfrucht' (M. Jahrb. n. f. vi, 204), he says, "The principle of human personality, that is to say, the notion of individuality, can originally reveal itself only in the manner of human conception." Carus would say, "Darleben," pervitalisation.

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it not be objected that the *ego* must be intellectual, for the child at first speaks of himself in the third person, till the intellectual personality is developed in him.[1] He speaks of himself in the third person till he perceives the relation of the two worlds to himself. This, however, is arguing in a circle, for he only perceives the two worlds because they unite in his *ego* as one subject. This circle must not mislead us; the facts of observation and consciousness are *felt* by man in his *ego, completely as one;* that they are *two* worlds, of which they give testimony, and which coincide in him, he discovers only by abstraction.

Matter and spirit are this abstraction; the former appears in man *in concreto* as body, the latter as mind. Body being animated matter, mind being incorporated spirit. Both intimately one, and indivisible in the phenomenon.

These ideas cannot be too clearly and profoundly impressed upon the mind; the security of all further steps in the domain of anthropological medicine depends on a firm adherence to them. They are, then, most deeply impressed upon our minds when we initiate ourselves into them by applying them in various directions, and as it were putting them to the proof. Thus also the Pythagorean scheme of Troxler is explained.[2]

"We feel ourselves originally as unity; in the *ego* of the natural man there is neither spirit nor matter. Thinking first induces the notion of spirit. Spirit, therefore, is something which we think (sceptical realism). But that we do think is itself a proof of the independent existence of spirit, for we cannot think anything without a thinking principle. There must, therefore, *be* spirit besides sensual existence (dualism.) Matter also, as distinct from spirit, is not conceived by us till after this abstraction; matter too, as well as spirit, is something within us of which we think (idealism). Spirit and matter are thus only differences which are thought of; they are, in reference to man, two modes of conceiving a unity, (the philosophy of identity, and its filiations.) But as we *are* only men, we will be content with this need of a conception, without premising anything beyond it." This is our view. "All systems of philosophy in their multiplied modifications move,

[1] Kant, Anthropol.

[2] Vide Blicke in d. Wes. d. Menschen.

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and will eternally move within these limits; to recognise them, and to be conscious of their limits is therefore, properly speaking, the key to all which unlocks their relative truth, it is the philosophy of philosophies."

§ 4. There are, therefore in man two systems of perceptive faculties, one called body, the other mind. The former is dependent on external excitements, the whole of which we collectively call nature; the latter is dependent on internal excitements, the whole of which we collectively call spirit.[1] We divine these worlds only from the dependence in which we feel ourselves with respect to them. They are generic abstractions of what is specifically individualised in us; both the abstractions are in themselves inexplicable, nor can they reciprocally explain each other. Such explanation, however, is not at all necessary to our view of the case, or to its medical application. As the naturalist knows and applies electro-magnetism in its relations, without comprehending its essence, as the astronomer calculates the movements of the planets without knowing their nature, so can we duly appreciate spirit and matter in their relations to each other as body and mind, without being able to explain their nature or these relations.[2] The human mind is satisfied if in any case it can explain to itself *why* it cannot explain that case. In this determination of what can *not* be known, by which time is spared and error avoided, consisted the great merit of Kant. What is the meaning of *explaining?* To *explain* means to deduce from a principle; but this principle must itself be conceivable, for from the inconceivable nothing can be deduced; that is, rendered conceivable. What is conceivable? That which lies within our laws of thought. Whether these be objects of sense or of intellect, we cannot, in either case, comprehend their principle, because it does not lie within those laws. Thus, as the phenomenon of the two facts is presented to us, we are compelled, in order not to be forced to deny them, to assume an inconceivable spiritual, and material principle, by which, however, neither spirit, nor matter, nor their unity is explained. Every attempt in other

[1] Noval, Kl. Sch. ii, 157.

[2] Nasse, Zeitschrift, 1822, 1 Part, p. 3. Yet the examination of the relations of a thing conducted by way of experiment does not necessarily imply a previous knowledge of the essence of that thing, on the contrary, the former may prepare the latter.

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directions is sophistry, we are everywhere confined *within our laws of thought*. Were it otherwise we might create and conjure up fancies; or we should not be what we are. It is in vain to attempt to elucidate our unity, because it is given us immediately; we think as a unity, and can, therefore, no more comprehend this thinking, with which we think, than our right hand, which may indeed lay hold of the left, can lay hold of itself.

When we are sufficiently clear on this point, the various methods of treating the matter, and the partial ends of these methods, will readily be estimated by us at their real value.

Hence you see how vain are all attempts to explain the mutual relations of body and mind, and how fruitless it is to criticise such attempts at explanation as the hypotheses of pre-established harmony, of physical influence, &c. It is not dualism that is given, to be reduced to unity; but unity that is given, and we only find dualism afterwards by abstraction. (§ 2.) *We* are a simple testimony of two *worlds*. The best that can be said on this subject, not to *explain* the mutual relations between mind and body, but to *express* it, seems to me to be contained in Nasse's paper, 'Grundzüge der Lehre,' &c. (outlines of the doctrines, &c.), in the first number of his Journal for 1822. I recommend it to your very careful meditation, because it at least completely states the problems, which, in life as in science, *is all that man can perform.*[1]

§ 5. That method which keeps mind and matter constantly separate, is indeed perfectly philosophical, for it does not blend the principles, but proceeds metaphysically with respect to mind, and physically with respect to matter; and will, therefore, attain, in both respects, the final results which must meet in the end. But not to mention that, in the phenomenon unity alone is given us, we never obtain in this manner that result which is indispensable to medical objects, viz. a knowledge of the reciprocal action of body and mind.

[1] Professor Exner, in his 'Kritik der Hegelschen Psychologie,' Leipzig, 1842, gives the following lucid observation: that "a product cannot be thoroughly comprehended before its factors;" that is, in this case, that physiology must have fully cleared up the knowledge of the body, and psychology that of the mind, before we can hope to attain that of their mixed state. True, if the question be an *explanation*; thus we are authorised, or rather compelled, by this remark also to be content with a *statement* of the facts.

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That method which maintains the unity of both worlds, may proceed in three different ways.

a. Ideal,—making matter a product of mind, and thus subjecting it to purely philosophical considerations.

b. Real, (or more properly *material*)—making mind the product of matter, and thus considering it in a chemico-physical (purely natural-historical) point of view.

c. Identical,—declaring matter and mind to be one (attributes of one substance, forms of one being, manifestations of one idea, considering them in a view partly philosophical, partly empirical. (Natural Philosophy, Monism.)

All these methods, when attentively examined, cut the knot instead of loosing it, and paralyse further research. To attempt to investigate matter and its state (*a*) by speculation, is impossible, and impedes the progress of our inquiries into nature; to explain spirit and its action (*b*) materially, leads to a negative result, and is equally impossible, not to mention that the positive fact of freedom interposes its veto. To identify spirit and matter (*c*), furnishes no definite resting point.

Again, therefore, in considering mind and body, no other course remains for us, than to maintain the spiritual essence of the former, and the material essence of the latter, in their constant synthesis, as acting with, for, upon, and against each other. (See Goethe, vol. xlix, p. 95.) This, therefore, is the problem which we have to solve (§ 1.), in doing which we begin below, and rise to higher considerations, after which, by returning from the higher to the lower, we shall complete the proof. (§ 1.)

We have already endeavoured to show in the preliminary chapter (p. 11, note), that both spiritualism and materialism are merely hypotheses, and are moreover unsatisfactory. The former cannot explain the corporeal, nor the latter the spiritual; but the second causes us more uncertainty than the first. In the latter, that Idealism which Kant called the critical is indisputable; namely, that we cannot go beyond our conceptions; but within their limits he leaves us at liberty—provided we do not deduce the corporeal world from them. Notwithstanding this, there is perhaps a "pre-established harmony," or something of the kind, between the two, and we

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and consolatory confirmation of the truth that the actions of man, as his most holy duty and most exalted task, may be performed without requiring certainty in all the problems of knowledge. As in the healing art in general, the most experienced and best-informed physicians pursue nearly the same treatment at the bed-side, and only explain in a different way, the effect of the same remedies, according to the difference of the schools to which they belong, so those who practise this branch of medicine in particular agree on the whole in the choice of remedies; the psychical employ likewise somatic; the somatic employ likewise psychical remedies; only, as we have seen above, the one party explain the effect of the psychical remedies somatically, and the other the effect of the somatic remedies psychically. Thus each employs both kinds of remedies, and the extravagances either way are so easily recognised as exceptions, that they cannot mislead the learner. All practical men in this branch are, however, especially unanimous in acknowledging the importance of public institutions for the cure of lunatic patients; all eyes are directed to them, and plans for their amusement and improvement are now the primary object of psychiatric science; and though the sanguine admirers of the psychical mode of cure, for instance, by theatrical representations, &c. undoubtedly go somewhat too far, it is nevertheless generally perceived, that these institutions and their proper organisation offer the only practicable mode of successfully treating mental disorders.

This is a general outline of the present state of the therapeutical part of our doctrine, and with it the sketch of its history is completed.

Instead of the notions of the somatic, psychical, and mixed views stated above, and the doubtful foundations upon which they rest, you will now naturally wish to be informed which of them are the views that these lectures adopt, or what others they will propose, in order that you may be guided by something not negative, but positive. A well-grounded answer to this point can only be furnished by the lectures themselves; but from our preliminary basis thus much may be premised. The maladies of the spirit alone, *in abstracto*, that is, error and sin, can be called diseases of the mind only *per analogiam*. They come not within the jurisdiction of the physician, but that of

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the teacher and clergyman, who again are called *physicians* of the mind only *per analogiam*. The maladies of the body alone, *in abstracto*, for instance, of the brain or the nerves, without mental alienation, are not diseases of the mind, but of the body. The notion, *mental disease*, must therefore be deduced, neither from the mind nor from the body, but from the relation of each to the other. The question does not turn here on the external cause of psychopathies, which may be either psychical or corporeal, nor upon what is called the proximate cause, which is inscrutable, because the relation between body and mind is inexplicable; the question is respecting the phenomenon itself. Where psychical phenomena appear *abnormal*, there is mental disorder which has its root in the mind, so far as this is manifested through the sensual organ, and has its root in the body, so far as this is the organ of the mind. To search after the phenomena in which these relations are revealed, with the unprejudiced eye of experience—to investigate them scientifically in every point that is of importance to the physician, and to collect them in one whole, is the province of medical psychology, upon which we are now about to enter.

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CHAPTER III.

PHYSIOLOGY.

§ 1. THERE are two modes or ways of treating the subject of our investigation—1st, the synthetical, which deduces the particular from the unity of the scientific idea; 2dly, the analytical, which takes given particulars as the starting-point, and aims at reaching scientific unity. The first gives the philosophical foundation; the second, the physical development, or natural history. The metaphysician takes the first course, the second is prescribed by our object, which requires a physiology of mental operations.

We shall, therefore, after determining the facts and notions from which we have to proceed, begin with the most simple operations of psychical life, and gradually advance to the more complex and elevated. The latter must be understood from the former, as in the sequel, the pathological from the physiological. When we have reached the highest functions, the reverse or synthetic method, which refers mental to bodily diseases, furnishes, as it were a proof and completion of the analytic, which again opens to our view many new points of the subject. An example of the first method is given in Hartmann's excellent work, 'The Physiology of Thought;'[1] which endeavours to develop the intellectual functions from the organs. An example of the second mode of proceeding is furnished by the able Nasse,[2] who seeks to deduce the relation to the several organs from the mental functions.

§ 2. How do we acquire the notions, *body, mind, spirit?* Fear not that I shall conduct you into the dangerous domain of metaphysics. We have nothing to do with it, though it would be well if we might take it for granted. We have only to seek a firm foundation and a definite terminology for our science, in order that we may be able to take every step with

[1] Der Geist des Menschen. Vienna, 1832, second edition.

[2] Zeitschrift. für ps. Aerzte (1822), and elsewhere.

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security and intelligence. If the practitioner think that he can do without any theoretical basis, and therefore without this, he is mistaken, and in the course of his practice will, alas! too late perceive his error; for every human action, even the most mechanical, rests upon, and ultimately requires, principles.

We attain the above-mentioned fundamental ideas by sensual perception and consciousness; the first reveals to us a material, the second an intellectual, world. We have, therefore, these two facts: the fact of perception and the fact of consciousness, from which we proceed.

The process in man himself, whereby he becomes aware of these facts is, as mentioned in § 1, first analytical, then synthetical. First, the material world is perceived by means of the feeling and senses. With the gradual development of man, he learns to analyse it more and more in detail, and thus attains, as it were, from below upwards, to abstractions and notions, and gradually to a notion of *notions*, which he designates by the word *mind*, which notion, however, at this stage of the process, is only negative, being "everything that is *not matter*." But here, uniting as it were two worlds, the fact of consciousness intervenes, which announces itself by the idea of unity and freedom. When this fact has occurred to man, he endeavours to combine, as it were, from above downwards synthetically, into one whole, the world with which he has become acquainted through his senses.

"Something for which man can find no analogy, combines with the organs which he has in common with the higher species of animals,—he calls it *mind*."[1]

§ 3. The union of the perception of both facts (§ 2) in one subject, every man designates as "*ego*." The *ego* of the mental physiologist is therefore not the *ego* of the metaphysician. That *ego* of which we speak, consists of body and mind,[2] the other is an abstraction of the most spiritual personality.[3] Let

[1] Neumann, d. Mensch. 1844, p. 23. [2] Vide Töltenyi. Kritik. i, 223.

[3] Fichte. Professor Lippich appears to agree with us, in his acute essay 'uber die Verletzlichkeit der menschlichen Leibesfrucht' (M. Jahrb. n. f. vi, 204), he says, "The principle of human personality, that is to say, the notion of individuality, can originally reveal itself only in the manner of human conception." Carus would say, "Darleben," pervitalisation.

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B. Before closing this historical sketch, I will give, according to my promise, a preliminary idea of the present position of our doctrine, together with a history of its development to the latest period. It is now usual to distinguish, in a medical sense, three different views of the relation of the operations of the mind to those of the body—of intellectual to corporeal life.

1. That called *somatic* assumes the operations of the mind to be an emanation from those of the body, and considers mental disorders to be merely bodily ailments.

2. That called *psychical* assumes an independent operation of the mind, and considers its disorders as purely psychical derangements.

3. That called *mixed* assumes an independent operation (life) of the mind, and sees in its derangements a half psychical, half corporeal disease.

These three designations are, however, only collective terms for very different views comprised in them, and we should be doing much injustice to their representatives if we imputed to them all the consequences that may be deduced from these strongly expressed extremes. They are, besides, variously combined and blended by the most diverse limitations and transitions, according to the proportion of intellectual and sensitive qualities existing in their respective supporters; qualities which are different in every thinking individual. We must therefore never positively designate any one as belonging to either of these categories, unless he declare himself to that effect, for instance Friedreich, who adopts the somatic view, though many passages might be adduced against him where his view partakes of the psychical. A theory which alleges as one of the arguments *for* the somatic nature of all mental derangement that the mind is an independent, indivisible energy, and incapable of becoming diseased, cannot, according to the above designation, be properly called somatic. The preceding observations were necessary to obviate any misconception of what follows.

The able J. B. Friedreich[1] is generally regarded as the

[1] Vide P. R. Lippich, Tract. de Vesav. (Breit et Wieser), where several subdivisions and arguments on both sides are adduced.

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representative of the somatic view. According to him, all psychical disorders are a result of abnormal conditions of the body: 1, because the mind (see above) cannot become diseased; 2, because the greater part of the causes producing those conditions is somatic; 3, because in all mental disorders there are somatic symptoms in addition; 4, because they are too permanent for pure conditions of the mind; 5, because they are subject to cosmical and telluric states; 6, because their crises always take place in a material way; 7, because they are not unfrequently removed by strong material influences; 8, because the somatic mode of cure alone has a direct sanatory effect, the psychical at most an indirect effect on the body; 9, because the occurrence of psychical indisposition on one side only, must arise from the duality of the brain; 10, because the return of reason before death occurs in cases not only of psychical, but likewise of somatic diseases, and may be physically accounted for; 11, because mental disorders correspond with the temperaments; 12, because it may be proved that there are psychical conditions which depend on organic causes, and are therefore very analogous to psychical disorders; 13, because chronic delirium (mania) can be no other than febrile.[1]

Though this is by no means the place to decide on these weighty questions, the import of which can be rendered clear only by the development of the whole doctrine, yet some preliminary observations on the reasons alleged above may afford a clue calculated to guide us further on our way. 1. The notion conveyed in the words "become diseased" must be more fully defined before we can judge of it. 2. The "greater part" is not the whole; and moreover occasional causes, and what are called proximate causes, must be distinguished. 3. Will be called in question by the adherents of the psychical view. 4. It does not appear why a pure condition of the mind should not be permanent. 5. These conditions may act indirectly on the mind in the same manner as psychical remedies, according to the somatic view,

[1] Historisch-kritische Darstellung der Theorieen über den Wahnsinn. Leipzig, 1836. The special views of individuals—for instance, of the judicious and conscientious Jacobi and others—must be studied at their sources. What has cost the labour of a life to acquire, cannot be discussed in the compass of a page. Here we have to do only with some final points.

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act on the body. 6. Psychopathology has not yet acquired sufficient light respecting these critical processes. 7. "Not unfrequently" is not identical with "always;" these influences may likewise act indirectly on the mind. 8. A *circulus in probando:* mental diseases are somatic because the remedies act somatically, and the remedies act somatically because the diseases are somatic; the adherents of the psychical view may take the converse of these propositions. 9. What are we to understand by a mental disease affecting only one side, if the mind be simple and indivisible? Will the adherents of the psychical view allow the cases here adduced to be mental disorders? 10. Does this "*likewise*" prove anything? 11. Do not the temperaments correspond conversely with the qualities of the mind? 12. Can a proof be deduced from analogous conditions? 13. This proposition is warmly contested by the adherents of the psychical view.

These observations are by no means intended to refute the somatic theory, or to detract from the great merits of Friedreich in illustrating and enlarging the fundamental principles of medical psychology. It would be a great misapprehension so to consider them. On the contrary, he is as right in his positive propositions as his psychiatric opponents are in theirs. It will appear in the sequel that all parties are wrong only in negative points, by virtue of which they dispute the neutral ground that lies between them. We shall find that as many objections may be made to the so-called psychical theory, and still more serious ones to the mixed theory. This is a matter not to be settled by single propositions and proofs. The arguments must be weighed, not counted. The true relations must be established, not by means of demonstrations, but by a consideration of the mode of procedure in the organic development of the whole. My purpose was to prepare the way for this. To discuss the subdivisions and varieties of the somatic view in this place would lead us too far, and be anticipating our subject. They are amply detailed in the works quoted.

Heinroth,[1] who died in 1843, is considered as the represen-

[1] Lehrbuch der Seelenkunde. Leipzig, 1818. It is worthy of remark, however, that both Heinroth and Friedreich entertained different views at two different periods, only conversely.

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tative of the psychical view. The diversity of opinions however, among the very eminent men who are generally ranged under this banner (Harper, Heinroth, Benecke, Ideler, &c. &c.) is much greater than in the preceding class.[1] It is therefore more difficult to lay down those general positions, in which they agree, than in the other case. The following may perhaps be assumed as such:—The mind is the immediate seat of the disease, the bodily suffering is secondary. Mental disorders may be clearly traced to their origin, SIN, ERROR, PASSION. Diseases of the brain, on the contrary and of all the organs, occur, even in their greatest intensity, without mental disturbance, as also the latter without the former. The psychical mode of cure is that which is properly efficient; the somatic remedies in reality act psychically; for instance, through pain, diversion of the thoughts, stupefaction, terror. Pathological anatomy has not discovered any decided relation between disorganisation of the brain and mental disorders.

Here again I add a few remarks. 1. Can the modification of the mind in itself be called disease otherwise than *per analogiam?* Here, as before, the idea "Disease" is not precise. 2. We may very often see them proceed as clearly from bodily suffering; and sin, error, and passion exist without their following as a consequence. Here too occasional causes and what are termed proximate causes must be distinguished. 3 They occur also *with* mental disturbance, and the latter when it does not arise merely from sin, error, &c. hardly ever without them. 4. The adherents of the somatic view (see above) affirm the contrary of both. 5. Pathological anatomy will make further progress, and where anatomical preparations cannot be made, recourse will be had to the aid of Pathological chemistry and physics.

As the representatives of what is called the mixed view, we

[1] We may distinguish a religious, an ethical, and a psychological view, (Heinroth, Ideler, and Benecke.) The ethical is the most clearly, scientifically, and practically developed by Ideler, whose works breathe a pure, moral intellectual spirit; but as Ideler is more discursive than methodical in his writings, I would refer any one who desires to be acquainted with the essence of his views, especially to the chapter on the Pathogeny of Mental Diseases, in the second volume of his 'Grundriss der Seelenheilkunde,' pp. 114, 115.

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are not to look on some eclectic, empirical French writers, as for instance, Esquirol, that admirable observer, whom Lippich justly calls "Hippocratem pro morbis mentalibus dicendum," or Georget &c.; nor the English, as Haslam, Perfect, the profound Crichton, &c., but those who, like Groos or Blumröder, hope and endeavour to unite the principles of the two views. On reflection, however, it will appear evident that principles cannot be confounded, and that a question positively stated, must be either positively answered yea or nay, or a protest must be entered against the question itself.

There is something in the ever-recurring squabbles between the best writers on our subject which excites a compassionate smile in those who are in the habit of examining questions calmly and impartially. Who denies, who *can* deny that often, and independently of bodily causes, erroneous notions, unbridled passion, overpowering feelings, or a want of development may change the regular course of psychical operations in such a manner, that it may justly be said that such a mind is diseased? Who can deny that such a disease is not to be removed by cold shower-baths, tarter emetic, &c., but wholly and solely by an influence on the mind? But, if we impartially weigh the subject and extent of medical art and science, do we not immediately perceive that every psychological physician, who treats the above-mentioned condition in the above-mentioned manner, is called a physician only in a metaphorical sense? The question in dispute is, properly speaking, not whether the mind can become diseased, but whether the task of treating independent states of the mind by education, instruction, &c. is to be considered as belonging to the province of the physician or not? The present state of the world seems to reply in the negative, because, since these moral influences are confided to parents, teachers, the clergy, &c., and by diseases, in a non-figurative sense, only the somatic are understood, the physician has to do with them alone. But here, as in human knowledge in general, it happens occasionally that these moral and logical conditions, which, as well etiologically as therapeutically, are wholly independent, trench on the somatic, and enter into the domain of the physician, whose rule, therefore, extends over them. The confines, as in all human knowledge, touch without effacing each other, and this is the main substance and object of all medical psycho-

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logy, so that the physician, who is wholly unacquainted with the relations of intellectual to physical life will not be able to comprehend and treat the latter in all its various bearings.

Matter and spirit, when they are united to form body and mind, can no longer be considered otherwise than as unity. When therefore the so-called somatic theory affirms that every mental disorder has a purely corporeal origin, it speaks as partially as the psychical theory would in affirming that every bodily suffering proceeds from the mind. If, as Dubois justly observes in hypochondriacs, organic diseases are the most easily formed in those parts on which they bestow particular care, and if (as I have endeavoured in another place to show by many proofs) imagination may contribute as much to the prophylaxis and cure, as to the origin of bodily maladies, a psychical commencement of them is hereby admitted; while, on the other hand, no one who is acquainted with human nature will deny that those peculiar maladies of the mind, error and vice, originate frequently in states of the body. Here again we have only to do with the determination of the boundaries of the medical domain, not with theories. The end of the former, the beginning of the latter, lie in this domain, and the physician has to find the line of coincidence, the line where spirit and matter combine to form a living unity; he has to appreciate the mind, so far as it acts etiologically or therapeutically on the body. Its peculiar and proper pathology belongs to logic and ethics, for, as it has itself no seat, it cannot be the seat of substantial sufferings. The division hitherto most approved, of what are called mental diseases, according to the deranged functions of the mind, is therefore, at all events, only symptomatic—phenomenological. It may, however, answer our purpose as well as any other, till we shall have ascertained in every case of these deranged functions the causal relation between mind and organ, before which period many a long year will pass away.

If we now turn from these theoretical views to the practice of medical psychology, which is our proper concern, we shall perceive with pleasure, in considering its present state, that the importance of these theories is by no means so great in the application as might at first sight appear. Different as are the psychological and pathological doctrines of the mind, their adherents agree pretty well with respect to the therapeutics; a new

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and consolatory confirmation of the truth that the actions of man, as his most holy duty and most exalted task, may be performed without requiring certainty in all the problems of knowledge. As in the healing art in general, the most experienced and best-informed physicians pursue nearly the same treatment at the bed-side, and only explain in a different way, the effect of the same remedies, according to the difference of the schools to which they belong, so those who practise this branch of medicine in particular agree on the whole in the choice of remedies; the psychical employ likewise somatic; the somatic employ likewise psychical remedies; only, as we have seen above, the one party explain the effect of the psychical remedies somatically, and the other the effect of the somatic remedies psychically. Thus each employs both kinds of remedies, and the extravagances either way are so easily recognised as exceptions, that they cannot mislead the learner. All practical men in this branch are, however, especially unanimous in acknowledging the importance of public institutions for the cure of lunatic patients; all eyes are directed to them, and plans for their amusement and improvement are now the primary object of psychiatric science; and though the sanguine admirers of the psychical mode of cure, for instance, by theatrical representations, &c. undoubtedly go somewhat too far, it is nevertheless generally perceived, that these institutions and their proper organisation offer the only practicable mode of successfully treating mental disorders.

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CHAPTER III.

PHYSIOLOGY.

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We attain the above-mentioned fundamental ideas by sensual perception and consciousness; the first reveals to us a material, the second an intellectual, world. We have, therefore, these two facts: the fact of perception and the fact of consciousness, from which we proceed.

The process in man himself, whereby he becomes aware of these facts is, as mentioned in § 1, first analytical, then synthetical. First, the material world is perceived by means of the feeling and senses. With the gradual development of man, he learns to analyse it more and more in detail, and thus attains, as it were, from below upwards, to abstractions and notions, and gradually to a notion of *notions*, which he designates by the word *mind*, which notion, however, at this stage of the process, is only negative, being "everything that is *not matter*." But here, uniting as it were two worlds, the fact of consciousness intervenes, which announces itself by the idea of unity and freedom. When this fact has occurred to man, he endeavours to combine, as it were, from above downwards synthetically, into one whole, the world with which he has become acquainted through his senses.

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§ 3. The union of the perception of both facts (§ 2) in one subject, every man designates as "*ego*." The *ego* of the mental physiologist is therefore not the *ego* of the metaphysician. That *ego* of which we speak, consists of body and mind,[2] the other is an abstraction of the most spiritual personality.[3] Let

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it not be objected that the *ego* must be intellectual, for the child at first speaks of himself in the third person, till the intellectual personality is developed in him.[1] He speaks of himself in the third person till he perceives the relation of the two worlds to himself. This, however, is arguing in a circle, for he only perceives the two worlds because they unite in his *ego* as one subject. This circle must not mislead us; the facts of observation and consciousness are *felt* by man in his *ego, completely as one;* that they are *two* worlds, of which they give testimony, and which coincide in him, he discovers only by abstraction.

Matter and spirit are this abstraction; the former appears in man *in concreto* as body, the latter as mind. Body being animated matter, mind being incorporated spirit. Both intimately one, and indivisible in the phenomenon.

These ideas cannot be too clearly and profoundly impressed upon the mind; the security of all further steps in the domain of anthropological medicine depends on a firm adherence to them. They are, then, most deeply impressed upon our minds when we initiate ourselves into them by applying them in various directions, and as it were putting them to the proof. Thus also the Pythagorean scheme of Troxler is explained.[2]

"We feel ourselves originally as unity; in the *ego* of the natural man there is neither spirit nor matter. Thinking first induces the notion of spirit. Spirit, therefore, is something which we think (sceptical realism). But that we do think is itself a proof of the independent existence of spirit, for we cannot think anything without a thinking principle. There must, therefore, *be* spirit besides sensual existence (dualism.) Matter also, as distinct from spirit, is not conceived by us till after this abstraction; matter too, as well as spirit, is something within us of which we think (idealism). Spirit and matter are thus only differences which are thought of; they are, in reference to man, two modes of conceiving a unity, (the philosophy of identity, and its filiations.) But as we *are* only men, we will be content with this need of a conception, without premising anything beyond it." This is our view. "All systems of philosophy in their multiplied modifications move,

[1] Kant, Anthropol.

[2] Vide Blicke in d. Wes. d. Menschen.

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and will eternally move within these limits; to recognise them, and to be conscious of their limits is therefore, properly speaking, the key to all which unlocks their relative truth, it is the philosophy of philosophies."

§ 4. There are, therefore in man two systems of perceptive faculties, one called body, the other mind. The former is dependent on external excitements, the whole of which we collectively call nature; the latter is dependent on internal excitements, the whole of which we collectively call spirit.[1] We divine these worlds only from the dependence in which we feel ourselves with respect to them. They are generic abstractions of what is specifically individualised in us; both the abstractions are in themselves inexplicable, nor can they reciprocally explain each other. Such explanation, however, is not at all necessary to our view of the case, or to its medical application. As the naturalist knows and applies electro-magnetism in its relations, without comprehending its essence, as the astronomer calculates the movements of the planets without knowing their nature, so can we duly appreciate spirit and matter in their relations to each other as body and mind, without being able to explain their nature or these relations.[2] The human mind is satisfied if in any case it can explain to itself *why* it cannot explain that case. In this determination of what can *not* be known, by which time is spared and error avoided, consisted the great merit of Kant. What is the meaning of *explaining?* To *explain* means to deduce from a principle; but this principle must itself be conceivable, for from the inconceivable nothing can be deduced; that is, rendered conceivable. What is conceivable? That which lies within our laws of thought. Whether these be objects of sense or of intellect, we cannot, in either case, comprehend their principle, because it does not lie within those laws. Thus, as the phenomenon of the two facts is presented to us, we are compelled, in order not to be forced to deny them, to assume an inconceivable spiritual, and material principle, by which, however, neither spirit, nor matter, nor their unity is explained. Every attempt in other

[1] Noval. Kl. Sch. ii, 157.

[2] Nasse, Zeitschrift, 1822, 1 Part, p. 3. Yet the examination of the relations of a thing conducted by way of experiment does not necessarily imply a previous knowledge of the essence of that thing, on the contrary, the former may prepare the latter.

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directions is sophistry, we are everywhere confined *within our laws of thought*. Were it otherwise we might create and conjure up fancies; or we should not be what we are. It is in vain to attempt to elucidate our unity, because it is given us immediately; we think as a unity, and can, therefore, no more comprehend this thinking, with which we think, than our right hand, which may indeed lay hold of the left, can lay hold of itself.

When we are sufficiently clear on this point, the various methods of treating the matter, and the partial ends of these methods, will readily be estimated by us at their real value.

Hence you see how vain are all attempts to explain the mutual relations of body and mind, and how fruitless it is to criticise such attempts at explanation as the hypotheses of pre-established harmony, of physical influence, &c. It is not dualism that is given, to be reduced to unity; but unity that is given, and we only find dualism afterwards by abstraction. (§ 2.) *We* are a simple testimony of two *worlds*. The best that can be said on this subject, not to *explain* the mutual relations between mind and body, but to *express* it, seems to me to be contained in Nasse's paper, 'Grundzüge der Lehre,' &c. (outlines of the doctrines, &c.), in the first number of his Journal for 1822. I recommend it to your very careful meditation, because it at least completely states the problems, which, in life as in science, *is all that man can perform*.[1]

§ 5. That method which keeps mind and matter constantly separate, is indeed perfectly philosophical, for it does not blend the principles, but proceeds metaphysically with respect to mind, and physically with respect to matter; and will, therefore, attain, in both respects, the final results which must meet in the end. But not to mention that, in the phenomenon unity alone is given us, we never obtain in this manner that result which is indispensable to medical objects, viz. a knowledge of the reciprocal action of body and mind.

[1] Professor Exner, in his 'Kritik der Hegelschen Psychologie,' Leipzig, 1842, gives the following lucid observation: that "a product cannot be thoroughly comprehended before its factors;" that is, in this case, that physiology must have fully cleared up the knowledge of the body, and psychology that of the mind, before we can hope to attain that of their mixed state. True, if the question be an *explanation*; thus we are authorised, or rather compelled, by this remark also to be content with a *statement* of the facts.

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That method which maintains the unity of both worlds, may proceed in three different ways.

a. Ideal,—making matter a product of mind, and thus subjecting it to purely philosophical considerations.

b. Real, (or more properly *material*)—making mind the product of matter, and thus considering it in a chemico-physical (purely natural-historical) point of view.

c. Identical,—declaring matter and mind to be one (attributes of one substance, forms of one being, manifestations of one idea, considering them in a view partly philosophical, partly empirical. (Natural Philosophy, Monism.)

All these methods, when attentively examined, cut the knot instead of loosing it, and paralyse further research. To attempt to investigate matter and its state (*a*) by speculation, is impossible, and impedes the progress of our inquiries into nature; to explain spirit and its action (*b*) materially, leads to a negative result, and is equally impossible, not to mention that the positive fact of freedom interposes its veto. To identify spirit and matter (*c*), furnishes no definite resting point.

Again, therefore, in considering mind and body, no other course remains for us, than to maintain the spiritual essence of the former, and the material essence of the latter, in their constant synthesis, as acting with, for, upon, and against each other. (See Goethe, vol. xlix, p. 95.) This, therefore, is the problem which we have to solve (§ 1), in doing which we begin below, and rise to higher considerations, after which, by returning from the higher to the lower, we shall complete the proof. (§ 1.)

We have already endeavoured to show in the preliminary chapter (p. 11, note), that both spiritualism and materialism are merely hypotheses, and are moreover unsatisfactory. The former cannot explain the corporeal, nor the latter the spiritual; but the second causes us more uncertainty than the first. In the latter, that Idealism which Kant called the critical is indisputable; namely, that we cannot go beyond our conceptions; but within their limits he leaves us at liberty—provided we do not deduce the corporeal world from them. Notwithstanding this, there is perhaps a "pre-established harmony," or something of the kind, between the two, and we

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may hazard the attempt to deduce the prodigy of reason. But as, independently of the constant illusiveness of the perceptions of the senses, there is after all no transition to the fact of consciousness in materialism; it explains mind still less than the other view explains matter. We believe, for instance, that we are very near the sensible demonstration of seeing, because we can even *see* the image on the retina; but have we thereby explained vision? and this is only an action of sense. Supposing that we are acquainted with all the chemico-organical and microscopical, as well as the physical polar processes in the cortical substance of the brain, during the formation or reproduction of a thought, have we thereby explained thinking? "Materialists," it is somewhere observed,[1] "look for the incarnation of thought, as the Jews do for the Messiah." For the present, therefore, we probably take the best course (see above) by impartially and carefully considering mind and matter alternately in their infinite diversity, and final pervasion, without attempting to *explain* either the one or the other.[2]

§ 6. But, with reference to what has been said in the preliminary chapter, it will be useful to confirm ourselves still further in the conception and limits of our doctrine. The separation, from physiology as well as from psychology, can but promote its study,[3] and spare us many digressions. The former is the natural description of the mind,[4] the latter is the natural description of the body; our doctrine is that of the reciprocal relation of both, and as it appears in the phenomena. Strictly considered, the investigation of our subject would not interfere with any of the above hypotheses; for supposing our corporeal part to be fundamentally spiritual, our aim, for the occasion, is to consider and study that spirit in this corporeal garb and its relations, and, supposing our mind to be only a corporeal emanation, our aim is to investigate completely those particular functions of it which are called spiritual. This view alone is that which interests the physician, and which forms a basis for

[1] Grundzüge z. Erkenntniss der Natur der Menschen. Frankfurt, s. 105.

[2] What is called explanation in the natural sciences, is nothing more than a classing of observations under a common expression.—Beneke.

[3] Nasse, l. c. p. 6.

[4] Kant, Anf. d. Nat. p. 17, Pref.

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the doctrine of mental diseases.[1] A certain proportion in the relations between mind and body is called health,[2] and a deviation from it is termed disease. This proportion is by no means a complete equilibrium, but the perfect adaptation of the body, without injury to its integrity, to the purposes of the mind. Thus, therefore, there is in man a higher and a lower existence; but a medium of connexion between them,[3] in the sense that it is half body, half mind,[4] which the nervous fluid, for instance, has been considered to be, does not exist, unless we will assume as such the notion of organism (vital power?), in which alone the action of the mind is manifested to us. Further, as the soul is immaterial, and the body material, the relation between them is neither beside nor within each other. The mind is not the internal part, the body not the external, these being merely corporeal notions of space.[5] This is for the present an answer to the question relative to the seat of the soul. Yet, notwithstanding this, the relative activity of the mind is certainly not always and everywhere equal, in all the structures of the body, nor that of these structures in the functions of the mind;[6] still the organs of the body, situated more internally, have a closer relation to the higher functions of the mind,[7] whence the above-mentioned designations may have arisen. With these preliminary observations, which partly determine what precedes, and partly anticipate what follows, we will begin our inquiry. (§ 5.)

§ 7. The first, that is, the earliest, sign by which the "*Ego*" (§ 3) becomes perceptible, even before it expresses opinion itself as such, is *corporeal sensation*.[8]

Its excitation commences before the senses are manifested, and before there is any perception. It is the foundation of these special manifestations of life. Without this general innate sensation we should not possess the certainty that our body is *our* body; for it is as much an *object* for the other

[1] Nasse, l. c. 12. [2] Nasse, l. c. 19. [3] Goethe, vol. I, 43.

[4] Corpus quid sit intelligo, *quasi* corpus quid sit non intelligo.—Cicero.

[5] Ibid. 16. [6] Nasse, l. c. 23. [7] Ibid. l. c. 24.

[8] Brach, über d. Bd. d. k. Ges. Berl. 1842. Carus calls this attribute of the organic individual "Perception," to distinguish it from Sensation. Lindemann, in his L. v. Menschen, Zurich, 1844, calls it "Ursinn," (primitive, original sense.)

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senses, as anything else that we can see, hear, taste and feel.[1] This original and immediate innate sensation must be distinguished from what is called common feeling (*Cœnæsthesis*), which is to be treated of in the sequel.[2] This, as we shall see, is the function of a peculiar distinct system of nerves, to which belong certain definite sensations of our Being. But original general innate sensation is necessary to the existence of all other particular sensations, and it seems that it may exist, even independently of the nervous system. Polypi, animals of the simplest structure, without being provided with a nervous system distinct from the rest of the organic mass, show traces of innate sensation. The light, by means of which we see, acts not only on the visual nerves, but also on the fluids of the eye, and the sensations of sight partly depend on the structure of the eye. *This* sensibility, therefore, appears to be a necessary attribute of animated organic matter itself, which bears within it the wants of the special sensations, as well as the elements of the nervous system, and since in the higher classes of animals and in man, these elements adapt themselves to a particular system, the organism becomes more clearly individualised to the expression of itself.[3]

All the perceptions of sense are rooted in the general sensation. The child must be conscious of his senses, before he applies them.[4] This sensation is however very obscure, even pain is not clearly felt by it at the place where it exists.[5] Equally obscure is the notion which it entertains of an object. Though Brach, therefore, is right[6] in ascribing something objective, even to the general sensation, since conditions cannot communicate themselves, without communicating (though ever so obscurely) something of *that* which produces the condition,—nay, strictly speaking, as even in the idea "Subject," that of an object is involved, yet it is advisable to abide by the distinction founded by Kant, according to which, by innate sensation, we *especially* perceive our own personality (subject), and by the senses we *especially* perceive objects (and thus in the ascending line, Feeling, Taste, Smell, Hearing and Sight.)

[1] Brach, l. c. 11.
[2] In which Brach often fails.
[3] Töltenyi, Kritik, ii, 226.
[4] Brach, l. c. xi.
[5] Ibid. Comp. Ch. Bell, on the Hand, 1836.
[6] Brach, l. c. 15, &c.

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This general sensation (not the sense of touch)[1] is properly what Hegel calls "the feeling of earthly totality," and which long before him Reil called "the ideal assimilation of the Universe."

§ 8. The next step from this obscure, original, innate sensation is particular sensation through the medium of the nervous system, which, in its more profound, and yet more obscure sphere, produces common sensation (*Cœnæsthesis*), and in a higher manifestation, the perceptions of the senses.

We know from physiology, that it is really the nerves which we must consider as the organs of this more developed sensation and of perception. The reasons founded on experience are these,[2]—

1. Mental powers, as founded on sensation, develop themselves in the order of beings in the same ratio as the nervous system.

2. Their manifestation in the individual is also parallel with the degree of development, and with the conditions of the nervous system, and ceases when this is destroyed or injured.[3]

3. A single nerve affected mechanically or chemically, excites violent pains.

4. The greater the number of nerves in an organic structure, the more acute and sensitive it is; for instance, the retina of the eye.

5. Nerveless structures appear to feel either not at all, or only very obscurely.

§ 9. That the nerves *conduct* this sensation, of which they are the medium (§ 8), from the periphery to the centre, is likewise taught by physiology on the following grounds, which we here only state in general terms:

1. If a nerve is compressed, it feels no pain from the place of pressure towards the periphery, but from the point of pressure towards the interior. When the pressure ceases, sensation returns.

2. The same phenomenon is manifested by a nerve which is tied, or—

3. Which is cut through.

[1] Rosenkranz, Psych. 78.

[2] Vide Hartmann, G. d. M. 68.

[3] Sommering, d. Fab. c. h. iv, 165.

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We must not, however, thence infer that there exists a *current* of some nervous principle, which is only a provisional hypothesis,[1] nay, which many observations seem to contradict.

§ 10. That it is the *Brain*, in which, as to a centre, these (§ 9) conducted sensations are collected, appears from the following considerations:

1. Anatomy shows the course of the nerves from the periphery of the organs to the brain, where they have their so-called central end.

2. When this central end is compressed or injured, sensation ceases.[2]

3. When the brain, or the spinal marrow (as the continuation of it) is compressed or concussed, the function of the nerves arising below ceases, and returns when the brain, or spinal marrow, is again relieved.[3]

4. Morbid feelings often manifestly spread from the nerves to the brain.

5. After the healing of the wound caused by the amputation of a limb, the feeling of the lost member often remains, which seems, therefore, to be transferred to the central organ.[4]

§ 11. But all the nerves do not lead, with equal freedom of communication, to the brain. On the contrary, the *vegetative nerves* form, as is well known, a partially distinct system, existing independently of the cerebral, and which, by peculiar separate foci, partly counteracts and is partly connected with the cerebral system, by the sympathetic nerves, which Reil calls[5] the apparatus of semi-conduction, and which form a continuous elliptical chain. Hence the impressions, which fall within the dominion of this system, are not at once so clearly felt, as those of the other, namely, the cerebro-spinal nerves. A morsel, for instance, that is swallowed, is felt only to a certain point, when it enters the œsophagus; sensation then ceases, and returns only at the *sphincter ani*. An animal which is opened alive does not cry out when the soft nerves

[1] Vide Meyer, Unters. über d. Phys. d. Nervenfaser. Tub. 1843.

[2] Sömmering, 93. [3] Ibid. 93.

[4] This observation plays a special part in the physiology of the mind; it is adduced in confirmation of the most diverse, nay, conflicting assertions; but this seems to me to be its proper place.

[5] Kluge, Magn. 266.

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of the abdomen are pricked, but immediately when the hard nerves of the extremities are touched.[1]

These are the most general points of physiology, which must be borne in mind, in order to comprehend psychical life, in its lowest degrees of sensation. I need not mention, that in this branch of physiology we have as yet obtained only hypothetical views. It is, therefore, our duty to abide by what is most general, and most commonly received. Thus we avoid the danger which hypothesis brings with it in its wide ramifications, where, forgetful of its great uncertainty, we consider it as a foundation, on which we can confidently build. Generally speaking, error will always be more thoroughly extirpated from the sciences, and truth always more confirmed and extended, by a conscientious indication of those points which are hypothetical, and by invariably bearing them in mind in the course of the investigation.

Many experiments are alleged *against*, and many *for* sensation in the sympathetic nerves—the apparatus of semi-conduction. Such experiments, when the nerve is mechanically or chemically injured, perhaps prove less than the sensations of the living body. At all events it is sufficient for us to know that the sensations of the ganglionic system, when in a healthy state, are not so immediately conducted to the brain (the preceding notion) as those of the other nerves.[2]

If we review the foregoing as a whole, in order that we may be able to use it to more advantage in our future inquiries, we shall have the following results.

The nerves are the roots of special sensation. They arise in almost all structures of the organism, are, as it were, supported and united together in its lower sphere by knots (ganglia), are in its middle sphere blended through the sympathetic nerves with the higher sphere, and in this higher sphere form the stem (spinal marrow), and the crown (the brain) of this whole tree of life. We are therefore justified in assuming, with all physiologists, a nervous system, twofold in its unity; the ganglionic system (or better, the vegetative, for there are ganglia of the senses and spinal ganglia) with the sympathetic, and the cerebro-spinal system. Our business is

[1] Kluge, Magn. 261. Vide Brach, l. c. 23.

[2] Brach, l. c. 25.

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now to inquire, beginning with the lowest sphere, what each contributes to the development of psychical action.

The nervous, like every organic system, is a complete whole. Every separation of it is arbitrary. It seems most to the purpose, as Marshall Hall proposed, that it should be made on physiological principles, and there is nothing objectionable in dividing it into a vegetative (nutritive), motor, and sensorial system; or into a system of sensation, motion, respiration, and sympathy (Jessen). Its relations to psychical life, which is what we have to do with, seem to be most properly expressed by the grouping which we have adopted. The centres which unite the whole are, the cortical substance of the brain, the spinal marrow, and perhaps also the ganglia of the sympathetic system. Every primitive nervous fibre runs isolated (without anastomosis) from the periphery to the central end. In its course, therefore, there is no collateral communication of action. In the central organs alone, where the terminating loops are situated, can the excitement be transmitted to homogeneous or heterogeneous nervous structures. The transition to the homogeneous is called irradiation (in motor nerves, synergy,—in sensitive, sympathy); the transition from one system to the other is called reflex.

§ 12. But before proceeding in this order to the above-mentioned individual foci of the ganglionic system, we ought properly to institute a general investigation into what passes in the nerves, during the function of sensation ascribed to them; and thus follow, as it were, the first psychical manifestation into its last psychical retreat. What physiology, in its present state, has to impart on this subject, is unfortunately still hypothetical (§ 11), and it remains to be seen, whether the progress of organic chemistry and physics will ever exchange this hypothesis for ascertained facts. A careful examination of the views propounded since Hartmann's[1] time, leads pretty nearly to the following propositions.

The source of sensation in the nerves is the nervous medulla.[2] Whether the cerebro-spinal fluid, which accompanies all the nerves of sensation, and spreads in the neurilema of all the nerves, co-operates, is undecided.[3]

[1] G. d. M. p. 85.
[2] Bischoff, Natur. d. M. ii, 241.
[3] Sinogowitz, Geistesstör., p. 153.

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The function itself shows a polar relation both as respects the internal action of the nerves in their component parts, medulla and neurilema,[1] and as respects the external in their periphery and centre;[2] and, therefore, leads us to infer a vital motion resembling the electro-magnetic or the galvanic. It occurs—1st, like the latter, homogeneously and instantaneously at the two poles, however long the conducting line may be; 2d, it is maintained like the latter, by a (vital) chemical process. Whether this sensation, acting in a direction from without inwards, with which alone we have to do here, is the same as motion, acting in a direction from within outwards, is undecided.

Whether the nerves have a certain sensible atmosphere, by means of which they feel *beyond* themselves, as Reil and Humboldt suppose,[3] is undecided.

In a somatic view, the reciprocal action between the nerves and the blood deserves our attention. The influence of the first on the second shows itself: (*a*) in respect to quality by the changes in the secretions after mental emotion; (*b*) in respect to quantity by the acceleration or retardation of the circulation, according as the nervous action is heightened or depressed. The influence of the vascular system on the nervous manifests itself again (*a*) in respect to quality, by the nourishment which the latter derives from the former; and (*b*) in respect to quantity by the increased or diminished vital action of the nerves through the medium of the blood. Every nervous filament is provided with blood, by arterial and venous branches, through imbibition by the primitive fibres; every artery, and probably also every vein,[4] is provided with motor vasal nerves.

It is an important remark of Carus, that as the galvanic current depends on the immersion of zinc and copper in acids, so that of innervation depends on the reciprocal action of blood and the parenchymatous nervous fluid, and that as the development of galvanism is exhausted by too great an oxydation of the pairs of plates, so also is that of innervation, when, in the process of respiration, oxydation has exceeded a certain degree. The arterial blood is therefore, in respect to quality, the

[1] Hartmann, l. c. 90.
[2] Neumann, Path. Unt. Cent. Ztg. 1844, No. 69.
[3] Bischoff, l. c. 242.
[4] Sömmering, Angiol. 328.

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normal stimulant of the whole nervous system, so long as it remains normal itself in respect to quantity; venous blood is directly, and arterial blood indirectly, inimical to nervous vitality.

These anatomico-physiological *Lemnata* are very important for the explanation of many psychopathical phenomena. They explain the old dogma: *ubi stimulus ibi humorum uberior adfluxus;* but the converse is also true: *ubi adfluxus ibi irritatio.* (See the admirable statement in Dr. Leiden's *Dissert. de Neuralg., spin.* Vienna, 1844, p. 20.)

With respect to structure, the cerebro-spinal nerves consist of what are called the nerve-corpuscles (nerve-cells of Carus, overlaying mass of Valentin, nerve-spheres of Klencke), and the primitive nervous fibres (cylindrical tubes), whence their white colour is chiefly derived. In the vegetative nerves these primitive fibres are less numerous, whence arises their colour, which inclines to gray. It seems to be still undecided whether, what are called special organic fibres, occur in the *sympathetic nerve,* together with what are called animal fibres, and whether the vegetative and animal function of this nerve, or, as Remak supposes,[1] a separate apparatus is to be ascribed to this connexion; or whether, like a purely cerebro-spinal nerve, it has no organic fibres, as Professor Czermak and Valentin suppose.[2] At all events, the cerebro-spinal nerves are distinguished by their colour, firmness, transverse stripes, and lustre, from the vegetative nerves, which are softer, indistinctly striped, flat, and of a gray colour, tending to red. So, too, the different sensual nerves differ from each other in colour and consistency, from which, as well as from the structure of the sensual organs, into which, they ramify, we must seek, though we cannot explain, the peculiarity of their offices. The terminating form of the nervous fibres cannot be at all shown by anatomical preparations, but only by the microscope. In this way Valentin (*Nova acta,* &c., p. 106) has found, and later observers have confirmed his discovery, that the nervous fibres do not terminate in a free end, but are always united, two and two together, and form an arched terminal loop. The usual

[1] Froriep, Notiz. 1834; and Observ. an. et micr.

[2] Repert. 1840; and C. Langer, Ueber d. Bau d. N. 1842.

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supposition of a much greater, nay, stereotype, constancy in the form of the nervous structure, as opposed to all other structures of the organism, appears, on more careful comparison, to be only partially true. Here, as elsewhere, we find that men resemble and differ from each other, as much as the several leaves of one tree. The highly attractive microscopical and chemical researches into these details belong to anatomy and physiology, and these unfortunately have hitherto furnished but few data for explaining how the functions are produced.

The gray substance of the ganglia is not homogeneous with the gray substance of the brain.[1]

§ 13. Common feeling (*Cœnæsthesis*) (§ 8), which is referred to the ganglionic nerves (§ 11), is therefore organically represented by the ganglionic system (§ 11). This system shows three separate foci, in which, as in the focus of a lens, its sensations unite.

a. The focus of generation forms opposite to the brain, as it were, the other pole of the organisation. The more completely the structures belonging to this focus are developed, the less so is the cerebrum (for the contrary is affirmed of the cerebellum), and conversely. Here the sexual excitement comes into operation. They have a manifold and close relation to the higher psychical operations. With puberty, with the sexual functions, (procreation, conception, pregnancy, parturition,) with their decline in age, further, with the difference of the sexes, and, lastly, with the pathological conditions of this sphere, so many psychical effects, to be discussed in the sequel, are connected, that no doubt can be entertained on this point.

b. The phrenic focus. As belonging to this, we reckon the heart, the diaphragm, the cardiac orifice of the stomach, and the stomach itself, which receive their nerves from the eighth pair, the phrenic nerves and the great sympathetics. From those sources also psychical action is variously affected, which is proved as well by the physiological conditions of the temporarily altered circulation, of the digestion, &c., as by the pathological conditions to be treated of in the sequel.

c. The *Plexus solaris*. This is formed by the two semilunar arcs of the superior abdominal plexus, and of the

[1] Sarlandière, Traité d. Syst. n. Paris, 1840.

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superior mesenteric plexus, in the middle of which lie several knots, which it surrounds like the rays of a sun. In it are interwoven the nerves of the voice, the splanchnic nerve, and the twigs of the intercostal nerves. The influence of this focus on psychical action, obscure as are the sensations proceeding from it, is very important, especially in pathological conditions.

§ 14. Besides these foci (§ 13), the nervous system describes some other circles, the largest of which, from the head to the coccyx, is closed above by the cerebellum, and below by the ganglia of Walter; that is, it forms from one pole of the organism to the other the great sympathetic nerve. This is what Reil calls the apparatus[1] (§ 1) of semi-conduction (§ 11). The sympathetic nerves receive nervous fibres and real roots from all the spinal and some of the cerebral nerves. How far a certain independence belongs to it, or to a system connecting the others, is in the present state of the anatomy of the nerves undecided.[2] The sympathetic nerve has an especial relation to all the vital functions on which nutrition depends, and is evidently sensitive.[3] Its psychological relation, too, is especially apparent in pathological states, when the otherwise obscure sensation is more vivid. As connecting threads have been found between the cerebellum and the third pair of nerves (Gans), or the sixth pair (Natter), and these are variously connected with the sympathetic nerve, the cerebellum is to be considered as the superior end of the sympathetic nerve, which is of importance with regard to the relations of the Cœnæsthesis to consciousness.[4]

§ 15. The parts of the nervous system which have been described (§ 13-15), regulate the Cœnæsthesis, which differ from the general corporeal sensation (§ 7), inasmuch as the latter is originally the foundation of every special sensation. (§ 7.) It may be called subjective, inasmuch as the body itself (and not the external world, as in the case of the sensual nerves, which are to be subsequently discussed) gives the excitement to the nerves concerned, and, consequently, repre-

[1] Reil, l. c. 265.

[2] Sinogowitz, in reference to Joh. Muller, 365. Bidder und Volkmann, Die Selbstständigkeit des symp. Nervens. Leip. 1842.

[3] Burdach, Physiologie, Bd. iv, 464.

[4] Klencke, Org. Psychol. 228.

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sents[1] the object of their perception. This perception is however very obscure, because the individual objects of it lie hidden, —cannot be arbitrarily altered,—cannot be corrected by the senses; and because the connexion of the nerves of this system with the brain takes place very indirectly. What modifications are produced by a state of disease will be mentioned hereafter.

By the Cœnæsthesis, states of our body are revealed to us, which have their seat in the sphere of vegetative life, wherein the nerves which belong to it spread themselves. These states are:

a. General: corporeal heaviness and buoyancy, atony, toniety.

b. Special: hunger, thirst, sexual instinct, &c.

The sensations of pain, titillation, itching, &c., which are generally cited here, are, if more accurately considered, of a different nature. In their more common acceptation they belong to the general corporeal feeling; in their more local limitation with distinct perception of the object exciting them, to the sense of touch, which is to be discussed in the sequel; but when they arise from the nervous system allotted to the vegetative sphere of the body, they certainly belong to the Cœnæsthesis, in the more limited sense of the word.

To this class belongs, especially, the anxiety arising from an impediment in the organs of respiration and from nausea, as well as from hunger and thirst, which immediately proceed from the organs of alimentation, and, by their especial influence on the frame of mind, will claim our future attention (§ 66).

The further development of the laws of sensibility, so far as they form a foundation for the construction of the doctrine of the neuroses, belongs to general pathology. See, on this subject, Romberg (Lehrbuch d. Nervenkr. 1840, 1.) They are indicated above (Remark on § 11) as isolation, irradiation (synergy, sympathy), reflex function.

§ 16. In the analysis of the psycho-physical processes proceeding outwards from sensation to perception, we encounter, after the organs of the cœnæsthesis, the organs of sense, and in the first place—

[1] However subjective this sensation is, there is always in it the indication of an object, as Brach (l. c.) very admirably shows; hence illustrating the instinct of animals (p. 53). Presentiment, too, chiefly belongs to this system.

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senses, as anything else that we can see, hear, taste and feel.[1] This original and immediate innate sensation must be distinguished from what is called common feeling (*Cœnæsthesis*), which is to be treated of in the sequel.[2] This, as we shall see, is the function of a peculiar distinct system of nerves, to which belong certain definite sensations of our Being. But original general innate sensation is necessary to the existence of all other particular sensations, and it seems that it may exist, even independently of the nervous system. Polypi, animals of the simplest structure, without being provided with a nervous system distinct from the rest of the organic mass, show traces of innate sensation. The light, by means of which we see, acts not only on the visual nerves, but also on the fluids of the eye, and the sensations of sight partly depend on the structure of the eye. *This* sensibility, therefore, appears to be a necessary attribute of animated organic matter itself, which bears within it the wants of the special sensations, as well as the elements of the nervous system, and since in the higher classes of animals and in man, these elements adapt themselves to a particular system, the organism becomes more clearly individualised to the expression of itself.[3]

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[1] Brac
[3] Tölte
[5] Ibid.

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This general sensation (not the sense of touch)[1] is properly what Hegel calls "the feeling of earthly totality," and which long before him Reil called "the ideal assimilation of the Universe."

§ 8. The next step from this obscure, original, innate sensation is particular sensation through the medium of the nervous system, which, in its more profound, and yet more obscure sphere, produces common sensation (*Cœnæsthesis*), and in a higher manifestation, the perceptions of the senses.

We know from physiology, that it is really the nerves which we must consider as the organs of this more developed sensation and of perception. The reasons founded on experience are these,[2]—

1. Mental powers, as founded on sensation, develop themselves in the order of beings in the same ratio as the nervous system.

2. Their manifestation in the individual is also parallel with the degree of development, and with the conditions of the nervous system, and ceases when this is destroyed or injured.[3]

3. A single nerve affected mechanically or chemically, excites violent pains.

4. The greater the number of nerves in an organic structure, the more acute and sensitive it is; for instance, the retina of the eye.

5. Nerveless structures appear to feel either not at all, or only very obscurely.

§ 9. That the nerves *conduct* this sensation, of which they are the medium (§ 8), from the periphery to the centre, is likewise taught by physiology on the following grounds, which we here only state in general terms:

1. If a nerve is compressed, it feels no pain from the place of pressure towards the periphery, but from the point of pressure towards the interior. When the pressure ceases, sensation returns.

2. The same phenomenon is manifested by a nerve which is tied, or—

3. Which is cut through.

[1] Vide Hartm[illegible] [2] M. 68.

[3] 165.

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We must not, however, thence infer that there exists a *current* of some nervous principle, which is only a provisional hypothesis,[1] nay, which many observations seem to contradict.

§ 10. That it is the *Brain*, in which, as to a centre, these (§ 9) conducted sensations are collected, appears from the following considerations:

1. Anatomy shows the course of the nerves from the periphery of the organs to the brain, where they have their so-called central end.

2. When this central end is compressed or injured, sensation ceases.[2]

3. When the brain, or the spinal marrow (as the continuation of it) is compressed or concussed, the function of the nerves arising below ceases, and returns when the brain, or spinal marrow, is again relieved.[3]

4. Morbid feelings often manifestly spread from the nerves to the brain.

5. After the healing of the wound caused by the amputation of a limb, the feeling of the lost member often remains, which seems, therefore, to be transferred to the central organ.[4]

§ 11. But all the nerves do not lead, with equal freedom of communication, to the brain. On the contrary, the *vegetative nerves* form, as is well known, a partially distinct system, existing independently of the cerebral, and which, by peculiar separate foci, partly counteracts and is partly connected with the cerebral system, by the sympathetic nerves, which Reil calls[5] the apparatus of semi-conduction, and which form a continuous elliptical chain. Hence the impressions, which fall within the dominion of this system, are not at once so clearly felt, as those of the other, namely, the cerebro-spinal nerves. A morsel, for instance, that is swallowed, is felt only to a certain point, when it enters the œsophagus; sensation then ceases, and returns only at the *sphincter ani*. An animal which is opened alive does not cry out when the soft nerves

[1] Vide Meyer, Unters. über d. Phys. d. Nervenfaser. Tub. 1843.

[2] Sömmering, 93. [3] Ibid. 93.

[4] This observation plays a special part in the physiology of the mind; it is adduced in confirmation of the most diverse, nay, conflicting assertions; but this seems to me to be its proper place.

[5] Kluge, Magn. 266.

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of the abdomen are pricked, but immediately when the hard nerves of the extremities are touched.[1]

These are the most general points of physiology, which must be borne in mind, in order to comprehend psychical life, in its lowest degrees of sensation. I need not mention, that in this branch of physiology we have as yet obtained only hypothetical views. It is, therefore, our duty to abide by what is most general, and most commonly received. Thus we avoid the danger which hypothesis brings with it in its wide ramifications, where, forgetful of its great uncertainty, we consider it as a foundation, on which we can confidently build. Generally speaking, error will always be more thoroughly extirpated from the sciences, and truth always more confirmed and extended, by a conscientious indication of those points which are hypothetical, and by invariably bearing them in mind in the course of the investigation.

Many experiments are alleged *against*, and many *for* sensation in the sympathetic nerves—the apparatus of semi-conduction. Such experiments, when the nerve is mechanically or chemically injured, perhaps prove less than the sensations of the living body. At all events it is sufficient for us to know that the sensations of the ganglionic system, when in a healthy state, are not so immediately conducted to the brain (the preceding notion) as those of the other nerves.[2]

If we review the foregoing as a whole, in order that we may be able to use it to more advantage in our future inquiries, we shall have the following results.

The nerves are the roots of special sensation. They arise in almost all structures of the organism, are, as it were, supported and united together in its lower sphere by knots (ganglia), are in its middle sphere blended through the sympathetic nerves with the higher sphere, and in this higher sphere form the stem (spinal marrow), and the crown (the brain) of this whole tree of life. We are therefore justified in assuming, with all physiologists, a nervous system, twofold in its unity; the ganglionic system (or better, the vegetative, for there are ganglia of the senses and spinal ganglia) with the sympathetic, and the cerebro-spinal system. Our business is

[1] Kluge, Magn. 261. Vide Brach, l. c. 23.

[2] Brach, l. c. 25.

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now to inquire, beginning with the lowest sphere, what each contributes to the development of psychical action.

The nervous, like every organic system, is a complete whole. Every separation of it is arbitrary. It seems most to the purpose, as Marshall Hall proposed, that it should be made on physiological principles, and there is nothing objectionable in dividing it into a vegetative (nutritive), motor, and sensorial system; or into a system of sensation, motion, respiration, and sympathy (Jessen). Its relations to psychical life, which is what we have to do with, seem to be most properly expressed by the grouping which we have adopted. The centres which unite the whole are, the cortical substance of the brain, the spinal marrow, and perhaps also the ganglia of the sympathetic system. Every primitive nervous fibre runs isolated (without anastomosis) from the periphery to the central end. In its course, therefore, there is no collateral communication of action. In the central organs alone, where the terminating loops are situated, can the excitement be transmitted to homogeneous or heterogeneous nervous structures. The transition to the homogeneous is called irradiation (in motor nerves, synergy,—in sensitive, sympathy); the transition from one system to the other is called reflex.

§ 12. But before proceeding in this order to the above-mentioned individual foci of the ganglionic system, we ought properly to institute a general investigation into what passes in the nerves, during the function of sensation ascribed to them; and thus follow, as it were, the first psychical manifestation into its last psychical retreat. What physiology, in its present state, has to impart on this subject, is unfortunately still hypothetical (§ 11), and it remains to be seen, whether the progress of organic chemistry and physics will ever exchange this hypothesis for ascertained facts. A careful examination of the views propounded since Hartmann's[1] time, leads pretty nearly to the following propositions.

The source of sensation in the nerves is the nervous medulla.[2] Whether the cerebro-spinal fluid, which accompanies all the nerves of sensation, and spreads in the neurilema of all the nerves, co-operates, is undecided.[3]

[1] G. d. M. p. 85.
[2] Bischoff, Natur. d. M. ii, 241.
[3] Sinogowitz, Geistesstör., p. 153.

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The function itself shows a polar relation both as respects the internal action of the nerves in their component parts, medulla and neurilema,[1] and as respects the external in their periphery and centre;[2] and, therefore, leads us to infer a vital motion resembling the electro-magnetic or the galvanic. It seems—like the latter, homogeneously and instantaneously [illegible] however long the conducting line may be : [illegible] like the latter, by a vital chemical process. [illegible] sensation, acting in a direction from without inwards, with which alone we have to do here, is the same as motion, acting in a direction from within outwards [illegible]

Whether the nerves have a certain [illegible] by means of which they feel beyond themselves, as [illegible] and Humboldt suppose,[3] is undecided.

In a somatic view, the reciprocal action between the nerves and the blood deserves our attention. The influence of the first on the second shows itself: *a* in respect to quality by the changes in the secretions after mental emotion [illegible] in respect to quantity by the acceleration or retardation of the circulation according as the nervous action is heightened or depressed. The influence of the vascular system on the nervous manifests itself again *a* in respect to quality [illegible] which the latter derives from the former, and [illegible] in respect to quantity by the increased or diminished [illegible] of the nerves through the medium of the blood. [illegible] filament is provided with blood [illegible] branches, through [illegible] artery, and probably also every [illegible] vasal nerves.

It is an important remark of Carus that as the galvanic current depends on the [illegible] acids, so that of innervation [illegible] of blood and the parenchyma [illegible] development of galvanism is enhanced by [illegible] of the pairs of plates, so also [illegible] the process of respiration, [illegible] gree. The arterial blood is [illegible]

[1] Hartmann, l. c. [illegible]

[2] B[illegible], l. c. 242

[3] [illegible]

[4] [illegible]

directions is sophistry, we are everywhere confined *within our laws of thought*. Were it otherwise we might create and conjure up fancies; or we should not be what we are. It is in vain to attempt to elucidate our unity, because it is given us immediately; we think as a unity, and can, therefore, no more comprehend this thinking, with which we think, than our right hand, which may indeed lay hold of the left, can lay hold of itself.

When we are sufficiently clear on this point, the various methods of treating the matter, and the partial ends of these methods, will readily be estimated by us at their real value.

Hence you see how vain are all attempts to explain the mutual relations of body and mind, and how fruitless it is to criticise such attempts at explanation as the hypotheses of pre-established harmony, of physical influence, &c. It is not dualism that is given, to be reduced to unity; but unity that is given, and we only find dualism afterwards by abstraction. (§ 2.) *We* are a simple testimony of two *worlds*. The best that can be said on this subject, not to *explain* the mutual relations between mind and body, but to *express* it, seems to me to be contained in Nasse's paper, 'Grundzüge der Lehre,' &c. (outlines of the doctrines, &c.), in the first number of his Journal for 1822. I recommend it to your very careful meditation, because it at least completely states the problems, which, in life as in science, *is all that man can perform.*[1]

§ 5. That method which keeps mind and matter constantly separate, is indeed perfectly philosophical, for it does not blend the principles, but proceeds metaphysically with respect to mind, and physically with respect to matter; and will, therefore, attain, in both respects, the final results which must meet in the end. But not to mention that, in the phenomenon unity alone is given us, we never obtain in this manner that result which is indispensable to medical objects, viz. a knowledge of the reciprocal action of body and mind.

[1] Professor Exner, in his 'Kritik der Hegelschen Psychologie,' Leipzig, 1842, gives the following lucid observation: that "a product cannot be thoroughly comprehended before its factors;" that is, in this case, that physiology must have fully cleared up the knowledge of the body, and psychology that of the mind, before we can hope to attain that of their mixed state. True, if the question be an *explanation*; thus we are authorised, or rather compelled, by this remark also to be content with a *statement* of the facts.

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That method which maintains the unity of both worlds, may proceed in three different ways.

a. Ideal,—making matter a product of mind, and thus subjecting it to purely philosophical considerations.

b. Real, (or more properly *material*)—making mind the product of matter, and thus considering it in a chemico-physical (purely natural-historical) point of view.

c. Identical,—declaring matter and mind to be one (attributes of one substance, forms of one being, manifestations of one idea, considering them in a view partly philosophical, partly empirical. (Natural Philosophy, Monism.)

All these methods, when attentively examined, cut the knot instead of loosing it, and paralyse further research. To attempt to investigate matter and its state (*a*) by speculation, is impossible, and impedes the progress of our inquiries into nature; to explain spirit and its action (*b*) materially, leads to a negative result, and is equally impossible, not to mention that the positive fact of freedom interposes its veto. To identify spirit and matter (*c*), furnishes no definite resting point.

Again, therefore, in considering mind and body, no other course remains for us, than to maintain the spiritual essence of the former, and the material essence of the latter, in their constant synthesis, as acting with, for, upon, and against each other. (See Goethe, vol. xlix, p. 95.) This, therefore, is the problem which we have to solve (§ 1), in doing which we begin below, and rise to higher considerations, after which, by returning from the higher to the lower, we shall complete the proof. (§ 1.)

We have already endeavoured to show in the preliminary chapter (p. 11, note), that both spiritualism and materialism are merely hypotheses, and are moreover unsatisfactory. The former cannot explain the corporeal, nor the latter the spiritual; but the second causes us more uncertainty than the first. In the latter, that Idealism which Kant called the critical is indisputable; namely, that we cannot go beyond our conceptions; but within their limits he leaves us at liberty—provided we do not deduce the corporeal world from them. Notwithstanding this, there is perhaps a "pre-established harmony," or something of the kind, between the two, and we

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are not to look on some eclectic, empirical French writers, as for instance, Esquirol, that admirable observer, whom Lippich justly calls "Hippocratem pro morbis mentalibus dicendum," or Georget &c.; nor the English, as Haslam, Perfect, the profound Crichton, &c., but those who, like Groos or Blumröder, hope and endeavour to unite the principles of the two views. On reflection, however, it will appear evident that principles cannot be confounded, and that a question positively stated, must be either positively answered yea or nay, or a protest must be entered against the question itself.

There is something in the ever-recurring squabbles between the best writers on our subject which excites a compassionate smile in those who are in the habit of examining questions calmly and impartially. Who denies, who *can* deny that often, and independently of bodily causes, erroneous notions, unbridled passion, overpowering feelings, or a want of development may change the regular course of psychical operations in such a manner, that it may justly be said that such a mind is diseased? Who can deny that such a disease is not to be removed by cold shower-baths, tarter emetic, &c., but wholly and solely by an influence on the mind? But, if we impartially weigh the subject and extent of medical art and science, do we not immediately perceive that every psychological physician, who treats the above-mentioned condition in the above-mentioned manner, is called a physician only in a metaphorical sense? The question in dispute is, properly speaking, not whether the mind can become diseased, but whether the task of treating independent states of the mind by education, instruction, &c. is to be considered as belonging to the province of the physician or not? The present state of the world seems to reply in the negative, because, since these moral influences are confided to parents, teachers, the clergy, &c., and by diseases, in a non-figurative sense, only the somatic are understood, the physician has to do with them alone. But here, as in human knowledge in general, it happens occasionally that these moral and logical conditions, which, as well etiologically as therapeutically, are wholly independent, trench on the somatic, and enter into the domain of the physician, whose rule, therefore, extends over them. The confines, as in all human knowledge, touch without effacing each other, and this is the main substance and object of all medical psycho-

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logy, so that the physician, who is wholly unacquainted with the relations of intellectual to physical life will not be able to comprehend and treat the latter in all its various bearings.

Matter and spirit, when they are united to form body and mind, can no longer be considered otherwise than as unity. When therefore the so-called somatic theory affirms that every mental disorder has a purely corporeal origin, it speaks as partially as the psychical theory would in affirming that every bodily suffering proceeds from the mind. If, as Dubois justly observes in hypochondriacs, organic diseases are the most easily formed in those parts on which they bestow particular care, and if (as I have endeavoured in another place to show by many proofs) imagination may contribute as much to the prophylaxis and cure, as to the origin of bodily maladies, a psychical commencement of them is hereby admitted; while, on the other hand, no one who is acquainted with human nature will deny that those peculiar maladies of the mind, error and vice, originate frequently in states of the body. Here again we have only to do with the determination of the boundaries of the medical domain, not with theories. The end of the former, the beginning of the latter, lie in this domain, and the physician has to find the line of coincidence, the line where spirit and matter combine to form a living unity; he has to appreciate the mind, so far as it acts etiologically or therapeutically on the body. Its peculiar and proper pathology belongs to logic and ethics, for, as it has itself no seat, it cannot be the seat of substantial sufferings. The division hitherto most approved, of what are called mental diseases, according to the deranged functions of the mind, is therefore, at all events, only symptomatic—phenomenological. It may, however, answer our purpose as well as any other, till we shall have ascertained in every case of these deranged functions the causal relation between mind and organ, before which period many a long year will pass away.

If we now turn from these theoretical views to the practice of medical psychology, which is our proper concern, we shall receive with pleasure, in considering its present state, that the importance of these theories is by no means so great in the application as might at first sight appear. Different as are the psychological and pathological doctrines of the mind, their adherents agree pretty well with respect to the therapeutics; a new

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and consolatory confirmation of the truth that the actions of man, as his most holy duty and most exalted task, may be performed without requiring certainty in all the problems of knowledge. As in the healing art in general, the most experienced and best-informed physicians pursue nearly the same treatment at the bed-side, and only explain in a different way, the effect of the same remedies, according to the difference of the schools to which they belong, so those who practise this branch of medicine in particular agree on the whole in the choice of remedies; the psychical employ likewise somatic; the somatic employ likewise psychical remedies; only, as we have seen above, the one party explain the effect of the psychical remedies somatically, and the other the effect of the somatic remedies psychically. Thus each employs both kinds of remedies, and the extravagances either way are so easily recognised as exceptions, that they cannot mislead the learner. All practical men in this branch are, however, especially unanimous in acknowledging the importance of public institutions for the cure of lunatic patients; all eyes are directed to them, and plans for their amusement and improvement are now the primary object of psychiatric science; and though the sanguine admirers of the psychical mode of cure, for instance, by theatrical representations, &c. undoubtedly go somewhat too far, it is nevertheless generally perceived, that these institutions and their proper organisation offer the only practicable mode of successfully treating mental disorders.

This is a general outline of the present state of the therapeutical part of our doctrine, and with it the sketch of its history is completed.

Instead of the notions of the somatic, psychical, and mixed views stated above, and the doubtful foundations upon which they rest, you will now naturally wish to be informed which of them are the views that these lectures adopt, or what others they will propose, in order that you may be guided by something not negative, but positive. A well-grounded answer to this point can only be furnished by the lectures themselves; but from our preliminary basis thus much may be premised. The maladies of the spirit alone, *in abstracto*, that is, error and sin, can be called diseases of the mind only *per analogiam*. They come not within the jurisdiction of the physician, but that of

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the teacher and clergyman, who again are called *physicians* of the mind only *per analogiam*. The maladies of the body alone, *in abstracto*, for instance, of the brain or the nerves, without mental alienation, are not diseases of the mind, but of the body. The notion, ***mental disease***, must therefore be deduced, neither from the mind nor from the body, but from the relation of each to the other. The question does not turn here on the external cause of psychopathies, which may be either psychical or corporeal, nor upon what is called the proximate cause, which is inscrutable, because the relation between body and mind is inexplicable; the question is respecting the phenomenon itself. Where psychical phenomena appear *abnormal*, there is mental disorder which has its root in the mind, so far as this is manifested through the sensual organ, and has its root in the body, so far as this is the organ of the mind. To search after the phenomena in which these relations are revealed, with the unprejudiced eye of experience—to investigate them scientifically in every point that is of importance to the physician, and to collect them in one whole, is the province of *medical* psychology, upon which we are now about to enter.

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CHAPTER III.

PHYSIOLOGY.

§ 1. THERE are two modes or ways of treating the subject of our investigation—1st, the synthetical, which deduces the particular from the unity of the scientific idea; 2dly, the analytical, which takes given particulars as the starting-point, and aims at reaching scientific unity. The first gives the philosophical foundation; the second, the physical development, or natural history. The metaphysician takes the first course, the second is prescribed by our object, which requires a physiology of mental operations.

We shall, therefore, after determining the facts and notions from which we have to proceed, begin with the most simple operations of psychical life, and gradually advance to the more complex and elevated. The latter must be understood from the former, as in the sequel, the pathological from the physiological. When we have reached the highest functions, the reverse or synthetic method, which refers mental to bodily diseases, furnishes, as it were a proof and completion of the analytic, which again opens to our view many new points of the subject. An example of the first method is given in Hartmann's excellent work, 'The Physiology of Thought;'[1] which endeavours to develop the intellectual functions from the organs. An example of the second mode of proceeding is furnished by the able Nasse,[2] who seeks to deduce the relation to the several organs from the mental functions.

§ 2. How do we acquire the notions, *body*, *mind*, *spirit*? Fear not that I shall conduct you into the dangerous domain of metaphysics. We have nothing to do with it, though it would be well if we might take it for granted. We have only to seek a firm foundation and a definite terminology for our science, in order that we may be able to take every step with

[1] Der Geist des Menschen. Vienna, 1832, second edition.

[2] Zeitschrift. für ps. Aerzte (1822), and elsewhere.

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security and intelligence. If the practitioner think that he can do without any theoretical basis, and therefore without this, he is mistaken, and in the course of his practice will, alas! too late perceive his error; for every human action, even the most mechanical, rests upon, and ultimately requires, principles.

We attain the above-mentioned fundamental ideas by sensual perception and consciousness; the first reveals to us a material, the second an intellectual, world. We have, therefore, these two facts: the fact of perception and the fact of consciousness, from which we proceed.

The process in man himself, whereby he becomes aware of these facts is, as mentioned in § 1, first analytical, then synthetical. First, the material world is perceived by means of the feeling and senses. With the gradual development of man, he learns to analyse it more and more in detail, and thus attains, as it were, from below upwards, to abstractions and notions, and gradually to a notion of *notions*, which he designates by the word *mind*, which notion, however, at this stage of the process, is only negative, being "everything that is *not matter*." But here, uniting as it were two worlds, the fact of consciousness intervenes, which announces itself by the idea of unity and freedom. When this fact has occurred to man, he endeavours to combine, as it were, from above downwards synthetically, into one whole, the world with which he has become acquainted through his senses.

"Something for which man can find no analogy, combines with the organs which he has in common with the higher species of animals,—he calls it *mind*."[1]

§ 3. The union of the perception of both facts (§ 2) in one object, every man designates as "*ego*." The *ego* of the mental physiologist is therefore not the *ego* of the metaphysician. That *ego* of which we speak, consists of body and mind,[2] the other is an abstraction of the most spiritual personality.[3] Let

[1] Neumann, d. Mensch. 1844, p. 23. [2] Vide Töltenyi. Kritik. i, 223.

[3] Richte. Professor Lippich appears to agree with us, in his acute essay 'die Verletzlichkeit der menschlichen Leibesfrucht' (M. Jahrb. n. f. vi, 204), he says: "The principle of human personality, that is to say, the notion of individuality, originally reveal itself only in the manner of human conception." Carus would call "Darleben," pervitalisation.

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it not be objected that the *ego* must be intellectual, for the child at first speaks of himself in the third person, till the intellectual personality is developed in him.[1] He speaks of himself in the third person till he perceives the relation of the two worlds to himself. This, however, is arguing in a circle, for he only perceives the two worlds because they unite in his *ego* as one subject. This circle must not mislead us; the facts of observation and consciousness are *felt* by man in his *ego, completely as one;* that they are *two* worlds, of which they give testimony, and which coincide in him, he discovers only by abstraction.

Matter and spirit are this abstraction; the former appears in man *in concreto* as body, the latter as mind. Body being animated matter, mind being incorporated spirit. Both intimately one, and indivisible in the phenomenon.

These ideas cannot be too clearly and profoundly impressed upon the mind; the security of all further steps in the domain of anthropological medicine depends on a firm adherence to them. They are, then, most deeply impressed upon our minds when we initiate ourselves into them by applying them in various directions, and as it were putting them to the proof. Thus also the Pythagorean scheme of Troxler is explained.[2]

"We feel ourselves originally as unity; in the *ego* of the natural man there is neither spirit nor matter. Thinking first induces the notion of spirit. Spirit, therefore, is something which we think (sceptical realism). But that we do think is itself a proof of the independent existence of spirit, for we cannot think anything without a thinking principle. There must, therefore, *be* spirit besides sensual existence (dualism.) Matter also, as distinct from spirit, is not conceived by us till after this abstraction; matter too, as well as spirit, is something within us of which we think (idealism). Spirit and matter are thus only differences which are thought of; they are, in reference to man, two modes of conceiving a unity, (the philosophy of identity, and its filiations.) But as we *are* only men, we will be content with this need of a conception, without premising anything beyond it." This is our view. "All systems of philosophy in their multiplied modifications move,

[1] Kant, Anthropol.

[2] Vide Blicke in d. Wes. d. Menschen.

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and will eternally move within these limits; to recognise them, and to be conscious of their limits is therefore, properly speaking, the key to all which unlocks their relative truth, it is the philosophy of philosophies."

§ 4. There are, therefore in man two systems of perceptive faculties, one called body, the other mind. The former is dependent on external excitements, the whole of which we collectively call nature; the latter is dependent on internal excitements, the whole of which we collectively call spirit.[1] We divine these worlds only from the dependence in which we feel ourselves with respect to them. They are generic abstractions of what is specifically individualised in us; both the abstractions are in themselves inexplicable, nor can they reciprocally explain each other. Such explanation, however, is not at all necessary to our view of the case, or to its medical application. As the naturalist knows and applies electro-magnetism in its relations, without comprehending its essence, as the astronomer calculates the movements of the planets without knowing their nature, so can we duly appreciate spirit and matter in their relations to each other as body and mind, without being able to explain their nature or these relations.[2] The human mind is satisfied if in any case it can explain to itself *why* it cannot explain that case. In this determination of what can *not* be known, by which time is spared and error avoided, consisted the great merit of Kant. What is the meaning of *explaining?* To explain means to deduce from a principle; but this principle must itself be conceivable, for from the inconceivable nothing can be deduced; that is, rendered conceivable. What is conceivable? That which lies within our laws of thought. Whether these objects of sense or of intellect, we cannot, in either case, comprehend their principle, because it does not lie within the laws. Thus, as the phenomenon of the two facts is presented to us, we are compelled, in order not to be forced to deny them, to assume an inconceivable spiritual, and material principle, by which, however, neither spirit, nor matter, nor their unity is explained. Every attempt in other

...al, Kl. Sch. ii, 157.

...se, Zeitschrift, 1822, 1 Part, p. 3. Yet the examination of the relations of a ...onducted by way of experiment does not necessarily imply a previous know... of the essence of that thing, on the contrary, the former may prepare the latter.

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[1] Professor Exner, in his 'Kritik der Hegelschen Psychologie,' Leipzig, 1842, gives the following lucid observation: that "a product cannot be thoroughly comprehended before its factors;" that is, in this case, that physiology must have fully cleared up the knowledge of the body, and psychology that of the mind, before we can hope to attain that of their mixed state. True, if the question be an *explanation*; thus we are authorised, or rather compelled, by this remark also to be content with a *statement* of the facts.

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That method which maintains the unity of both worlds, may proceed in three different ways.

a. Ideal,—making matter a product of mind, and thus subjecting it to purely philosophical considerations.

b. Real, (or more properly *material*)—making mind the product of matter, and thus considering it in a chemico-physical (purely natural-historical) point of view.

c. Identical,—declaring matter and mind to be one (attributes of one substance, forms of one being, manifestations of one idea, considering them in a view partly philosophical, partly empirical. (Natural Philosophy, Monism.)

All these methods, when attentively examined, cut the knot instead of loosing it, and paralyse further research. To attempt to investigate matter and its state (*a*) by speculation, is impossible, and impedes the progress of our inquiries into nature; to explain spirit and its action (*b*) materially, leads to a negative result, and is equally impossible, not to mention that the positive fact of freedom interposes its veto. To identify spirit and matter (*c*), furnishes no definite resting point.

Again, therefore, in considering mind and body, no other course remains for us, than to maintain the spiritual essence of the former, and the material essence of the latter, in their constant synthesis, as acting with, for, upon, and against each other. (See Goethe, vol. xlix, p. 95.) This, therefore, is the problem which we have to solve (§ 1.), in doing which we begin below, and rise to higher considerations, after which, by returning from the higher to the lower, we shall complete the proof. (§ 1.)

We have already endeavoured to show in the preliminary apter (p. 11, note), that both spiritualism and materialism e merely hypotheses, and are moreover unsatisfactory. The ner cannot explain the corporeal, nor the latter the itual; but the second causes us more uncertainty than the . In the latter, that Idealism which Kant called the cri- is indisputable; namely, that we cannot go beyond our ptions; but within their limits he leaves us at liberty— led we do not deduce the corporeal world from them. ithstanding this, there is perhaps a "pre-established har-," or something of the kind, between the two, and we

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may hazard the attempt to deduce the prodigy of reason. But as, independently of the constant illusiveness of the perceptions of the senses, there is after all no transition to the fact of consciousness in materialism; it explains mind still less than the other view explains matter. We believe, for instance, that we are very near the sensible demonstration of seeing, because we can even *see* the image on the retina; but have we thereby explained vision? and this is only an action of sense. Supposing that we are acquainted with all the chemico-organical and microscopical, as well as the physical polar processes in the cortical substance of the brain, during the formation or reproduction of a thought, have we thereby explained thinking? "Materialists," it is somewhere observed,[1] "look for the incarnation of thought, as the Jews do for the Messiah." For the present, therefore, we probably take the best course (see above) by impartially and carefully considering mind and matter alternately in their infinite diversity, and final pervasion, without attempting to *explain* either the one or the other.[2]

§ 6. But, with reference to what has been said in the preliminary chapter, it will be useful to confirm ourselves still further in the conception and limits of our doctrine. The separation, from physiology as well as from psychology, can but promote its study,[3] and spare us many digressions. The former is the natural description of the mind,[4] the latter is the natural description of the body; our doctrine is that of the reciprocal relation of both, and as it appears in the phenomena. Strictly considered, the investigation of our subject would not interfere with any of the above hypotheses; for supposing our corporeal part to be fundamentally spiritual, our aim, for the occasion, is to consider and study that spirit in this corporeal garb and its relations, and, supposing our mind to be only a corporeal emanation, our aim is to investigate completely those particular functions of it which are called spiritual. This view alone is that which interests the physician, and which forms a basis for

[1] Grundzüge z. Erkenntniss der Natur der Menschen. Frankfurt, s. 105.

[2] What is called explanation in the natural sciences, is nothing more than a classing of observations under a common expression.—Beneke.

[3] Nasse, l. c. p. 6.

[4] Kant, Anf. d. Nat. p. 17, Pref.

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the doctrine of mental diseases.[1] A certain proportion in the relations between mind and body is called health,[2] and a deviation from it is termed disease. This proportion is by no means a complete equilibrium, but the perfect adaptation of the body, without injury to its integrity, to the purposes of the mind. Thus, therefore, there is in man a higher and a lower existence; but a medium of connexion between them,[3] in the sense that it is half body, half mind,[4] which the nervous fluid, for instance, has been considered to be, does not exist, unless we will assume as such the notion of organism (vital power?), in which alone the action of the mind is manifested to us. Further, as the soul is immaterial, and the body material, the relation between them is neither beside nor within each other. The mind is not the internal part, the body not the external, these being merely corporeal notions of space.[5] This is for the present an answer to the question relative to the seat of the soul. Yet, notwithstanding this, the relative activity of the mind is certainly not always and everywhere equal, in all the structures of the body, nor that of these structures in the functions of the mind;[6] still the organs of the body, situated more internally, have a closer relation to the higher functions of the mind,[7] whence the above-mentioned designations may have arisen. With these preliminary observations, which partly determine what precedes, and partly anticipate what follows, we will begin our inquiry. (§ 5.)

§ 7. The first, that is, the earliest, sign by which the "*Ego*" 3) becomes perceptible, even before it expresses opinion [i]f as such, is *corporeal sensation*.[8]

[I]ts excitation commences before the senses are manifested, before there is any perception. It is the foundation of special manifestations of life. Without this general sensation we should not possess the certainty that our is *our* body; for it is as much an *object* for the other

...e, l. c. 12. [2] Nasse, l. c. 19. [3] Goethe, vol. 1, 43.
...s quid sit intelligo, *quasi* corpus quid sit non intelligo.—Cicero.
...16. [6] Nasse, l. c. 23. [7] Ibid. l. c. 24.
... uber d. Bd. d. k. Ges. Berl. 1842. Carus calls this attribute of the ...dividual "Perception," to distinguish it from Sensation. Lindemann, in ...Menschen, Zurich, 1844, calls it "Ursinn," (primitive, original sense.)

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senses, as anything else that we can see, hear, taste and feel.[1] This original and immediate innate sensation must be distinguished from what is called common feeling (*Cœnæsthesis*), which is to be treated of in the sequel.[2] This, as we shall see, is the function of a peculiar distinct system of nerves, to which belong certain definite sensations of our Being. But original general innate sensation is necessary to the existence of all other particular sensations, and it seems that it may exist, even independently of the nervous system. Polypi, animals of the simplest structure, without being provided with a nervous system distinct from the rest of the organic mass, show traces of innate sensation. The light, by means of which we see, acts not only on the visual nerves, but also on the fluids of the eye, and the sensations of sight partly depend on the structure of the eye. *This* sensibility, therefore, appears to be a necessary attribute of animated organic matter itself, which bears within it the wants of the special sensations, as well as the elements of the nervous system, and since in the higher classes of animals and in man, these elements adapt themselves to a particular system, the organism becomes more clearly individualised to the expression of itself.[3]

All the perceptions of sense are rooted in the general sensation. The child must be conscious of his senses, before he applies them.[4] This sensation is however very obscure, even pain is not clearly felt by it at the place where it exists.[5] Equally obscure is the notion which it entertains of an object. Though Brach, therefore, is right[6] in ascribing something objective, even to the general sensation, since conditions cannot communicate themselves, without communicating (though ever so obscurely) something of *that* which produces the condition,—nay, strictly speaking, as even in the idea "Subject," that of an object is involved, yet it is advisable to abide by the distinction founded by Kant, according to which, by innate sensation, we *especially* perceive our own personality (subject), and by the senses we *especially* perceive objects (and thus in the ascending line, Feeling, Taste, Smell, Hearing and Sight.)

[1] Brach, l. c. 11.
[2] In which Brach often fails.
[3] Töltenyi, Kritik, ii, 226.
[4] Brach, l. c. xi.
[5] Ibid. Comp. Ch. Bell, on the Hand, 1836.
[6] Brach, l. c. 15, &c.

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This general sensation (not the sense of touch)[1] is properly what Hegel calls "the feeling of earthly totality," and which long before him Reil called "the ideal assimilation of the Universe."

§ 8. The next step from this obscure, original, innate sensation is particular sensation through the medium of the nervous system, which, in its more profound, and yet more obscure sphere, produces common sensation (*Cœnæsthesis*), and in a higher manifestation, the perceptions of the senses.

We know from physiology, that it is really the nerves which we must consider as the organs of this more developed sensation and of perception. The reasons founded on experience are these,[2]—

1. Mental powers, as founded on sensation, develop themselves in the order of beings in the same ratio as the nervous system.

2. Their manifestation in the individual is also parallel with the degree of development, and with the conditions of the nervous system, and ceases when this is destroyed or injured.[3]

3. A single nerve affected mechanically or chemically, excites violent pains.

4. The greater the number of nerves in an organic structure, the more acute and sensitive it is; for instance, the retina of the eye.

5. Nerveless structures appear to feel either not at all, or only very obscurely.

§ 9. That the nerves *conduct* this sensation, of which they are the medium (§ 8), from the periphery to the centre, is likewise taught by physiology on the following grounds, which we here only state in general terms:

1. If a nerve is compressed, it feels no pain from the place of pressure towards the periphery, but from the point of pressure towards the interior. When the pressure ceases, sation returns.

2. The same phenomenon is manifested by a nerve which ed, or—

3. Which is cut through.

[1] Rosenkranz, Psych. 78. Sommering, d. Fab. c. h. iv, 165.

[2] Vide Hartmann, G. d. M. 68.

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We must not, however, thence infer that there exists a *current* of some nervous principle, which is only a provisional hypothesis,[1] nay, which many observations seem to contradict.

§ 10. That it is the *Brain*, in which, as to a centre, these (§ 9) conducted sensations are collected, appears from the following considerations:

1. Anatomy shows the course of the nerves from the periphery of the organs to the brain, where they have their so-called central end.

2. When this central end is compressed or injured, sensation ceases.[2]

3. When the brain, or the spinal marrow (as the continuation of it) is compressed or concussed, the function of the nerves arising below ceases, and returns when the brain, or spinal marrow, is again relieved.[3]

4. Morbid feelings often manifestly spread from the nerves to the brain.

5. After the healing of the wound caused by the amputation of a limb, the feeling of the lost member often remains, which seems, therefore, to be transferred to the central organ.[4]

§ 11. But all the nerves do not lead, with equal freedom of communication, to the brain. On the contrary, the *vegetative nerves* form, as is well known, a partially distinct system, existing independently of the cerebral, and which, by peculiar separate foci, partly counteracts and is partly connected with the cerebral system, by the sympathetic nerves, which Reil calls[5] the apparatus of semi-conduction, and which form a continuous elliptical chain. Hence the impressions, which fall within the dominion of this system, are not at once so clearly felt, as those of the other, namely, the cerebro-spinal nerves. A morsel, for instance, that is swallowed, is felt only to a certain point, when it enters the œsophagus; sensation then ceases, and returns only at the *sphincter ani*. An animal which is opened alive does not cry out when the soft nerves

[1] Vide Meyer, Unters. über d. Phys. d. Nervenfaser. Tub. 1843.

[2] Sömmering, 93. [3] Ibid. 93.

[4] This observation plays a special part in the physiology of the mind; it is adduced in confirmation of the most diverse, nay, conflicting assertions; but this seems to me to be its proper place.

[5] Kluge, Magn. 266.

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of the abdomen are pricked, but immediately when the hard nerves of the extremities are touched.[1]

These are the most general points of physiology, which must be borne in mind, in order to comprehend psychical life, in its lowest degrees of sensation. I need not mention, that in this branch of physiology we have as yet obtained only hypothetical views. It is, therefore, our duty to abide by what is most general, and most commonly received. Thus we avoid the danger which hypothesis brings with it in its wide ramifications, where, forgetful of its great uncertainty, we consider it as a foundation, on which we can confidently build. Generally speaking, error will always be more thoroughly extirpated from the sciences, and truth always more confirmed and extended, by a conscientious indication of those points which are hypothetical, and by invariably bearing them in mind in the course of the investigation.

Many experiments are alleged *against*, and many *for* sensation in the sympathetic nerves—the apparatus of semi-conduction. Such experiments, when the nerve is mechanically or chemically injured, perhaps prove less than the sensations of the living body. At all events it is sufficient for us to know that the sensations of the ganglionic system, when in a healthy state, are not so immediately conducted to the brain (the preceding notion) as those of the other nerves.[2]

If we review the foregoing as a whole, in order that we may be able to use it to more advantage in our future inquiries, we shall have the following results.

The nerves are the roots of special sensation. They arise in almost all structures of the organism, are, as it were, supported and united together in its lower sphere by knots (ganglia), are in its middle sphere blended through the sympathetic nerves with the higher sphere, and in this higher sphere form the stem (spinal marrow), and the crown (the brain) of this whole tree of life. We are therefore justified in assuming, with all physiologists, a nervous system, twofold in its unity; the ganglionic system (or better, the vegetative, where are ganglia of the senses and spinal ganglia) with the sympathetic, and the cerebro-spinal system. Our business is

[1] Kluge, Magn. 261. Vide Brach, l. c. 23. [2] Brach, l. c. 25.

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now to inquire, beginning with the lowest sphere, what each contributes to the development of psychical action.

The nervous, like every organic system, is a complete whole. Every separation of it is arbitrary. It seems most to the purpose, as Marshall Hall proposed, that it should be made on physiological principles, and there is nothing objectionable in dividing it into a vegetative (nutritive), motor, and sensorial system; or into a system of sensation, motion, respiration, and sympathy (Jessen). Its relations to psychical life, which is what we have to do with, seem to be most properly expressed by the grouping which we have adopted. The centres which unite the whole are, the cortical substance of the brain, the spinal marrow, and perhaps also the ganglia of the sympathetic system. Every primitive nervous fibre runs isolated (without anastomosis) from the periphery to the central end. In its course, therefore, there is no collateral communication of action. In the central organs alone, where the terminating loops are situated, can the excitement be transmitted to homogeneous or heterogeneous nervous structures. The transition to the homogeneous is called irradiation (in motor nerves, synergy,—in sensitive, sympathy); the transition from one system to the other is called reflex.

§ 12. But before proceeding in this order to the above-mentioned individual foci of the ganglionic system, we ought properly to institute a general investigation into what passes in the nerves, during the function of sensation ascribed to them; and thus follow, as it were, the first psychical manifestation into its last psychical retreat. What physiology, in its present state, has to impart on this subject, is unfortunately still hypothetical (§ 11), and it remains to be seen, whether the progress of organic chemistry and physics will ever exchange this hypothesis for ascertained facts. A careful examination of the views propounded since Hartmann's[1] time, leads pretty nearly to the following propositions.

The source of sensation in the nerves is the nervous medulla.[2] Whether the cerebro-spinal fluid, which accompanies all the nerves of sensation, and spreads in the neurilema of all the nerves, co-operates, is undecided.[3]

[1] G. d. M. p. 85.
[2] Bischoff, Natur. d. M. ii, 241.
[3] Simogowitz, Geistesstör., p. 153.

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The function itself shows a polar relation both as respects the internal action of the nerves in their component parts, medulla and neurilema,[1] and as respects the external in their periphery and centre;[2] and, therefore, leads us to infer a vital motion resembling the electro-magnetic or the galvanic. It occurs—1st, like the latter, homogeneously and instantaneously at the two poles, however long the conducting line may be; 2d, it is maintained like the latter, by a (vital) chemical process. Whether this sensation, acting in a direction from without inwards, with which alone we have to do here, is the same as motion, acting in a direction from within outwards, is undecided.

Whether the nerves have a certain sensible atmosphere, by means of which they feel *beyond* themselves, as Reil and Humboldt suppose,[3] is undecided.

In a somatic view, the reciprocal action between the nerves and the blood deserves our attention. The influence of the first on the second shows itself: (*a*) in respect to quality by the changes in the secretions after mental emotion; (*b*) in respect to quantity by the acceleration or retardation of the circulation, according as the nervous action is heightened or depressed. The influence of the vascular system on the nervous manifests itself again (*a*) in respect to quality, by the nourishment which the latter derives from the former; and (*b*) in respect to quantity by the increased or diminished vital action of the nerves through the medium of the blood. Every nervous filament is provided with blood, by arterial and venous branches, through imbibition by the primitive fibres; every artery, and probably also every vein,[4] is provided with motor nasal nerves.

It is an important remark of Carus, that as the galvanic current depends on the immersion of zinc and copper in fluids, so that of innervation depends on the reciprocal action of blood and the parenchymatous nervous fluid, and that as the development of galvanism is exhausted by too great an oxydation of the pairs of plates, so also is that of innervation, when, in the process of respiration, oxydation has exceeded a certain degree. The arterial blood is therefore, in respect to quality, the

[1] Neumann, l. c. 90.
[2] Hoff, l. c. 242.
[3] Neumann, Path. Unt. Cent. Ztg. 1844, No. 69.
[4] Sömmering, Angiol. 328.

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normal stimulant of the whole nervous system, so long as it remains normal itself in respect to quantity; venous blood is directly, and arterial blood indirectly, inimical to nervous vitality.

These anatomico-physiological *Lemnata* are very important for the explanation of many psychopathical phenomena. They explain the old dogma: *ubi stimulus ibi humorum uberior adfluxus;* but the converse is also true: *ubi adfluxus ibi irritatio.* (See the admirable statement in Dr. Leiden's *Dissert. de Neuralg., spin.* Vienna, 1844, p. 20.)

With respect to structure, the cerebro-spinal nerves consist of what are called the nerve-corpuscles (nerve-cells of Carus, overlaying mass of Valentin, nerve-spheres of Klencke), and the primitive nervous fibres (cylindrical tubes), whence their white colour is chiefly derived. In the vegetative nerves these primitive fibres are less numerous, whence arises their colour, which inclines to gray. It seems to be still undecided whether, what are called special organic fibres, occur in the *sympathetic nerve,* together with what are called animal fibres, and whether the vegetative and animal function of this nerve, or, as Remak supposes,[1] a separate apparatus is to be ascribed to this connexion; or whether, like a purely cerebro-spinal nerve, it has no organic fibres, as Professor Czermak and Valentin suppose.[2] At all events, the cerebro-spinal nerves are distinguished by their colour, firmness, transverse stripes, and lustre, from the vegetative nerves, which are softer, indistinctly striped, flat, and of a gray colour, tending to red. So, too, the different sensual nerves differ from each other in colour and consistency, from which, as well as from the structure of the sensual organs, into which, they ramify, we must seek, though we cannot explain, the peculiarity of their offices. The terminating form of the nervous fibres cannot be at all shown by anatomical preparations, but only by the microscope. In this way Valentin (*Nova acta,* &c., p. 106) has found, and later observers have confirmed his discovery, that the nervous fibres do not terminate in a free end, but are always united, two and two together, and form an arched terminal loop. The usual

[1] Froriep, Notiz. 1834; and Observ. an. et micr.

[2] Repert. 1840; and C. Langer, Ueber d. Bau d. N. 1842.

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supposition of a much greater, nay, stereotype, constancy in the form of the nervous structure, as opposed to all other structures of the organism, appears, on more careful comparison, to be only partially true. Here, as elsewhere, we find that men resemble and differ from each other, as much as the several leaves of one tree. The highly attractive microscopical and chemical researches into these details belong to anatomy and physiology, and these unfortunately have hitherto furnished but few data for explaining how the functions are produced.

The gray substance of the ganglia is not homogeneous with the gray substance of the brain.[1]

§ 13. Common feeling (*Cœnæsthesis*) (§ 8), which is referred to the ganglionic nerves (§ 11), is therefore organically represented by the ganglionic system (§ 11). This system shows three separate foci, in which, as in the focus of a lens, its sensations unite.

a. The focus of generation forms opposite to the brain, as it were, the other pole of the organisation. The more completely the structures belonging to this focus are developed, the less so is the cerebrum (for the contrary is affirmed of the cerebellum), and conversely. Here the sexual excitement comes into operation. They have a manifold and close relation to the higher psychical operations. With puberty, with the sexual functions, (procreation, conception, pregnancy, parturition,) with their decline in age, further, with the difference of the sexes, and, lastly, with the pathological conditions of this sphere, so many psychical effects, to be discussed in the sequel, are connected, that no doubt can be entertained on this point.

b. The phrenic focus. As belonging to this, we reckon the art, the diaphragm, the cardiac orifice of the stomach, and e stomach itself, which receive their nerves from the eighth r, the phrenic nerves and the great sympathetics. From e sources also psychical action is variously affected, which is d as well by the physiological conditions of the tempo- altered circulation, of the digestion, &c., as by the patho- l conditions to be treated of in the sequel.

The *Plexus solaris.* This is formed by the two semi- arcs of the superior abdominal plexus, and of the

[1] Sarlandière, Traité d. Syst. n. Paris, 1840.

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superior mesenteric plexus, in the middle of which lie several knots, which it surrounds like the rays of a sun. In it are interwoven the nerves of the voice, the splanchnic nerve, and the twigs of the intercostal nerves. The influence of this focus on psychical action, obscure as are the sensations proceeding from it, is very important, especially in pathological conditions.

§ 14. Besides these foci (§ 13), the nervous system describes some other circles, the largest of which, from the head to the coccyx, is closed above by the cerebellum, and below by the ganglia of Walter; that is, it forms from one pole of the organism to the other the great sympathetic nerve. This is what Reil calls the apparatus[1] (§ 1) of semi-conduction (§ 11). The sympathetic nerves receive nervous fibres and real roots from all the spinal and some of the cerebral nerves. How far a certain independence belongs to it, or to a system connecting the others, is in the present state of the anatomy of the nerves undecided.[2] The sympathetic nerve has an especial relation to all the vital functions on which nutrition depends, and is evidently sensitive.[3] Its psychological relation, too, is especially apparent in pathological states, when the otherwise obscure sensation is more vivid. As connecting threads have been found between the cerebellum and the third pair of nerves (Gans), or the sixth pair (Natter), and these are variously connected with the sympathetic nerve, the cerebellum is to be considered as the superior end of the sympathetic nerve, which is of importance with regard to the relations of the Cœnæsthesis to consciousness.[4]

§ 15. The parts of the nervous system which have been described (§ 13-15), regulate the Cœnæsthesis, which differ from the general corporeal sensation (§ 7), inasmuch as the latter is originally the foundation of every special sensation. (§ 7.) It may be called subjective, inasmuch as the body itself (and not the external world, as in the case of the sensual nerves, which are to be subsequently discussed) gives the excitement to the nerves concerned, and, consequently, repre-

[1] Reil, l. c. 265.

[2] Sinogowitz, in reference to Joh. Muller, 365. Bidder und Volkmann, Die Selbstständigkeit des symp. Nervens. Leip. 1842.

[3] Burdach, Physiologie, Bd. iv, 464.

[4] Klencke, Org. Psychol. 228.

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sents[1] the object of their perception. This perception is however very obscure, because the individual objects of it lie hidden, —cannot be arbitrarily altered,—cannot be corrected by the senses; and because the connexion of the nerves of this system with the brain takes place very indirectly. What modifications are produced by a state of disease will be mentioned hereafter.

By the Cœnæsthesis, states of our body are revealed to us, which have their seat in the sphere of vegetative life, wherein the nerves which belong to it spread themselves. These states are:

a. General: corporeal heaviness and buoyancy, atony, toniety.

b. Special: hunger, thirst, sexual instinct, &c.

The sensations of pain, titillation, itching, &c., which are generally cited here, are, if more accurately considered, of a different nature. In their more common acceptation they belong to the general corporeal feeling; in their more local limitation with distinct perception of the object exciting them, to the sense of touch, which is to be discussed in the sequel; but when they arise from the nervous system allotted to the vegetative sphere of the body, they certainly belong to the Cœnæsthesis, in the more limited sense of the word.

To this class belongs, especially, the anxiety arising from an impediment in the organs of respiration and from nausea, as well as from hunger and thirst, which immediately proceed from the organs of alimentation, and, by their especial influence on the frame of mind, will claim our future attention (§ 66).

The further development of the laws of sensibility, so far as they form a foundation for the construction of the doctrine of the neuroses, belongs to general pathology. See, on this subject, Romberg (Lehrbuch d. Nervenkr. 1840, 1.) They are indicated above (Remark on § 11) as isolation, irradiation (synergy, sympathy), reflex function.

§ 16. In the analysis of the psycho-physical processes proceeding outwards from sensation to perception, we encounter, after the organs of the cœnæsthesis, the organs of sense, and in the first place—

[1] However subjective this sensation is, there is always in it the indication of an object, as Brach (l. c.) very admirably shows; hence illustrating the instinct of animals (p. 53). Presentiment, too, chiefly belongs to this system.

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The sense of touch. This is the first sense which develops itself, passing from vital sensation to a conception of the objective (external?) world. It is the sense appropriated to the estimation of mechanical conditions. Its seat is the entire external and internal surface of the skin, but in the more limited sense it is the hand, partly on account of the delicacy of the skin at the tips of the fingers, partly on account of the protection which the nail affords to the finger, and partly (which we shall have to explain by-and-by) on account of the freer action of this member. The nerves for the sense of touch are the nerves of the skin in general, the peripheric end of which is applied to the epidermis, and the central end to the larger cerebro-spinal stems. The organ of touch, besides the general surface of the skin, is especially seated in the *papillæ cutaneæ*,[1] which being composed of very fine ramifications of capillary vessels and nervous threads, forms beneath the epidermis numerous rows of elevations. It is supposed that the mechanical pressure of an object causes a determination of blood to the finest vessels of these papillæ; that these swell, rise, and, with the speed of lightning, communicate the impulse to the brain. The perception of warmth and cold, of electric, galvanic, &c. influences, is a perception of conditions, which are already excited in our body, and, therefore, belongs not to the sense of touch, but to the *Cœnæsthesis* (§ 18.) On the contrary, every pain hinders the perception by touch. This sense, again, by its immediate application, corrects more than any other the perception of the other senses. Its extent, however, is very limited, owing to the necessity of this immediate contact.

§ 17. The sense of taste is a sense for estimating chemical qualities, and especially those of thick, fluid, or soluble substances. Its seat is in the moist, soft, mucous membrane of the tongue, and of the palate, that is, in the uncovered continuation of the organ of the preceding sense. The nerves which run into it, and cause the sense of taste, are the *glosso-pharyngeal*, the *lingual*, and the *hypoglossal*. The first, which also contributes to form *papillæ* at the root of the tongue, seems to have the greatest share in this, since dogs, according to

[1] Bischoff, l. c. 260.

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Panizza, after it is cut through, devour with equal voracity meat and bitter substances,[1] which does not happen when the two other nerves are divided. This sense therefore has fewer nervous roots for its function than the preceding, but no single nerves separately assigned to it, like the following; the objects of taste are fluid and soluble substances, which have a gustatory chemical relation to its organ, the nature of which is unknown to us. Yet perception in taste is, properly speaking, a perception of a change occurring under the cognisance of the organ, and hence the sense of taste is rather subjective than objective. Like the touch, it comes in immediate contact with its object, and for that reason has no great extent. Its sensations belong to the sphere of pleasure or disgust, for which reason it is metaphorically used to indicate a sense of the beautiful; as salt, which particularly affects it, is metaphorically used to indicate the charm of æsthetic enjoyment. However, the principle *de gustibus non est disputandum*, which is perfectly true of the sense of taste, on account of its subjective nature, is erroneously transferred to the metaphorical sense.

§ 18. The sense of smell is very nearly allied to the preceding. It is likewise a sense of chemical qualities, namely, of the elastic fluids, or of substances soluble in them. Its seat is the mucous membrane of the nostrils, which is continued by the passages of the nares into the fauces, and thus by a slight transition the organs of taste and smell are united.[2] The sense of smell has its own nerves, and is, therefore, reckoned among what are called the higher senses. *The Nervus olfactorius*, the so-called first pair of cerebral nerves, whose terminating peripheral ramifications extend to the Schneiderian membrane, but as it seems, only in the upper and inner part, cannot, on account of its extreme softness and delicacy, be clearly traced at its central end to its origin in the brain. The share, however, which the other nerves of the organ of smell, coming from the fifth pair, have in the perception of smell, according to the observations of Magendie, Berard, and Merys, seems

[1] Bischoff, l. c. 264.

[2] According to this, the smell *remains* after the destruction of the first pair of nerves, and *disappears* after the destruction of the fifth. Vide Bischoff, l. c. p. 275.

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not to be fully made out. All gaseous substances are objects of smell. Its perceptions, like those of taste, are also decidedly subjective. It does not put itself so immediately in contact with its objects as taste does, because the gaseous substances are suspended in the atmospheric air which plays around its organs; yet it approaches these objects in a definite degree, in order to have a clear perception of them. Either further or nearer than this degree, its perception, according to the difference of the subject and object, is indistinct. Thus, as in the sense subsequently to be treated of there is a field of vision, so there is likewise a field of smelling, which on the whole is of no great extent. The connexion of the organ of smell with that of taste is manifested in most articles of food, which we smell and taste at the same time, and, in general too, when the smell is wanting, the taste is imperfect. It has a similar connexion with the organs of respiration (in smelling we always inhale air.) In a psychical view it seems to have a particular relation to memory. Dogs retain, through it, the recollection of their masters. Odours often suddenly remind us of past moments. This sense is especially acute in the female sex, which may be occasioned by their tender nerves, the delicacy of their perception, and their conventional education.

§ 19. The sense of sight is the sense for appreciating colour and the illumination of bodies, qualities which also make their outlines clear. Form, in its strictest acceptation, is indicated by the touch.[1] In this sense, sensual perceptions rise to a region which is much nearer to the intellectual than was the case with the preceding. Its origin is the eye, that wonderful instrument, a knowledge of the anatomy and physiology of which must here be taken for granted. The optic nerve, the second pair of cerebral nerves, designed for this sense, forms, by its peripheral extension, the retina, contracts in order to penetrate the optic foramen in the floor of the orbit, and ends, according to recent investigations,[2] in the corpora quadrigemina. The rays issuing from any luminous or illuminated body, refracted by the three humours, the aqueous, the crystalline, and the vitreous, which they pass through, combine on the retina

[1] See Herder's Plastik, &c.

[2] Eble's Gesch. i, 517.

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to form an image, on which the perception of the objects of sight depends. We can mention only *en passant* that the much-debated question, why we see these objects upright, though by the known law of refraction the image appears reversed on the retina, is quite idle. Lichtenberg was of opinion that we have no standard of comparison, because we see *all* objects in the same relative position. We must also remember that the mind is not placed outside the retina of its own body, and consequently does not see this reversed image *as reversed*, the reflection of the retina being only a *condition* of the perception of sight, with the process of which we are as little acquainted as in the case of other sensations. Choulant[1] very justly observes, that in the sense of touch, also, we perceive elevations as such, though they impress the finger that feels them as depressions. But two other series of nerves, besides the optic nerve, have their share in the function of sight, the ciliary nerves, and the nerves of the muscles of the eye. Of their co-operation we shall speak in another place. The objects of sight are all illumined bodies, or the relations of light, disturbed by the corporeal world. Its perceptions are decidedly objective. (The healthy eye is the least affected in seeing, and one that is affected is disturbed in the function of vision.) The eyes are mediate—light is their medium. Their extent of perception is greater than that of any of the other senses. For though every eye has its relative field of view (§ 18), yet this refers only to the *distinctness* of the perception; and the most remote object, the starry firmament, is visible to every eye. This sense is related physically to that of smell (the irritation of light causes sneezing) and to sexual feeling. (Hartmann, p. 189.) It has manifold connexions with the operations of the mind, because it gives them the whole visible external world as their subject. The world in space is reflected in the eye; that which cannot be reflected, as the threefold dimensions of bodies, is judged of by the touch. Saunderson, who was born blind, taught geometry and optics. He had therefore acquired the idea of space by means of inferences from the other senses. By the sight, man is recognisable by man; that is, so far as his interior is expressed in the exterior, namely, in the eye itself.

[1] L. c. p. 76.

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The several colours have a decided, not fully defined, but individually modified, psychical effect. In general, the positive colours, red, yellow, &c. excite the mind; the negative, blue, &c. calm it. The warm and cold colouring of painters, experiments with coloured glasses, &c., confirm this fact.[1]

§ 20. The sense of hearing is the sense for appreciating sound, a motion taking place in bodies, propagated by a medium, (generally the atmospheric air). This sense is the most intellectual of all, because it is the means by which we comprehend human language, the purest earthly revelation of the mind, and harmony, the most refined expression in the sensual world. Its organ is the ear, both the interior and the exterior, with the exquisite structure of which you are made acquainted by anatomy. The auditory nerve (*nervus acousticus*), the eighth pair of cerebral nerves, assigned to this sense, extends, with its ramifications, into the parts of the labyrinth, passes, accompanied by the facial nerves, through a distinct bony canal, from the *os petrosum*, and ends, according to pretty accurate investigation,[2] at the lower part of the anterior wall of the fourth ventricle of the brain. The so-called rays of sound, which proceed from every sonorous body, partly reflected and again collected by the elastic *cochlea*, partly propagated through the cartilaginous and bony parts of the ear, to the water of the labyrinth, extend, by communication, over the ramifications of this nerve, and give what is called the image of sound, on which the perception of the objects of hearing depends. We can here only slightly touch upon the question why sounds are heard single, though with both ears, which is quite as idle as that why we see objects single, though with both eyes. *There* the objects of perception coincide in time, *here* in space, and, as mathematicians say, are in congruity. Where the function is pathologically disturbed, as, for instance,

[1] *Il pretendait que son ton de conversation avec Madame était changé depuis qu'elle avoit changé en cramoisi le meuble de son cabinet, qui était bleu.* See Goethe's 'Farbenlehre,' where some details are given (p. 311); also Biunde and Szokalski. In a mystical book of the year 1724 (Naturæ Naturatæ et Naturantis Mysterium), these effects are very prettily expressed, and not without some feeling of truth: Red, is seeking and desiring; yellow, finding and recognising; white, possessing and enjoying; green, hoping and expecting; blue, observing and thinking; black, oblivion and privation.

[2] Eble, i, 519.

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in strabismus, they appear double. The internal ear receives additional nerves from the *glosso-pharyngeal*, and this in the branches of the so-called Jacobson's nerve.[1] All sonorous bodies, that is, all bodies which propagate concussion in them, by the vibrations of an elastic medium are objects of hearing. The perceptions are constantly objective (a too violent affection of the organ, e. g. by noise, obscures them). They are communicated through a medium. The air, from its great elasticity, is the most common medium. Their extent is smaller than that of the perceptions of sight, but greater than that of the perceptions of the other senses. This sense is physically connected with the organs of speech (through the facial nerves),[2] with the muscles of the extremities (dancing to measure),[3] and with the cœnæsthesis[4] (the effect of music on it). But it is most intimately connected with the operations of the mind, because, as we observed before, by means of the human voice, it perceives language, the highest sensual expression of the mind. The world, with respect to time, reveals itself in the sense of hearing ("the simultaneous," by harmony; "the consecutive," by rythm and melody). The object of sight is confined entirely to form, and has therefore more relation to the imagination; the object of hearing approaches by its intellectuality to comprehension, and has therefore more relation to the understanding. This sense addresses itself the most impressively to the feelings, which is proved, partly by the effect of music, partly by the fact, that human compassion is excited in a greater degree, and more purely, by the tone, than by the sight of the sufferings of others. (Vide Herder, Ideen I, 201.)

§ 21. If we now compare all the senses from the preceding description, we obtain the following results:

a. They form, collectively, the receptive medium of the organism, by means of which an objective material in the perception of an external world is furnished to the mind. How far the mind itself acts in and through them, is not a question for present discussion.

[1] Bischoff, l. c. p. 286. [2] Hartmann, l. c. p. 166. [3] Ibid. p. 167.

[4] Hearing is the sense which has the most influence on our vital sensation. An experiment is on record of which physicians are ashamed, because they are afraid of being ridiculed; namely, to expel maw-worms by music. This experiment succeeded in the case of a man, to whom, after a mild aperient, a Jew's harp was given; he played on it, and the worms were expelled.—Kant, 'Menschenkunde,' p. 66.

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b. They all consist of separate apparatus, in which the proper sensation is produced by the medium of common (§§ 16, 17) or special (§§ 18, 19, 20) nerves. Now, as the nerves which, in their structure and combinations, nowhere show any essential (though some, § 12) differences, are in general (§ 8) the medium of all human sensations, so the five senses are not five different perceptive faculties, but only one, modified by different organs, in a way, it is true, which is not fully explained. Hence it results further—

a. That it would be quite irrelevant to assume more senses, as has been occasionally attempted. Thus, for instance, the so-called sexual sense is a part of the cœnæsthesis (§ 13); the so-called muscular sense, is general corporeal sensation, in so far as it accompanies motion (§ 7); the so-called sense of language, is a connexion of the sense of hearing with the organs of speech (§ 20), &c.

β. That experience, which shows that one sense may sometimes supply the place of another that is wanting, certainly finds a support in this unity of the perceptive faculty.

N.B. The difference of receptive capacity through the senses, according to sex, age, &c. is evidenced, partly from the preceding, partly from the following observations:

§ 22. If we take a retrospective view of our subject we shall find that from the first perception of our corporeal existence, when it separates itself, as cœnæsthesis (§ 13), from the obscure general sensation (§ 7), to the spiritual perception of external existence in the most refined organs of sense (§ 20), all perception takes place through the medium of nerves; the course of which from the periphery, whether directed to the vegetative structures of the body, or to our relation with the external world, leads, at last, either to the spinal marrow or to the brain. The organs of sense, too, run in the same direction as the sensations in general (§ 10); and thus, if we follow the trace of the perceptions, from the somatic upward to the psychical, here also we come to the brain.

The brain itself is a convolution of nervous matter, consisting of primitive fibrous loops, and vesicular or cellular masses which overlay them, the anatomical knowledge of which I assume you already to possess; but a cursory survey of the formation of which may aid us in prosecuting our investigations.

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The peripheral filaments of the nerves collect into twigs, the twigs into branches, the branches into boughs, and these into one main stem—the spinal marrow. This rises in the vertebral column to the foramen magnum, where, for some space, it is called the medulla oblongata which divides above into four so-called *crura*, the two anterior of which arch into the cerebrum, and the two posterior into the cerebellum. The first, which, with their overlaying mass constantly increasing above and anteriorly, form the two hemispheres of the cerebrum, leave, by their vaulted curvature, interstices and other lateral ventricles, and swell out into various eminences, the names of which are better known than their destination.

Externally the surface of the cerebrum is marked by furrows, which are called gyri or convolutions. The medullary crura of the cerebellum form together a nucleus, which branches out under the form of what is called the arbor vitæ. Posteriorly the cerebellum enlarges into what is called the vermiform process. Outwardly it forms, as it were, two hemispheres; above and in front it is connected with the corpora quadrigemina of the cerebrum, below and in front with the crura of the cerebrum, and, by means of the pons with itself. Externally it has straight furrows, which arise from the investing vascular membrane.[1]

Two kinds of substance constitute the structure of the brain, the cortical and the medullary, or better, the gray and the milk-white; for the former is found here and there internally, for instance, in the olivary bodies, the pyramids, the optic thalami, &c., and the latter externally in the course of the spinal marrow. The proportion of the gray to the white substance decreases with the increase of age. The former is composed of overlaying spherules, the latter of three sets of fibres; the first set leads from the medullary to the cortical substance; the second unites the two hemispheres; the third unites individual portions of the same hemisphere. Above, with the optic thalamus on each side, begins a column, which forms the posterior part of the medulla oblongata and spinal marrow, and terminates where the sensitive nerves are given

[1] Hartmann, l. c. 72, &c. The medullary striæ are faithfully described (from Berres' Observations) in Dr. Dantscher's 'Dissertation on the Brain;' Vienna, 1839.

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off. With the corpus striatum of each side, a second column begins, which forms the anterior part of the medulla oblongata and the spinal marrow, and terminates where the motor nerves are given off. (§ 29.) According to this structure and the result of some dissections, it is affirmed that the first set of fibres of the medullary portion conveys the sensitive impressions to the cortical portion; that the second and third row are the medium of the functions of the hemispheres, and that the cortical substance affords the necessary conditions for intellectual operations;[1] that voluntary motions proceed from the latter, and are conveyed by the motor column to the muscles; that involuntary arising from the irritation of the sensitive column are reflected on the motor column, so that in the former the irritation is physical, in the latter, psychical. These affirmations contain, according to Bennet,[2] the summary of our present knowledge of the physiology of the brain, and, in fact, the more detailed opinions which may be found in Burdach, Carus, Flourens, and others, attractive as they appear, are, all of them, only hypothetical. Marshall Hall[3] doubts this statement of the localisation of the functions of the brain, and only considers, as made out, that the hemispheres of the cerebrum and cerebellum regulate the voluntary motions of the opposite side of the body,[4] while the medulla oblongata and spinal marrow exercise their influence on the corresponding side. That the cerebellum contains central loops of nervous filaments from the sexual system seems to be confirmed.

The cortical substance, as before observed, is gray; the medullary substance, milk-white; but these vary in the protuberance, its prolongations, and the spinal marrow, in colour, consistence, hardness, and moisture. Notwithstanding careful microscopico-chemical investigations, nothing is yet decided respecting the topical, qualitative relations, of differences of structure to those of function.

Between the pia mater and the tunica arachnoides is what

[1] It must not, however, be forgotten that in cretins the cortical substance often predominates.

[2] Inaugural Dissertation on the Brain. [3] L. c. p. 33.

[4] Weakness of the arm on one side is well known to be often a sign of encephalomalacie, on the other.

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is called the cerebro-spinal fluid, in which all the central ends of the nerves are as it were bathed. Its component parts have an affinity with those of the mass of the brain,[1] it seems to be secreted by the pia mater, and to play an essential part in the cerebral functions.[2]

In consequence of the organic connexion we must here likewise extend our observations to the spinal marrow, the more special importance of which will appear to us in the sequel (§ 29). It consists, like the brain, of cortical and medullary substance, and of the delicate tissue of a continuation of the pia mater or vascular coat, and presents in its formation, two anterior and two posterior cords. Van Deen's and Magendie's experiments have shown us that the posterior cords, as well as the posterior roots of the nerves running into them, together with all the others which are furnished with ganglia, are designed for sensation, the anterior cords as well as the roots of their nerves for motion.[3] The latter, however, by communication from the posterior, receive, as it were, a borrowed sensibility, which they possess as long as that communication continues.[4] From the continuous transition of these relations of structure into those of the brain, what has hitherto been laid down on the importance of the latter, results.

A very great number of blood-vessels from the two carotid and two vertebral arteries supplies the brain in all its parts[5] with blood, contributes to the reciprocal action between the

[1] This contains, in 100 parts, 80 of water, 4½ cerebrot (?), 7 albumen, 1½ phosphorus, 1 phosphate of lime, 1 do. potass, 1 do. magnesia, 1 common salt, 1 extractive matter, $\frac{7}{10}$ red fat, sulphur (?).—Couerbe, New Analysis. (See Fremy, in Liebig.

[2] Magendie, Leçons, etc.

[3] Magendie showed by experiments on animals, that the irritation of the posterior cords, by pricking them with a needle, only produced violent pain without motion.

[4] In cases of paralysis without loss of sensation, it was found after death that the anterior surface of the spinal marrow was dissolved or dried up, the posterior being in its normal state. (Rullier, Olivier, Abercrombie, &c. &c.) On this subject, however, the experiments of J. W. Arnold (On the Functions of the Roots of the Spinal Marrow, Heidelberg. Gross, 1844), which contradict this doctrine of Bell, deserve great attention and further investigation. The evidence on this subject therefore cannot be considered as complete.

[5] So that, according to Haller's calculation, which is perhaps rather exaggerated, eight times more blood flows into the brain in a given time, than into any other part of the body.

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blood and nervous matter necessary to its vegetation, and, therefore indirectly to its higher vital action, and causes that phenomenon of expansion and contraction visible under the name of the pulsation of the brain; which, however is to be distinguished from that motion of the brain indirectly connected with it, which corresponds with respiration.[1] (Blumenbach, Phys. 201, note.) A third motion, namely, a depression in sleep, and an elevation in waking (Bischoff, p. 222), results from the preceding.

§ 23. After this cursory retrospect of the structure of the brain, we may resume the thread of our inquiry.

The sensations and perceptions of the senses make on the peripheral ends of the nerves an impression, which being conducted to the central end, there forms, as it were, an image of the object which caused it. Now, as the brain receives the central ends of the nerves, it is certainly to be considered as the terminus where the so-called images of sensation and perception are collected (*Sensorium commune*). The eye and the ear do not see and hear, but the brain through their medium. How much or how little is implied by this will appear in the sequel.[2]

By *sensorium commune* nothing more is to be understood here than the immediate instrument of sense πρῶτον Αἰσθητήριον by which the mind receives materials for its operations.[3]

Whether this sensorium is to be sought in a certain part of the brain, and in what part, is undecided in the present state of the science. Attempts have in vain been made to represent all the solid structures of the brain,[4] and even the ventricular fluids,[5] as the point in which all the central ends of the nerves unite.

[1] Though this pulsation is so important a sign of vital endowment in the brain, we must not at once declare with Bird (Path. und Ther. der ps. Krankh.), that it is the last discoverable corporeal condition of the manifestation of the mind; because, although we know the use of the blood in imparting vitality to the brain, we do not know its special use in imparting to it psychical qualities.

[2] In this sense Ideler is right when (Anthrop. p. 61) he assigns to the "common sensation" the cerebral nerves, as well as the ganglions. From these it proceeds and is called κατέξοχην, *common sensation;* in the cerebral sphere it unites itself together with other perceptions to the *sensorium commune.* These ideas ought certainly not to be designated merely by the difference of language.

[3] Kant to Sömmering. [4] Sömmer., Org. der Seele. p. 53.

[5] The same work refuted by Rudolphi, Comment. de Ventric. Cerebr. Gryphisw. 1796.

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In the first place, the proofs are defective, because the connexions between the central and peripheral parts of the nervous system are by no means sufficiently ascertained, and it cannot always be demonstrated which organs of the brain are to be considered as immediate continuations of the sensitive nerves ;[1] and, secondly, the object of these considerations, viz. to prove by the unity of the organ the unity of psychical consciousness, was altogether a fallacy, as will appear in the sequel.

Von Bischoff[2] expresses the relation of the sensorium commune to the cœnæsthesis, by assuming a double sensorium, one of the mind and one of the body, placing the former in the brain, the latter in the spinal marrow and the ganglionic nerves, and thus accounts for the phenomenon of living acephali which have corporeal, but not intellectual life, as well as for the ancient classical distinction of *anima* and *animus*, &c. So long as we have no better distinction, by means of language (see above) than that through the medium of Latin and Greek, this distinction remains very suitable, but we must not forget that in man a living unity unites all, and that sensation becomes at length representation.

§ 24. We must, therefore, for the present be content to assume that the brain is the focus of represented images, and, as such, doubtless essential to the manifestation of psychical action. This is confirmed independently of the previous course of observation by the following facts:

1. If the brain be uninjured, every other structure of the body may be injured or destroyed, without affecting the psychical action. (The destruction of the physical existence cannot be adduced in refutation.) On the other hand, if the brain be injured, the physical energies of life do not always suffer.

2. Injuries of the brain impede the functions of the mind. Blood, pieces of bone, &c., by their pressure, deprive the brain of consciousness.[3] Acephali are physically incapable of cul-

[1] All terms used to express the nature of the relations of the processes of the brain to the processes of thought, are metaphors. "Why," asks Jean Paul, (Selina, p. 149,) "do we not allow certain parts in the heart to correspond with the feelings, as thoughts correspond with certain parts in the head, and place emotion, melancholy, &c. in its four chambers?"

[2] Naturl. des M. ii, 235.

[3] The statement that, during profuse perspiration, occurring some hours before death, perfect intellectual lucidity has often returned, requires further confirmation.

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ture. Those facts, apparently founded on experience, that seem to favour the contrary opinion, are refuted (*a*) by the duality of the brain, and (*b*) by the sufficiency of injured organs in general (as the lungs, &c.) to perform their functions. Nay, we shall even see in the sequel that, in certain cases, an injury may act as a relief to the impeded action of the brain, by which the controverted position is but further confirmed.

3. After removal of a diseased state of the brain consciousness returns.[1]

4. The psychical dignity of animals increases in the same proportion as the development of their brain.

5. The manifestation of mind in the individual is in proportion to the degree of development and the conditions of the brain.

6. The perceptions proceeding from nerves, whose communication with the brain is interrupted (§ 11), produce only obscure images.

These positions connected with experiments on the heads of decapitated criminals immediately after execution, even led to a conjecture that in the brain, separated from the rest of the body, there still remains, for a time, sensation, nay, consciousness; a question, which, after Sömmering's 'Vorgänge,' caused long and lively discussions, *pro* and *con*, among the physiologists.[2]

The experiments[3] which consisted in compressing and pulling the spinal marrow still attached to the brain, with the fingers or with instruments, throwing the head backwards and forwards, applying galvanism, and irritating the pupil by light, caused distortions of the muscles of the face and the eyes, and seem, therefore, to have justified the above conjecture. The strongest of the assertions that have been made is, that the *name* of the beheaded person being pronounced aloud in the ear of the dissevered head, the closed eyes opened and turned to the side whence the sound came.[4]

Burdach observes that these experiments were not made

[1] Sömmering's Nervenlehre, &c.

[2] Mémoires de la Soc. d'Emul. vol. ii.

[3] They will be found in Burdach, 'On the Structure of the Brain,' iii; and Friedreich's Gesch. p. 192.

[4] Ibid. 192.

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during the necessary tranquillity of mind, and refers to the fabulous story of the head of Charlotte Corday, which, it was affirmed, had been seen to blush with indignation at the shameful behaviour of the executioner. He declares the convulsions which followed, and which, according to eye-witnesses, had no psychical expression, to have been mechanical, and reminds us of the simultaneous cessation of consciousness from such great losses of blood, nay, from the mere shock which must have occurred in this case. If we accurately examine these experiments we shall find that, without taking into account the mechanical, and far from slight violence, the immediate effect of which was certainly not calculated to ensure the accuracy required in such delicate observations, there is no proof whatever that sensation existed, but only motion, such as galvanism produces in the limbs of frogs. We regard as wholly unworthy of credit that the eyes followed the pronunciation of the name, which would thus have been more tractable than they are in a swoon or even in sound sleep. But sensation, even if it were proved, would still not be consciousness, as will appear clearly from the sequel.

After this digression we return to our position laid down above (§ 23), that the brain, as the sensorium commune, receives all the images of ideas conveyed by the nerves.

§ 25. We must not, however, suffer ourselves to be led by this position to take hasty views. Images of ideas are not ideas, that they may become so, something must be added, namely, an action of the mind, which manifests itself in general as a simple spontaneous power, and in reference to perceptions, as attention, for producing which no organic medium can be assigned.[1] For the sensorium implies only capability of reception (§ 21), and thus requires a second factor as necessary to a product. But attention is only possible through a premised consciousness; and here, therefore, we have arrived at the fact of consciousness—that is (§ 2), at the boundary of our ascending line of investigation; for consciousness manifests itself in the free union of a given compound with an uncompounded unity; but unity and free-

[1] M. Herz. (über den Schwindel) expresses this very ingeniously by the similitude of a looking-glass, which represents objects, but does not represent them to itself. (p. 39.)

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dom are not given in the sensual world, and therefore presuppose a supersensual world.[1]

§ 26. Feeling that everything depends on the unity of consciousness, many investigators have attempted (§ 23) to discover for it an organic unity, and through this, the seat of the soul. There is scarcely a point of our organisation in which this seat has not been located; Des Cartes placed it in the pineal gland; Empedocles in the blood; Diogenes in the right ventricle of the heart; Chrysippus in the heart; Helmont in the pylorus ventriculi; Digby in the septum lucidum; Lancisi in the corpus callosum; La Peyronie in the fornix; Sömmering in the fluid of the ventricles of the brain.[2] The notions of soul and its functions were not, indeed, the same among all these inquirers; but there is no single structure of the brain which has not been seen disturbed (and often many at once), while the functions of the mind have remained undisturbed. Here, however, the anatomical duality of the brain, in all its parts, which is undeniable, must be dwelt upon,[3] as upon an important problem for the future investigation of its psychical relation, though the declarations of a frequent, as it were, double consciousness,[4] which are inferred from it, perhaps make rather greater caution desirable. But it is—

(*a*) Wholly inconceivable, how specifically different conceptions, for instance, those of the sight and the hearing, which besides arise at different times, should proceed indifferently from a single organ, even if it were proved that there is such a one (which, according to § 23, is not the case).

(*b*) An attempt to prove such a fallacy (§ 23) would never have been made, if the principles with which we set out (§ 4) had been constantly attended to. The idle question respecting a seat of the soul (§ 6) would never have been proposed. The soul, as a spirit in a body, has no seat, for a spirit has no relation to space; the soul, as a spirit in a body, presides everywhere, where that body acts through it. "When people in general," says Kant, "fancy that they feel the act of thinking in the head, they surreptitiously take their judgment on the cause

[1] See Hartmann, G. der M., the course of the whole work.

[2] Which, however, is nothing more than halitus of blood, and, in a pathological state, serum.

[3] Burdach, V. Leb. und B. des Geh. p. 786. [4] Friedreich, Hist. Pr. Darst. p. 172.

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of sensation, for a sensation of that cause;"[1] and "if the soul," observes Platner,[2] "were in the place where it feels to be, it would be, in the act of seeing, out of the body." But enough of a supposition which is a *contradictio in adjecto*. The assumption of a solid, corporeal vehicle, for the pure action of mind, is incompatible with its extensibility, its infinity, its continuity; a fluid and ethereal vehicle is incompatible with its power of memory—its firmness; a so-called imponderable vehicle, with its spontaneity. We are continually driven back to the postulate of a simple consciousness; a postulate which, fortunately, is at the same time a fact.

§ 27. Further it appears, from what has been said, that it is quite unnecessary to assume a separate "internal sense."

If this term be meant to designate the capability of being so affected from within, that perceptions of corporeal occurrences are thereby conveyed to the consciousness,[3] then this is the sensorium commune (§ 23), with reference to the nerves of the cœnæsthesis (§ 15); consequently, it is the somatic side of the feeling of personality (§ 3).

If, what is more usual, it is meant to indicate the capability of being affected by ideas, to which there is nothing corresponding in space, then this is the soul itself, that is, the psychical side of the feeling of personality.

If (as Hartmann thinks,) it is to indicate the affection of the first through the second (of the organ through the mind), then the central loops of the nerves are meant, which we cannot consider as a distinct sense, or else we must look upon each one of them as so many distinct senses.

§ 28. Lastly, the notion of "obscure ideas" is accounted for by the preceding observations.[4] They are either—

(*a*) Such as proceed from nerves, the connexion of which, with the brain is more or less interrupted (§ 24), or—

(*b*) Such as the mind does not bestow that attention on, which is requisite for clear perception (§ 25).

These obscure ideas, or, more properly, sensations with

[1] J. Sömmering, ü. des. Org. d. S. [2] Phil. Aphor. i, 81.

[3] Klotz, Erfahr. s. l. p. 27.

[4] Natural philosophy justly calls those energies "latent" which do not manifest themselves, because the external circumstances necessary to call them forth are wanting, yet nevertheless exist.

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b. They all consist of separate apparatus, in which the proper sensation is produced by the medium of common (§§ 16, 17) or special (§§ 18, 19, 20) nerves. Now, as the nerves which, in their structure and combinations, nowhere show any essential (though some, § 12) differences, are in general (§ 8) the medium of all human sensations, so the five senses are not five different perceptive faculties, but only one, modified by different organs, in a way, it is true, which is not fully explained. Hence it results further—

a. That it would be quite irrelevant to assume more senses, as has been occasionally attempted. Thus, for instance, the so-called sexual sense is a part of the cœnæsthesis (§ 13); the so-called muscular sense, is general corporeal sensation, in so far as it accompanies motion (§ 7); the so-called sense of language, is a connexion of the sense of hearing with the organs of speech (§ 20), &c.

β. That experience, which shows that one sense may sometimes supply the place of another that is wanting, certainly finds a support in this unity of the perceptive faculty.

N.B. The difference of receptive capacity through the senses, according to sex, age, &c. is evidenced, partly from the preceding, partly from the following observations:

§ 22. If we take a retrospective view of our subject we shall find that from the first perception of our corporeal existence, when it separates itself, as cœnæsthesis (§ 13), from the obscure general sensation (§ 7), to the spiritual perception of external existence in the most refined organs of sense (§ 20), all perception takes place through the medium of nerves; the course of which from the periphery, whether directed to the vegetative structures of the body, or to our relation with the external world, leads, at last, either to the spinal marrow or to the brain. The organs of sense, too, run in the same direction as the sensations in general (§ 10); and thus, if we follow the trace of the perceptions, from the somatic upward to the psychical, here also we come to the brain.

The brain itself is a convolution of nervous matter, consisting of primitive fibrous loops, and vesicular or cellular masses which overlay them, the anatomical knowledge of which I assume you already to possess; but a cursory survey of the formation of which may aid us in prosecuting our investigations.

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The peripheral filaments of the nerves collect into twigs, the twigs into branches, the branches into boughs, and these into one main stem—the spinal marrow. This rises in the vertebral column to the foramen magnum, where, for some space, it is called the medulla oblongata which divides above into four so-called *crura*, the two anterior of which arch into the cerebrum, and the two posterior into the cerebellum. The first, which, with their overlaying mass constantly increasing above and anteriorly, form the two hemispheres of the cerebrum, leave, by their vaulted curvature, interstices and other lateral ventricles, and swell out into various eminences, the names of which are better known than their destination.

Externally the surface of the cerebrum is marked by furrows, which are called gyri or convolutions. The medullary crura of the cerebellum form together a nucleus, which branches out under the form of what is called the arbor vitæ. Posteriorly the cerebellum enlarges into what is called the vermiform process. Outwardly it forms, as it were, two hemispheres; above and in front it is connected with the corpora quadrigemina of the cerebrum, below and in front with the crura of the cerebrum, and, by means of the pons with itself. Externally it has straight furrows, which arise from the investing vascular membrane.[1]

Two kinds of substance constitute the structure of the brain, the cortical and the medullary, or better, the gray and the milk-white; for the former is found here and there internally, for instance, in the olivary bodies, the pyramids, the optic thalami, &c., and the latter externally in the course of the spinal marrow. The proportion of the gray to the white substance decreases with the increase of age. The former is composed of overlaying spherules, the latter of three sets of fibres; the first set leads from the medullary to the cortical substance; the second unites the two hemispheres; the third unites individual portions of the same hemisphere. Above, with the optic thalamus on each side, begins a column, which forms the posterior part of the medulla oblongata and spinal marrow, and terminates where the sensitive nerves are given

[1] Hartmann, l. c. 72, &c. The medullary striæ are faithfully described (from Berres' Observations) in Dr. Dantscher's 'Dissertation on the Brain;' Vienna, 1839.

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off. With the corpus striatum of each side, a second column begins, which forms the anterior part of the medulla oblongata and the spinal marrow, and terminates where the motor nerves are given off. (§ 29.) According to this structure and the result of some dissections, it is affirmed that the first set of fibres of the medullary portion conveys the sensitive impressions to the cortical portion; that the second and third row are the medium of the functions of the hemispheres, and that the cortical substance affords the necessary conditions for intellectual operations;[1] that voluntary motions proceed from the latter, and are conveyed by the motor column to the muscles; that involuntary arising from the irritation of the sensitive column are reflected on the motor column, so that in the former the irritation is physical, in the latter, psychical. These affirmations contain, according to Bennet,[2] the summary of our present knowledge of the physiology of the brain, and, in fact, the more detailed opinions which may be found in Burdach, Carus, Flourens, and others, attractive as they appear, are, all of them, only hypothetical. Marshall Hall[3] doubts this statement of the localisation of the functions of the brain, and only considers, as made out, that the hemispheres of the cerebrum and cerebellum regulate the voluntary motions of the opposite side of the body,[4] while the medulla oblongata and spinal marrow exercise their influence on the corresponding side. That the cerebellum contains central loops of nervous filaments from the sexual system seems to be confirmed.

The cortical substance, as before observed, is gray; the medullary substance, milk-white; but these vary in the protuberance, its prolongations, and the spinal marrow, in colour, consistence, hardness, and moisture. Notwithstanding careful microscopico-chemical investigations, nothing is yet decided respecting the topical, qualitative relations, of differences of structure to those of function.

Between the pia mater and the tunica arachnoides is what

[1] It must not, however, be forgotten that in cretins the cortical substance often predominates.

[2] Inaugural Dissertation on the Brain. [3] L. c. p. 33.

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is called the cerebro-spinal fluid, in which all the [illegible] of the nerves are as it were bathed. Its component parts have an affinity with those of the mass of the brain. It seems to be secreted by the pia mater and to play an essential part in the cerebral functions.[1]

In consequence of the [illegible] connection we must here likewise extend our observations to the spinal marrow, the more special importance of which will appear to us in the sequel (§ [illegible]). It consists, like the brain, of cortical and medullary substance and of the delicate tissue of a continuation of the pia mater or vascular coat, and presents in its formation, two anterior and two posterior cords. [illegible] and Magendie's experiments have shown us that the posterior cords, as well as the posterior roots of the nerves [illegible] them, together with all the [illegible] which are furnished with ganglia, are designed for sensation, the anterior cords as well as the roots of their nerves for motion.[2] The latter [illegible] communication from the posterior [illegible] a borrowed sensibility, which they possess so long as that communication continues.[3] From the [illegible] of these relations of structure with those of the brain, what has hitherto been said [illegible] of the [illegible] results.

A very great number of [illegible] from the [illegible] and two vertebral arteries [illegible] the brain [illegible] with blood contributes to the [illegible]

[1] This contains in [illegible] parts [illegible] of which [illegible] phorus, [illegible] of lime, [illegible] tive matter [illegible]

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[5] So that according to [illegible] circulation [illegible] of the body.

blood and nervous matter necessary to its vegetation, and, therefore indirectly to its higher vital action, and causes that phenomenon of expansion and contraction visible under the name of the pulsation of the brain; which, however is to be distinguished from that motion of the brain indirectly connected with it, which corresponds with respiration.[1] (Blumenbach, Phys. 201, note.) A third motion, namely, a depression in sleep, and an elevation in waking (Bischoff, p. 222), results from the preceding.

§ 23. After this cursory retrospect of the structure of the brain, we may resume the thread of our inquiry.

The sensations and perceptions of the senses make on the peripheral ends of the nerves an impression, which being conducted to the central end, there forms, as it were, an image of the object which caused it. Now, as the brain receives the central ends of the nerves, it is certainly to be considered as the terminus where the so-called images of sensation and perception are collected (*Sensorium commune*). The eye and the ear do not see and hear, but the brain through their medium. How much or how little is implied by this will appear in the sequel.[2]

By *sensorium commune* nothing more is to be understood here than the immediate instrument of sense πρῶτον Αἰσθητήριον by which the mind receives materials for its operations.[3]

Whether this sensorium is to be sought in a certain part of the brain, and in what part, is undecided in the present state of the science. Attempts have in vain been made to represent all the solid structures of the brain,[4] and even the ventricular fluids,[5] as the point in which all the central ends of the nerves unite.

[1] Though this pulsation is so important a sign of vital endowment in the brain, we must not at once declare with Bird (Path. und Ther. der ps. Krankh.), that it is the last discoverable corporeal condition of the manifestation of the mind; because, although we know the use of the blood in imparting vitality to the brain, we do not know its special use in imparting to it psychical qualities.

[2] In this sense Ideler is right when (Anthrop. p. 61) he assigns to the "common sensation" the cerebral nerves, as well as the ganglions. From these it proceeds and is called κατέξοχην, *common sensation*; in the cerebral sphere it unites itself together with other perceptions to the *sensorium commune*. These ideas ought certainly not to be designated merely by the difference of language.

[3] Kant to Sömmering.

[4] Sömmer., Org. der Seele. p. 53.

[5] The same work refuted by Rudolphi, Comment. de Ventric. Cerebr. Gryphisw. 1796.

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In the first place, the proofs are defective, because the connexions between the central and peripheral parts of the nervous system are by no means sufficiently ascertained, and it cannot always be demonstrated which organs of the brain are to be considered as immediate continuations of the sensitive nerves;[1] and, secondly, the object of these considerations, viz. to prove by the unity of the organ the unity of psychical consciousness, was altogether a fallacy, as will appear in the sequel.

Von Bischoff[2] expresses the relation of the sensorium commune to the cœnæsthesis, by assuming a double sensorium, one of the mind and one of the body, placing the former in the brain, the latter in the spinal marrow and the ganglionic nerves, and thus accounts for the phenomenon of living acephali which have corporeal, but not intellectual life, as well as for the ancient classical distinction of *anima* and *animus*, &c. So long as we have no better distinction, by means of language (see above), than that through the medium of Latin and Greek, this distinction remains very suitable, but we must not forget that in man a living unity unites all, and that sensation becomes at length representation.

§ 24. We must, therefore, for the present be content to assume that the brain is the focus of represented images, and, as such, doubtless essential to the manifestation of psychical action. This is confirmed independently of the previous course of observation by the following facts:

1. If the brain be uninjured, every other structure of the body may be injured or destroyed, without affecting the psychical action. (The destruction of the physical existence cannot be adduced in refutation.) On the other hand, if the brain be injured, the physical energies of life do not always suffer.

2. Injuries of the brain impede the functions of the mind. Blood, pieces of bone, &c., by their pressure, deprive the brain of consciousness.[3] Acephali are physically incapable of cul-

[1] All terms used to express the nature of the relations of the processes of the brain to the processes of thought, are metaphors. "Why," asks Jean Paul, (Selina, p. 142,) "do we not allow certain parts in the heart to correspond with the feelings, as thoughts correspond with certain parts in the head, and place emotion, melancholy, &c. in its four chambers?"

[2] Naturl. des M. ii, 235.

[3] The statement that, during profuse perspiration, occurring some hours before death, perfect intellectual lucidity has often returned, requires further confirmation.

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ture. Those facts, apparently founded on experience, that seem to favour the contrary opinion, are refuted (*a*) by the duality of the brain, and (*b*) by the sufficiency of injured organs in general (as the lungs, &c.) to perform their functions. Nay, we shall even see in the sequel that, in certain cases, an injury may act as a relief to the impeded action of the brain, by which the controverted position is but further confirmed.

3. After removal of a diseased state of the brain consciousness returns.[1]

4. The psychical dignity of animals increases in the same proportion as the development of their brain.

5. The manifestation of mind in the individual is in proportion to the degree of development and the conditions of the brain.

6. The perceptions proceeding from nerves, whose communication with the brain is interrupted (§ 11), produce only obscure images.

These positions connected with experiments on the heads of decapitated criminals immediately after execution, even led to a conjecture that in the brain, separated from the rest of the body, there still remains, for a time, sensation, nay, consciousness; a question, which, after Sömmering's 'Vorgänge,' caused long and lively discussions, *pro* and *con*, among the physiologists.[2]

The experiments[3] which consisted in compressing and pulling the spinal marrow still attached to the brain, with the fingers or with instruments, throwing the head backwards and forwards, applying galvanism, and irritating the pupil by light, caused distortions of the muscles of the face and the eyes, and seem, therefore, to have justified the above conjecture. The strongest of the assertions that have been made is, that the *name* of the beheaded person being pronounced aloud in the ear of the dissevered head, the closed eyes opened and turned to the side whence the sound came.[4]

Burdach observes that these experiments were not made

[1] Sömmering's Nervenlehre, &c.

[2] Mémoires de la Soc. d'Emul. vol. ii.

[3] They will be found in Burdach, 'On the Structure of the Brain,' iii; and Friedreich's Gesch. p. 192.

[4] Ibid. 192.

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during the necessary tranquillity of mind, and refers to the fabulous story of the head of Charlotte Corday, which, it was affirmed, had been seen to blush with indignation at the shameful behaviour of the executioner. He declares the convulsions which followed, and which, according to eye-witnesses, had no psychical expression, to have been mechanical, and reminds us of the simultaneous cessation of consciousness from such great losses of blood, &c., from the mere shock which must have occurred in this case. If we accurately examine these experiments we shall find that, without taking into account the mechanical and far from slight violence, the immediate effect of which was certainly not calculated to ensure the accuracy required in such delicate observations, there is no proof whatever that sensation existed, but only motion such as galvanism produces in the limbs of frogs. We regard as wholly unworthy of credit that the eyes followed the pronunciation of the name, which would thus have been more tractable than they are in a swoon or even in sound sleep. But sensation, even if it were proved, would still not be consciousness, as will appear clearly from the sequel.

After this digression we return to our position laid down above (§ 23), that the brain, as the sensorium commune, receives all the images of ideas conveyed by the nerves.

§ 25. We must not, however, suffer ourselves to be led by this position to take hasty views. Images of ideas are not ideas; that they may become so, something must be added, namely, an action of the mind, which manifests itself in general as a simple spontaneous power, and in reference to perceptions, as attention, for producing which no organic medium can be assigned.[1] For the sensorium implies only capability of reception (§ 21), and thus requires a second factor as necessary to a product. But attention is only possible through a premised consciousness; and here, therefore, we have arrived at the *fact of consciousness*—that is (§ 2), at the boundary of our ascending *line of investigation*; for consciousness manifests itself in the *free union of a given* compound with an uncompounded unity; but unity and *free-*

[1] M. Herz (über den Schwindel) expresses this very appropriately by the similitude of a looking-glass, which represents *objects*, but *does not represent them to itself* (p. 39.)

dom are not given in the sensual world, and therefore presuppose a supersensual world.[1]

§ 26. Feeling that everything depends on the unity of consciousness, many investigators have attempted (§ 23) to discover for it an organic unity, and through this, the seat of the soul. There is scarcely a point of our organisation in which this seat has not been located; Des Cartes placed it in the pineal gland; Empedocles in the blood; Diogenes in the right ventricle of the heart; Chrysippus in the heart; Helmont in the pylorus ventriculi; Digby in the septum lucidum; Lancisi in the corpus callosum; La Peyronie in the fornix; Sömmering in the fluid of the ventricles of the brain.[2] The notions of soul and its functions were not, indeed, the same among all these inquirers; but there is no single structure of the brain which has not been seen disturbed (and often many at once), while the functions of the mind have remained undisturbed. Here, however, the anatomical duality of the brain, in all its parts, which is undeniable, must be dwelt upon,[3] as upon an important problem for the future investigation of its psychical relation, though the declarations of a frequent, as it were, double consciousness,[4] which are inferred from it, perhaps make rather greater caution desirable. But it is—

(*a*) Wholly inconceivable, how specifically different conceptions, for instance, those of the sight and the hearing, which besides arise at different times, should proceed indifferently from a single organ, even if it were proved that there is such a one (which, according to § 23, is not the case).

(*b*) An attempt to prove such a fallacy (§ 23) would never have been made, if the principles with which we set out (§ 4) had been constantly attended to. The idle question respecting a seat of the soul (§ 6) would never have been proposed. The soul, as a spirit in a body, has no seat, for a spirit has no relation to space; the soul, as a spirit in a body, presides everywhere, where that body acts through it. "When people in general," says Kant, "fancy that they feel the act of thinking in the head, they surreptitiously take their judgment on the cause

[1] See Hartmann, G. der M., the course of the whole work.

[2] Which, however, is nothing more than halitus of blood, and, in a pathological state, serum.

[3] Burdach, V. Leb. und B. des Geh. p. 786. [4] Friedreich, Hist. Pr. Darst. p. 172.

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of sensation, for a sensation of that cause [illegible]" and "if the soul," observes Platner,[2] "were in the place where I feel it, it would be, in the act of seeing, out of the body." [illegible] of a supposition which is a *contradictio in adjecto*. The assumption of a solid corporeal vehicle for the pure action of mind is incompatible with its extensibility, [illegible] a fluid and ethereal vehicle is incompatible with its power of memory—its firmness; a mechanical [illegible] vehicle with its spontaneity. We are continually driven back to the postulate of a simple consciousness, a postulate which [illegible] is at the same time a fact.

§ 27. Further it appears from what has been said that it is quite unnecessary to assume a separate "[illegible]."

If this term be meant to designate the [illegible] of being [illegible] affected from within that perceptions of [illegible] are thereby conveyed to the consciousness, then this is the sensorium commune (§ [illegible]) with reference to the nerves of the cœnæsthesis (§ 1[illegible]), consequently it is the [illegible] of the feeling of personality (§ [illegible]).

If, what is more usual, it is meant to [illegible] the [illegible]lity of being affected by [illegible] to which there is [illegible] corresponding in space, then this is the [illegible] that is the psychical side of the feeling of personality.

If (as Hartmann thinks) it is to indicate the [illegible] of the first through the [illegible] of the organ through [illegible], then the central [illegible] of the nerves are meant, which we [illegible] consider as a distinct sense, or else we must [illegible] one of them as so many distinct senses.

§ 28. Lastly, the [illegible] of "[illegible]" is [illegible] for by the preceding observations.[4] They are either—

(*a*) Such as proceed from nerves the [illegible] with the brain is more or less interrupted [illegible], or—

(*b*) Such as the mind does not bestow that attention on which is requisite for clear perception (§ [illegible]).

These obscure ideas, or, more properly, [illegible]

[1] J. Sömmering, [illegible] [2] [illegible]

[3] Klotz, Erfahr. [illegible] p. 27.

[4] Natural philosophy [illegible] themselves, because the external circumstances [illegible] wanting, yet nevertheless exist.

dormant consciousness,[1]—a subject to which we shall often return on account of its importance in medical psychology—are exceedingly numerous. It is through them, so far as they (*a*) proceed from the nervous system of vegetative life, and thus accompany all its functions, digestion, secretion, &c., that the soul (according to Stahl) secretly governs the body. "Animus est instar oceani," says Leibnitz, "in quo infinita multitudo perceptionum obscurissimarum adest et distinctæ ideæ instar insularum sunt, quæ ex oceano emergunt." It is they (*b*) which are active throughout the whole process of the formation of thought, for this goes on, though we are unconscious of it, and gives us only the perfect results, namely, ideas, notions. It is they which, in habitual voluntary motions, for instance, in playing on the piano, dancing, &c., set the proper muscles in motion through the appropriate motor nerves, though the mind does not direct to them the attention of consciousness. It is they (*a* and *b*) which, in the physiological states of sleep hereafter to be discussed, and in the pathological states of disorders of the mind, act a most important part. It is their totality which forms what plays in life so prominent a part, under the name of disposition or temper.

To all the hitherto developed psychical processes on the receptive side, that is, arising out of impressions received, the well-known laws of excitability apply, with some modifications which the psychical relations require, and their application is of manifold service. They are as follows:

1. There is no excitement without a stimulus; the stimulus which shall call into activity an idea may come from within (psychical), or from without (physical).

2. The excitement (or, more properly, the excited activity) continues after the stimulus has ceased. This law is opposed to that in physical life, according to which, the excitement ceases with the stimulus. In psychical life, the laws of association (§ 34) lead further, and the spontaneous reaction, once excited, becomes itself an impulse, and a fresh starting-point.

3. The stimulus being equal, greater excitement is produced in the mind, the greater the individual excitability is, which depends on circumstances hereafter to be developed (§§ 49-53).

4. Stimuli, which are relatively too violent, or too long-con-

[1] Bischoff, l. c. 233.

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tinued, exhaust the excitability; over-tension is succeeded by relaxation.

5. Long cessation of stimulus increases excitability; long-continued grief produces such excitability that the strong new stimulus of sudden joy may cause death.

6. A small, but continued stimulus, exhausts as much as one that is violent but transitory. A person who thinks long on easy subjects becomes as wearied as he who over-exerts himself on a difficult problem. (Law 4.)

7. An interval of cessation in the stimulus restores the exhausted excitability. Suspension of study renews the power of thought.

8. Excitability exhausted by a stimulus, or a succession of stimuli, is restored by other stimuli. The mind wearied by abstruse reading is relieved by turning to a lighter subject. Every stimulus of an organic point becomes a stimulus to the other structures and functions. A disturbance of the cœnæsthesis of the alimentary canal disturbs the circulation and the process of respiration as well as the operations of the sensorium (§§ 13-24). On the other hand, an agreeable piece of news relieves an impeded secretion or excretion.

10. Besides the positive (exciting), there are also negative (depressing) stimuli, which act more powerfully than mere withdrawal. As such we may consider terrifying representations, &c.

11. Habitual stimuli act more rapidly, but less powerfully (according to Law 8), because they do not need first to excite the attention.

12. The stimulus from within counteracts that from without, or supplies it, and *vice versâ*. He who is absorbed by a thought which overpowers his whole mind, appears, as it were, to be paralysed; by lively exercise, as dancing, gymnastics, &c., the mind recovers its lost equilibrium. (This, however, is only true of the extremes; gentle stimuli mutually heighten each other; for my own part, I find moderate reflection easier in walking than at table.)

13. Many stimuli that are simultaneous, or rapidly succeed each other, prevent any one individually from producing an effect: they cause a confusion. (Vertigo, &c., § 60.) Intemperate men, devoted to pleasures, dream their lives away.

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off. With the corpus striatum of each side, a second column begins, which forms the anterior part of the medulla oblongata and the spinal marrow, and terminates where the motor nerves are given off. (§ 29.) According to this structure and the result of some dissections, it is affirmed that the first set of fibres of the medullary portion conveys the sensitive impressions to the cortical portion; that the second and third row are the medium of the functions of the hemispheres, and that the cortical substance affords the necessary conditions for intellectual operations;[1] that voluntary motions proceed from the latter, and are conveyed by the motor column to the muscles; that involuntary arising from the irritation of the sensitive column are reflected on the motor column, so that in the former the irritation is physical, in the latter, psychical. These affirmations contain, according to Bennet,[2] the summary of our present knowledge of the physiology of the brain, and, in fact, the more detailed opinions which may be found in Burdach, Carus, Flourens, and others, attractive as they appear, are, all of them, only hypothetical. Marshall Hall[3] doubts this statement of the localisation of the functions of the brain, and only considers, as made out, that the hemispheres of the cerebrum and cerebellum regulate the voluntary motions of the opposite side of the body,[4] while the medulla oblongata and spinal marrow exercise their influence on the corresponding side. That the cerebellum contains central loops of nervous filaments from the sexual system seems to be confirmed.

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A very great number of blood-vessels from the two carotid and two vertebral arteries supplies the brain in all its parts[5] with blood, contributes to the reciprocal action between the

[1] This contains, in 100 parts, 80 of water, 4½ cerebrot (?), 7 albumen, 1½ phosphorus, 1 phosphate of lime, 1 do. potass, 1 do. magnesia, 1 common salt, 1 extractive matter, $\frac{7}{10}$ red fat, sulphur (?).—Couerbe, New Analysis. (See Fremy, in Liebig.

[2] Magendie, Leçons, etc.

[3] Magendie showed by experiments on animals, that the irritation of the posterior cords, by pricking them with a needle, only produced violent pain without motion.

[4] In cases of paralysis without loss of sensation, it was found after death that the anterior surface of the spinal marrow was dissolved or dried up, the posterior being in its normal state. (Rullier, Olivier, Abercrombie, &c. &c.) On this subject, however, the experiments of J. W. Arnold (On the Functions of the Roots of the Spinal Marrow, Heidelberg. Gross, 1844), which contradict this doctrine of Bell, deserve great attention and further investigation. The evidence on this subject therefore cannot be considered as complete.

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blood and nervous matter necessary to its vegetation, and, therefore indirectly to its higher vital action, and causes that phenomenon of expansion and contraction visible under the name of the pulsation of the brain; which, however is to be distinguished from that motion of the brain indirectly connected with it, which corresponds with respiration.[1] (Blumenbach, Phys. 201, note.) A third motion, namely, a depression in sleep, and an elevation in waking (Bischoff, p. 222), results from the preceding.

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By *sensorium commune* nothing more is to be understood here than the immediate instrument of sense *πρῶτον Αἰσθητήριον* by which the mind receives materials for its operations.[3]

Whether this sensorium is to be sought in a certain part of the brain, and in what part, is undecided in the present state of the science. Attempts have in vain been made to represent all the solid structures of the brain,[4] and even the ventricular fluids,[5] as the point in which all the central ends of the nerves unite.

[1] Though this pulsation is so important a sign of vital endowment in the brain, we must not at once declare with Bird (Path. und Ther. der ps. Krankh.), that it is the last discoverable corporeal condition of the manifestation of the mind; because, although we know the use of the blood in imparting vitality to the brain, we do not know its special use in imparting to it psychical qualities.

[2] In this sense Ideler is right when (Anthrop. p. 61) he assigns to the "common sensation" the cerebral nerves, as well as the ganglions. From these it proceeds and is called *κατίξοχην, common sensation;* in the cerebral sphere it unites itself together with other perceptions to the *sensorium commune.* These ideas ought certainly not to be designated merely by the difference of language.

[3] Kant to Sömmering.

[4] Sömmer., Org. der Seele. p. 53.

[5] The same work refuted by Rudolphi, Comment. de Ventric. Cerebr. Gryphisw. 1796.

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In the first place, the proofs are defective, because the connexions between the central and peripheral parts of the nervous system are by no means sufficiently ascertained, and it cannot always be demonstrated which organs of the brain are to be considered as immediate continuations of the sensitive nerves;[1] and, secondly, the object of these considerations, viz. to prove by the unity of the organ the unity of psychical consciousness, was altogether a fallacy, as will appear in the sequel.

Von Bischoff[2] expresses the relation of the sensorium commune to the cœnæsthesis, by assuming a double sensorium, one of the mind and one of the body, placing the former in the brain, the latter in the spinal marrow and the ganglionic nerves, and thus accounts for the phenomenon of living acephali which have corporeal, but not intellectual life, as well as for the ancient classical distinction of *anima* and *animus*, &c. So long as we have no better distinction, by means of language (see above) than that through the medium of Latin and Greek, this distinction remains very suitable, but we must not forget that in man a living unity unites all, and that sensation becomes at length representation.

§ 24. We must, therefore, for the present be content to assume that the brain is the focus of represented images, and, as such, doubtless essential to the manifestation of psychical action. This is confirmed independently of the previous course of observation by the following facts:

1. If the brain be uninjured, every other structure of the body may be injured or destroyed, without affecting the psychical action. (The destruction of the physical existence cannot be adduced in refutation.) On the other hand, if the brain be injured, the physical energies of life do not always suffer.

2. Injuries of the brain impede the functions of the mind. Blood, pieces of bone, &c., by their pressure, deprive the brain of consciousness.[3] Acephali are physically incapable of cul-

[1] All terms used to express the nature of the relations of the processes of the brain to the processes of thought, are metaphors. "Why," asks Jean Paul, (Selina, p. 149,) "do we not allow certain parts in the heart to correspond with the feelings, as thoughts correspond with certain parts in the head, and place emotion, melancholy, &c. in its four chambers?"

[2] Naturl. des M. ii. 235.

[3] The statement that, during profuse perspiration, occurring some hours before death, perfect intellectual lucidity has often returned, requires further confirmation.

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ture. Those facts, apparently founded on experience, that seem to favour the contrary opinion, are refuted (*a*) by the duality of the brain, and (*b*) by the sufficiency of injured organs in general (as the lungs, &c.) to perform their functions. Nay, we shall even see in the sequel that, in certain cases, an injury may act as a relief to the impeded action of the brain, by which the controverted position is but further confirmed.

3. After removal of a diseased state of the brain consciousness returns.[1]

4. The psychical dignity of animals increases in the same proportion as the development of their brain.

5. The manifestation of mind in the individual is in proportion to the degree of development and the conditions of the brain.

6. The perceptions proceeding from nerves, whose communication with the brain is interrupted (§ 11), produce only obscure images.

These positions connected with experiments on the heads of decapitated criminals immediately after execution, even led to a conjecture that in the brain, separated from the rest of the body, there still remains, for a time, sensation, nay, consciousness; a question, which, after Sömmering's 'Vorgänge,' caused long and lively discussions, *pro* and *con*, among the physiologists.[2]

The experiments[3] which consisted in compressing and pulling the spinal marrow still attached to the brain, with the fingers or with instruments, throwing the head backwards and forwards, applying galvanism, and irritating the pupil by light, caused distortions of the muscles of the face and the eyes, and seem, therefore, to have justified the above conjecture. The strongest of the assertions that have been made is, that the *name* of the beheaded person being pronounced aloud in the ear of the dissevered head, the closed eyes opened and turned to the side whence the sound came.[4]

Burdach observes that these experiments were not made

[1] Sömmering's Nervenlehre, &c. [2] Mémoires de la Soc. d'Emul. vol. ii.
[3] They will be found in Burdach, 'On the Structure of the Brain,' iii; and Friedreich's Gesch. p. 192. [4] Ibid. 192.

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during the necessary tranquillity of mind, and refers to the fabulous story of the head of Charlotte Corday, which, it was affirmed, had been seen to blush with indignation at the shameful behaviour of the executioner. He declares the convulsions which followed, and which, according to eye-witnesses, had no psychical expression, to have been mechanical, and reminds us of the simultaneous cessation of consciousness from such great losses of blood, nay, from the mere shock which must have occurred in this case. If we accurately examine these experiments we shall find that, without taking into account the mechanical, and far from slight violence, the immediate effect of which was certainly not calculated to ensure the accuracy required in such delicate observations, there is no proof whatever that sensation existed, but only motion, such as galvanism produces in the limbs of frogs. We regard as wholly unworthy of credit that the eyes followed the pronunciation of the name, which would thus have been more tractable than they are in a swoon or even in sound sleep. But sensation, even if it were proved, would still not be consciousness, as will appear clearly from the sequel.

After this digression we return to our position laid down above (§ 23), that the brain, as the sensorium commune, receives all the images of ideas conveyed by the nerves.

§ 25. We must not, however, suffer ourselves to be led by this position to take hasty views. Images of ideas are not ideas, that they may become so, something must be added, namely, an action of the mind, which manifests itself in general as a simple spontaneous power, and in reference to perceptions, as attention, for producing which no organic medium can be assigned.[1] For the sensorium implies only capability of reception (§ 21), and thus requires a second factor as necessary to a product. But attention is only possible through a premised consciousness; and here, therefore, we have arrived at the fact of consciousness—that is (§ 2), at the boundary of our ascending line of investigation; for consciousness manifests itself in the free union of a given compound with an uncompounded unity; but unity and free-

[1] M. Herz. (über den Schwindel) expresses this very ingeniously by the similitude of a looking-glass, which represents objects, but does not represent them to itself. p. 39.)

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dom are not given in the sensual world, and therefore presuppose a supersensual world.[1]

§ 26. Feeling that everything depends on the unity of consciousness, many investigators have attempted (§ 23) to discover for it an organic unity, and through this, the seat of the soul. There is scarcely a point of our organisation in which this seat has not been located; Des Cartes placed it in the pineal gland; Empedocles in the blood; Diogenes in the right ventricle of the heart; Chrysippus in the heart; Helmont in the pylorus ventriculi; Digby in the septum lucidum; Lancisi in the corpus callosum; La Peyronie in the fornix; Sömmering in the fluid of the ventricles of the brain.[2] The notions of soul and its functions were not, indeed, the same among all these inquirers; but there is no single structure of the brain which has not been seen disturbed (and often many at once), while the functions of the mind have remained undisturbed. Here, however, the anatomical duality of the brain, in all its parts, which is undeniable, must be dwelt upon,[3] as upon an important problem for the future investigation of its psychical relation, though the declarations of a frequent, as it were, double consciousness,[4] which are inferred from it, perhaps make rather greater caution desirable. But it is—

(*a*) Wholly inconceivable, how specifically different conceptions, for instance, those of the sight and the hearing, which besides arise at different times, should proceed indifferently from a single organ, even if it were proved that there is such a one (which, according to § 23, is not the case).

(*b*) An attempt to prove such a fallacy (§ 23) would never have been made, if the principles with which we set out (§ 4) had been constantly attended to. The idle question respecting a seat of the soul (§ 6) would never have been proposed. The soul, as a spirit in a body, has no seat, for a spirit has no relation to space; the soul, as a spirit in a body, presides everywhere, where that body acts through it. "When people in general," says Kant, "fancy that they feel the act of thinking in the head, they surreptitiously take their judgment on the cause

[1] See Hartmann, G. der M., the course of the whole work.

[2] Which, however, is nothing more than halitus of blood, and, in a pathological state, serum.

[3] Burdach, V. Leb. und B. des Geh. p. 786. [4] Friedreich, Hist. Pr. Darst. p. 172.

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of sensation, for a sensation of that cause;"[1] and "if the soul," observes Platner,[2] "were in the place where it feels to be, it would be, in the act of seeing, out of the body." But enough of a supposition which is a *contradictio in adjecto.* The assumption of a solid, corporeal vehicle, for the pure action of mind, is incompatible with its extensibility, its infinity, its continuity; a fluid and ethereal vehicle is incompatible with its power of memory—its firmness; a so-called imponderable vehicle, with its spontaneity. We are continually driven back to the postulate of a simple consciousness; a postulate which, fortunately, is at the same time a fact.

§ 27. Further it appears, from what has been said, that it is quite unnecessary to assume a separate "internal sense."

If this term be meant to designate the capability of being so affected from within, that perceptions of corporeal occurrences are thereby conveyed to the consciousness,[3] then this is the sensorium commune (§ 23), with reference to the nerves of the cœnæsthesis (§ 15); consequently, it is the somatic side of the feeling of personality (§ 3).

If, what is more usual, it is meant to indicate the capability of being affected by ideas, to which there is nothing corresponding in space, then this is the soul itself, that is, the psychical side of the feeling of personality.

If (as Hartmann thinks,) it is to indicate the affection of the first through the second (of the organ through the mind), then the central loops of the nerves are meant, which we cannot consider as a distinct sense, or else we must look upon each one of them as so many distinct senses.

§ 28. Lastly, the notion of "obscure ideas" is accounted for by the preceding observations.[4] They are either—

(*a*) Such as proceed from nerves, the connexion of which, with the brain is more or less interrupted (§ 24), or—

(*b*) Such as the mind does not bestow that attention on, which is requisite for clear perception (§ 25).

These obscure ideas, or, more properly, sensations with

[1] J. Sömmering, u. des. Org. d. S.

[2] Phil. Aphor. i, 81.

[3] Klotz, Erfahr. s. l. p. 27.

[4] Natural philosophy justly calls those energies "latent" which do not manifest themselves, because the external circumstances necessary to call them forth are wanting, yet nevertheless exist.

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dormant consciousness,[1]—a subject to which we shall often return on account of its importance in medical psychology—are exceedingly numerous. It is through them, so far as they (*a*) proceed from the nervous system of vegetative life, and thus accompany all its functions, digestion, secretion, &c., that the soul (according to Stahl) secretly governs the body. "Animus est instar oceani," says Leibnitz, "in quo infinita multitudo perceptionum obscurissimarum adest et distinctæ ideæ instar insularum sunt, quæ ex oceano emergunt." It is they (*b*) which are active throughout the whole process of the formation of thought, for this goes on, though we are unconscious of it, and gives us only the perfect results, namely, ideas, notions. It is they which, in habitual voluntary motions, for instance, in playing on the piano, dancing, &c., set the proper muscles in motion through the appropriate motor nerves, though the mind does not direct to them the attention of consciousness. It is they (*a* and *b*) which, in the physiological states of sleep hereafter to be discussed, and in the pathological states of disorders of the mind, act a most important part. It is their totality which forms what plays in life so prominent a part, under the name of disposition or temper.

To all the hitherto developed psychical processes on the receptive side, that is, arising out of impressions received, the well-known laws of excitability apply, with some modifications which the psychical relations require, and their application is of manifold service. They are as follows:

1. There is no excitement without a stimulus; the stimulus which shall call into activity an idea may come from within (psychical), or from without (physical).

2. The excitement (or, more properly, the excited activity) continues after the stimulus has ceased. This law is opposed to that in physical life, according to which, the excitement ceases with the stimulus. In psychical life, the laws of association (§ 34) lead further, and the spontaneous reaction, once excited, becomes itself an impulse, and a fresh starting-point.

3. The stimulus being equal, greater excitement is produced in the mind, the greater the individual excitability is, which depends on circumstances hereafter to be developed (§§ 49-53).

4. Stimuli, which are relatively too violent, or too long-con-

[1] Bischoff, l. c. 233.

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tinued, exhaust the excitability; over-tension is succeeded by relaxation.

5. Long cessation of stimulus increases excitability. Long-continued grief produces such excitability that the merest stimulus of sudden joy may cause death.

6. A small, but continued stimulus exhausts as much as one that is violent but transitory. A person who thinks long on easy subjects becomes as wearied as he who over-exerts himself on a difficult problem. Law 4.

7. An interval of cessation in the stimulus restores the exhausted excitability. Suspension of study renews the power of thought.

8. Excitability exhausted by a stimulus or a succession of stimuli, is restored by other stimuli. The mind wearied by abstruse reading is relieved by turning to a lighter subject. Every stimulus of an organic part becomes a stimulus to the other structures and functions. A disturbance of the antithesis of the alimentary canal disturbs the circulation and the process of respiration as well as the operations of the sensorium (§§ 13-24). On the other hand an agreeable piece of news relieves an impeded secretion or excretion.

10. Besides the positive stimuli, there are also negative (depressing) stimuli, which act more powerfully than mere withdrawal. As such we may consider mental impressions, &c.

11. Habitual stimuli act more rapidly, but less powerfully (according to Law 8), because they do not need first to excite the attention.

12. The stimulus from within counteracts that from without, or supplies it, and *vice versâ*. He who is overcome by a thought which overpowers his whole mind, appears as if were to be paralysed; by lively exercise, as dancing, gymnastics &c., the mind recovers its lost equilibrium. This, however, is only true of the extremes; gentle mental activity augments every other; for my own part, I find [illegible] walking than at table.

13. Many stimuli that are simultaneous, or rapidly succeed each other, prevent any one individually from producing its effect: they cause a confusion. Vertigo &c., [illegible] Intemperate men, devoted to pleasures, dream their lives away

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14. A homogeneous external stimulus strengthens the internal, and *vice versâ*. A gouty subject is easily excited to anger; a melancholy person is easily affected by a miasma.

15. A heterogeneous stimulus weakens the other, or removes it. Welcome news will cheer the melancholy, and even makes a man forget the pain of the gout.[1]

16. A stronger homogeneous stimulus weakens the other or removes it. A real misfortune makes us forget light grievances.

The manifold combinations and individualisations of these instructive laws arising from the mention of Brown's doctrine can be learnt only by individual application. But the main result may be appropriately expressed by the statement that action and passion must be in equal proportion for the preservation of health.[2]

§ 29. Having now, in the ascending line of our investigation, arrived at attention, as the first manifestation of the spontaneity of the mind (§ 25), we shall, conformably with our plan (§ 5), setting out from the psychical principle, proceed on the descending line, and see what new results we shall then obtain, for the reciprocal relations of body and mind.

Spontaneity manifests itself in the organism.

1. By motion; 2, by the perceptions, which we have hitherto considered only on the receptive side, so that we shall be obliged, after the discussion of motion, again to go through the senses and sensations, in order to discover the share which the mind has in their functions.

Motion is effected through the medium of the nerves, and is manifested in the muscular fibres. The proofs of this are essentially the same as those adduced above for the sensations (§§ 8, 9). This is considered as a centrifugal nervous action, in contradistinction to perception, which is a centripetal nervous action. Charles Bell was the first who announced that the previously expressed conjecture of many

[1] How even a trifle may derivatively impede what is of the greatest importance, is shown in the story of the man who, being on the point of committing suicide, wanted to quote the passage "quand on a tout perdu," &c., and being in doubt whether it was by Voltaire or Molière, forgot his design.

[2] Compare Röschlaub's Pathogen. i; Hechenberger, Grundriss, p. 23.

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physiologists, that there existed a twofold class of nerves, one for sensation and one for motion, is anatomically founded (§ 22). Magendie, after direct experiments, soon established the position, that those roots of the nerves of the spinal marrow, which are provided with a ganglion, that is, the posterior and larger ones, are appropriated to sensation, and those without a ganglion, that is, the anterior and smaller ones, to motion. Johannes Müller, Panizza, and others, confirmed, by further experiments, the difference between the sensitive and the motor nerves. It must, however, not be forgotten, that the motions themselves are felt.[1] Respecting the organic conditions of this reciprocal action, more certain information must be obtained by ascertaining with greater accuracy the manifold connexion and separation of the sensitive and motor fibres.[2] The examination of these will perhaps teach us everywhere to distinguish between the nerves subject to the will, and those which are designed for the vegetative and similar functions.

Marshall Hall and J. Müller, after multiplied investigations, established the view, that, in the nervous system, as well as in the vascular system, there exists a kind of closed circulation. (Reflex-theory, § 11, Observ.) The remark that motion follows, on stimulating, not only the motor nerves, but also the sensitive nerves of a remote part, provided this be still connected with the spinal marrow, but that the motion ceases when the motor nerves of the part are cut through, or when a part is stimulated, the sensitive nerves of which are separated from the spinal marrow, is the foundation of the reflex theory, from the further investigation of which we expect decisive results. According to this theory, a reflection of a stimulus of sensation on the motor nerves takes place immediately in the spinal marrow alone. But whether, as Marshall Hall believes, all reflex motions in the living, are subject to the will, is not decided. How far the mode in which the nerves terminate by peripheral nooses, as discovered by the microscope, should be taken into consideration here, is also not yet physiologically determined. (Langer. p. 48.) What actually passes in the

[1] Brach, l. c. 37. W. Arnold (s. § 22), instead of Bell's position, maintains that the anterior nervous roots belong to the muscles, the posterior to the skin.

[2] Stilling, Med. Obl. 58.

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nerves when motion occurs,[1] is as unknown as the process which takes place on the occurrence of sensation (§ 12). The expansion and contraction of the irritable fibres in connexion with the polarity of the nerves, lead to the conclusion, as well in the one case as in the other, that a process occurs similar to the so-called electro-magnetic action. In the case of motion, a kind of image of feeling seems to originate in the central organ, and to be propagated to the periphery, while in the case of sensation the ideal image originates in the periphery, and is propagated to the central organ. When we earnestly think, for instance, of moving a finger, the image of this motion causes a certain obscure feeling in that finger, before actual motion takes place. We may in general imagine a motion without carrying it into effect, and then have the "image" of feeling in the muscles, which, when it becomes very lively, breaks forth into motion;[2] yet all these explanations, formed according to analogy, are only imaginary representations of a process which is indistinct. Besides muscular motion, there is what is called a waving motion, through the medium of ciliary filaments, by which fluids alone are moved onward without parietal contraction. According to Purkinje, ciliary movements occur in the mucous membrane of the oviducts, the windpipe, and the nostrils.[3]

§ 30. After this general physiological view, we may proceed to the psychological differences between voluntary and involuntary motions.

(*a.*) Voluntary motion is the positive expression of psychical spontaneity in the somatic sphere. In its highest power—as language—it is the exclusive privilege of man; and by the effect of its other powers—upright position and the use of the hands—it helps to complete the character of humanity, in the active energies of the mind. Perception, through the senses, forms a foundation for the capacity for Knowledge; motion, for the capacity for Art.[4]. The psychical importance of freedom of motion, results from the foregoing premises: its preponderant relation to the needful operations of the mind,

[1] According to Hartmann (l. c. p. 107, &c.), transition of the vapour of the blood into fluid, in the form of drops, by expansion in the nerves.

[2] See Brach, l. c. p. 34. [3] Bischoff, l. c. p. 353. [4] Ibid. p. 352.

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mental appetites, and their morbid perversions, will have to be considered in the sequel. Language, in particular, as a semeiotic beacon, in medical psychology, will have an important place.

(*b.*) Involuntary motion seems, according to the etymology, to be out of place here, when we are speaking of spontaneity. But the boundary line that divides voluntary, from what is called automatic motion, is far from being so positively defined in nature, as in idea; not to mention, that the mind, in many special circumstances, has a positive or negative influence on motions that are undeniably automatic, the connecting link being formed by what Schiller[1] calls *sympathetic motions*, and Fries[2] *emotions*, in which the psychical and the physical momenta have, as it were, an equal share. Such emotions are laughing, weeping, yawning, certain changes of the voice and of the respiration, occasional palpitations of the heart, blushing, and turning pale, play of the countenance, expression of the eyes, &c.[3] The semi-voluntary motions are related to the mind, in the same manner as the obscure sensations (§ 28) by which they are caused, accompanied, or followed. Their abnormal and pathological relation to the mind belongs to a subsequent chapter.

The organic process occasioned by this innervation, as it is called, in consequence of which, after long-continued and intense attention to any organic object, a greater afflux of blood (§ 12), and thence hypertrophy, or other alterations of structure arise, is worthy of observation.[4] Let a man only fix his attention for a time on one of his own organs, especially one near the brain, as, for instance, the eye, he will soon perceive the effect of thus fixing his thoughts, as an obscure sensation, in the organ itself (§ 28). Hence the inevitable consequence must be, that, after frequent repetition of this stimulus (for thoughts are a stimulus from within, as objects are from without), through the reciprocal relation of nerves and blood (§ 12), congestion will take place, according to the well-known law, "ubi stimulus, ibi humorum uberior adfluxus;" and, after frequent repetition of that congestion, under the plastic productiveness of the blood, the above-mentioned hyper-organisations will occur.

[1] Anm. und Würde.
[2] Handb. der Psych. Anthr. 1821.
[3] Brach, l. c. 38.
[4] Dubois, Hypoch, and others.

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The emotions of laughing and weeping, of which we have spoken, likewise deserve particular attention. Laughing, as the expression of a cheerful state of mind (which, as a purely physical excitement, belongs to physiology, and as a pathological stimulant, to a later chapter), is a short, rapid inspiration and expiration, accompanied by a sound and an oscillation of the diaphragm. Weeping, the expression of a distress which is sometimes psychical, sometimes physical, is a strong inspiration and a broken expiration, accompanied by a flow of tears, which, as a critical discharge, affords relief. In this case the nervus vagus is especially excited,—hence the respiratory phenomena. From branches which it gives off to the carotid, whence the ophthalmic artery arises, we explain the secretion of tears.[1] Laughing, as well as weeping, is most common to individuals of inferior spontaneity. Women and children are both excited by sympathy.

Yet these emotions are attributes of superior psychical organisation; for man alone laughs, and even the child does not laugh till about six weeks after its birth, when it begins to distinguish itself from external objects. Laughing and weeping, like joy and grief, are closely allied to each other; they depend upon the same physical condition, have in many men the same physiognomy, exchange places in a state of intensity (the tears of joy, the laughter of despair), and merge into one another.

Reil[2] lays down the following laws, according to which the cerebral influences on voluntary motion take place.

1. The cerebral influences determine the beginning, the duration, and the ending of motion.

2. They determine the intensity and (?) the amount of the motion.

3. By repetition, they acquire a habitude like the ideas. (See §§ 34 and 35.)

4. They associate with each other and with the cerebral influences on ideas, according to the same laws by which the latter associate in the imagination and the memory. (See the same paragraphs.)

5. They arise in the brain simple; as, for instance, in the resolution to pronounce a word; but the action of the muscles set in motion is very complex.

[1] See Bischoff, vol. ii, p. 168.

[2] Fieberlehre, iv, 5.

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6. They determine the velocity of motion, as well with respect to individual muscles, as to the propagation of motion by many.

7. From a number of cerebral influences on motion which have been once founded on association, new ones may be compounded, as the imagination, from ideas already present in it, is able to compose others (§ 60).

On considering these positions, we soon perceive that they are only the continuation of those laws, according to which cerebral influences follow ideas, which result spontaneously from the given genetic representation, and of which they certainly form a continuous succession.

The motion of the muscles being in conformity with the cerebral influences, Reil thence concludes further, that convulsions are the outward signs of what is passing in the interior of the nervous system, by which their psychical relation would be expressed in general. It is not meant hereby to affirm, that they have no other (non-psychical) relation.

§ 31. We now come to the manifestations of spontaneity in perception, which we again follow upwards into what are called the pure operations of the mind.

The cœnæsthesis (§ 15) is only so far under the control of the mind, that by intense attention we become conscious of the obscure sensations thereby occasioned (§ 28); that is, change them into ideas; or by abstraction, that is, by attention to other objects, are able entirely to annihilate them as regards our consciousness. So far, then, we are able to make ourselves masters of our frame of mind. The first of these effects is produced by means of the semi-voluntary motions (§ 30). As the feeling of warmth or of cold is properly only the result of warmth excited in the body, or withdrawn from it, and therefore relative, and more subjective than objective, inasmuch as it proceeds from a comparison of our own state with that of the object, it may certainly be said that, even in these sensations, the mind does not remain wholly passive.[1] A person whose mind is excited does not make this comparison, and feels heat or cold less, the more excited he is.

This psychical element is more manifest in touch; to feel

[1] Hartmann, l. c. 8, 127.

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the hardness, solidity, and weight of bodies, we must ascertain their resistance; to test their form by the touch, we must lay hold of them. Both are done by means of voluntary muscular motion, so that here a centripetal influence on the sensitive, and a centrifugal reaction on the motor nerves cannot be denied.[1]

The same thing occurs with taste. Observe the epicure or the wine-bibber; see how, by the voluntary muscles, he moves his tongue to taste, how he smacks his lips, &c. Here reaction is manifest.

The same is the case with smell, since we distend the nostrils by means of the voluntary muscles, in order to smell. Yet it is an extraordinary phenomenon, that the more delicate are the gradations of smell, the less are we able to obtain the perception of them by an effort, it is as if nature meant to give us a lesson not to be interfering with everything, but to suffer her voice to be heard. The delicate fragrance of violets passes by and vanishes, the more strenuous are the efforts which we make to catch it.

In sight, the co-operation of attention is still more striking, unless, like the king in Don Carlos, we choose to see nothing with our eyes wide open; and here, independently of the voluntary opening and shutting of the eyelids, besides the optic nerves, the two sets of nerves (§ 19) which regulate the eye have their share in the effect. These are (*a*) the nerves of the muscles of the eye; by their means we turn the eye at pleasure upon or from objects, carry it, as it were, all round them, and thus exercise our attention; and (*b*) the ciliary nerves. Whether these latter serve only for contracting and enlarging the pupil (respecting which actions there are examples of their having been subject to the will), or whether they especially co-operate in the phenomenon of subjective seeing,[2] is not decided. Here, therefore, the rights of psychical influence are especially manifest; but here, too, they have their limits. Gazing too intently increases the subjectivity in the eye, even to pain, and thus hinders the objective perception.

Lastly, in hearing, the psychical co-operation is the most

[1] Steinbuch, Beitr. z. Physiol. der Sinne. Nürnb. 1811.

[2] Purkinje, über die Sinne in Subjec. Hins.

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manifest, this being the most intellectual of the senses. Independently of the mobility of the cochlea of the ear, effected by muscles, the existence of which may be proved, though they are not exercised by man, let us observe a person in the act of listening,[1] who, as we are in the habit of saying, is "all ear." He strains, as it were, the sensibility of the internal organ of hearing to such a degree that even the slightest vibrations of the rays of sound find a reaction; he collects the single sounds, and combines them; he pronounces every word that he has heard, as it were, in thought, and explains the perception of the organ of hearing by this construction with the organ of speech (§ 20). The mode of action in hearing is shown, for example, in the circumstance that, in an assemblage, where many persons are speaking at the same time, one may be heard alone; or in a concert one instrument may be heard distinct from the rest.

Thus, in all physico-psychical processes the reaction of spontaneity of the human interior upon the exterior is confirmed; and thus there is, according to the wish of Goethe,[2] a vindication of the rights of what he calls ἐντελέχεια, that personality which is dependent on the unity of an intellectual and somatic organism. For the rest, we are not here speaking of the still higher intellectual assimilation of that which is perceived, but for the present only of the psychical participation in perception. At all events, it is certain that the psychical share is more important to human development than the physical, of which the example, that occurred ten years ago in Scotland, of James Mitchell, who was born blind and deaf, and yet attained to no inconsiderable degree of intellectual development, may serve as a proof.[3]

Von Bischoff (Naturlehre der M.) has dwelt especially on this twofold relation, attributing to every perception an understanding side and a feeling (emotion) side. This expression is, indeed, very significant, because feeling designates the receptive, understanding the spontaneous, element in man. The retina reacts very delicately (the understanding side), and is, in proportion, but little sensitive (the feeling side).

§ 32. In the development of intellectual operations ascend-

[1] Hartmann, l. c. 164.

[2] Vol. xlix, p. 94.

[3] Hufeland, Biblioth. 183, 60, 2.

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ing from the physical, we come very near to the limits of sensibility—the operation of imagination.[1] It is this in particular which causes such an intimate connexion between intellectual and material life, and which so plainly points out to medical psychology the line of its operation, we will therefore bestow a more particular attention upon it.

By imagination we here mean, in a more comprehensive sense, that operation of the mind by which it (*a*) receives, (*b*) retains, (*c*) recalls, and (*d*) combines, according to higher laws, the ideal images (§ 25) furnished to it by the cœnæsthesis (§ 15) and by the senses (§§ 16-20); for all these actions are manifestly links of one chain. At the first step we usually call this operation the faculty of conception; at the second, memory; at the third, reproductive fancy, and at the fourth, productive fancy.

The matter and the organ for these actions are afforded (§ 22) by the central ends of the sensitive nerves, in their union as sensorium commune (§ 23). If, after what has been already stated, further proofs of this should be wanted, the following may be adduced:

1. A definite portion of the conceptions of imagination disappears when an organ of sense, and the corresponding part of the brain disappear. There are instances of persons who, having become deaf and blind, no longer remember objects of hearing and sight, and no longer dream of them.

2. On the reproduction of objects of hearing and sight, the same objects are felt to act internally, which otherwise act externally.[2]

3. The strength and activity of imagination depend on the strength and exercise of the external organs of sense, and decline with them.

4. Imaginings when very vivid pass into the organs of sense and occasion morbid sensual delusions.

[1] It would be well if, instead of speaking of "the powers of the mind," (which causes misunderstanding,) we adhered to the designation of the several "*operations* of one mind;" which most psychologists recommend, but in the sequel forget.

[2] Kant (Kl. Schr. ii, 143) calls the point of sensual affection "focus imaginarius," which in a state of waking is placed inside the individual; and in dreaming, intoxication, mental delusion, and madness (which he thereby explains well, but not completely,) outside the individual.

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5. The same is the case with the organs of motion, hence the gesticulations of men in a state of excitement who break out into soliloquies, of sleeping persons, &c. &c.

6. The same transition occurs in the cœnæsthesis,[1] for instance, in nausea and the sexual sensations. Here, too, the impressions on the nerves are conducted only mediately to the sensorium (§ 22).

§ 33. But now the very remarkable phenomenon presents itself to our consideration that the mind is capable of retaining the images which it receives in the manner above stated (§ 32.) This quality of it—memory—is called by Kant, not without reason, the most wonderful of all the powers of the human mind.[2] That the same organs which we have hitherto considered are in operation here may be confirmed, in addition to what has hitherto been said, by the following observations:

1. Memory in man is in direct proportion to the size of the healthy brain.

2. Memory increases and decreases with the consistency of the medullary substance of the brain, from childhood to old age.

3. Memory is improved or impaired in proportion as the cerebral vitality is improved or impaired.[3]

What peculiar organic process takes place in this retention we can only, in some degree, infer from analogy, but we cannot explain it. It is at once self-evident that the notion of a tabula rasa, which is by degrees written all over, is not tenable. There probably remains to us only the conception of vital tension in the cerebral substance, such as occurs in the nerves on the occasion of every external impression; therefore, every nerve, every organ of sense, really has, in some degree, its own memory, and hence we may best explain the known laws of association, deduced from experience.

§ 34. The laws of association are[4]—

1. The law of coexistence and succession.

[1] C. F. Hartmann, 176. &c., and Brach, p. 79.

[2] Menschenkunde, p. 140. Not without reason; for the retention of an image is the first condition of the possibility of an intellectual reaction on it—the peculiar wonder of the revelation of our twofold nature.

[3] Hartmann, l. c. p. 185.

[4] Comp. Prochaska, Psychol. p. 72.

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2. The law of analogy and contrast.

The first is to the following effect: ideas of which we become conscious simultaneously or in succession are most easily retained in the memory.

The second is to the following effect: analogous or contrasting ideal images, impress themselves more deeply on the memory. The examples and explanations applicable to these laws are known to us by psychology, and the laws themselves, as approved results of experience, are susceptible of manifold applications to our object.[1]

But if we endeavour to examine more minutely into the possible organic relation of these laws of observation, we find that although there is no ground whatever for their explanation in the assumption of passive traces of impressions, there is some in the assumption of vital tensions of the nerves (§ 33).

Association with relation to "cause and effect" belongs not to the physiological but to the metaphysical laws of pure thought.

§ 35. These laws show us memory in a higher degree of activity, as reproductive imagination or recollection (§ 32). Here the nervous tension is considered as action. This, according to the recognised analogous laws of the senses, is the more easily reproduced,

1. the more intimate the connexion of the nervous organs which are affected, or according as this connexion is voluntarily brought about[2] (first law of association, § 34). An example of original connexion is found in the organs of hearing and speech; an example of the connexion voluntarily produced through simultaneous and repeated excitement, is found in reading and in learning to play on the piano.

2. Every vivifying nervous tension does not immediately cease with the exciting cause, but leaves behind something resembling it; for instance, an object long and steadfastly looked at, changes after the eyes are closed, into a similar image, a metamorphosis, as it were, of itself, which gradually vanishes. Every colour passes, thus, first into that which is nearest related

[1] What has been said against these laws (see Rosenkranz, Psychol. p. 262) must not confuse us. We speak here only of conceptions, and not of ideas. Laws are to be considered by us here merely as the sum of observations.

[2] Hartmann, 196.

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to it, but in the sequel,—which, as Hartmann[1] observes, seems to indicate a reversion of the poles of the process going on in the nerves—into its opposite. (Second law of association, § 34.)

In this manner, therefore, we may find an organic expression for the laws of association adduced above, nay, many other observed facts, not referable to them, become thus more intelligible; for instance, the power which we possess of facilitating recollection by repeating the impressions, whereby the same tension becomes more and more easy; the faster hold, or rather the more easy reproduction of the more lively impressions,[2] whereby the disposition to repetition is, as it were, impressed on the nerves; the increase and decrease of memory, with the increase and decrease of nervous vitality. Nay, we may say with Hartmann,[3] that this view, which, in the main, is the product of his investigation, is the only one which fully vindicates the right of spontaneity, since it results from it that the completely organized brain is partly a creation of self-directing and self-repeating mental activity.

We must not, however, forget that this mode of explanation, like every other in the compass of the natural sciences (§ 4), is only an hypothetical attempt to reconcile the operations of mind with nature.

§ 36. In the fourth degree of activity (§ 32), the imagination rises to that sphere, where it appears as productive or creative, and which we are accustomed to call, in the stricter sense of the word, fancy; and in its spontaneity, poetic power. It is here that the wonders of the intimate blending of mind and matter are brought to light, and in which the enigma of our mortal existence is peculiarly involved. Beneath this magic circle lies the material world, revealed to the senses; above it the intellectual world, revealed to the mind; and within it, the dark or shadowy world, of conjecture. While we willingly allow her rights, and recognise them in the empire of poetry, and in the internal life of the mind, let us not be deprived of ours, in the empire of science, and let us visit her domain without suffering ourselves to be touched by the magic wand of this Circe. It is our business calmly to watch her

[1] L. c. p. 195. [2] Z. B. the earliest. [3] L. c. p. 109.

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steps, and where we are not able to follow them, faithfully to indicate their traces for the benefit of more fortunate explorers.

In the first place, fancy deceives us when she claims an absolutely productive or creative power; it is conditional; that is to say, it does not exist without matter from the store of the imagination in the first instance (§ 32). She only fashions this matter, which, however, is always more than merely putting it together;[1] she is therefore productive in the form. Yellow and blue, mixed together, produce green; but he who has never seen this colour, can never create it in his fancy.

Now partly because the perceptions of the senses are not so communicable as the ideas, and partly because the manner in which every fancy proceeds with its subject-matter (all the radii of a human nature meeting in this centre) is individually different, fancy is most peculiarly that which distinguishes the individual, and the phrase of "living according to one's fancy," is justly opposed to that of "living according to common sense," a circumstance which is not without importance with reference to our further investigation. In this sense we are also to seek, especially in the fancy, for the foundation of peculiar talent; nay, with respect to the *arts*, even of genius.

Fancy harmonises all the higher energies, thought and will, with sensation, and may therefore with peculiar propriety be called the soul of life.

She harmonises all the inferior energies, admiration and sensation, with thought; and, according to the expression of Herder,[2] is thus, as it were, the budding flower of the sensual organisation for the use of the thinking powers.

She especially harmonises the sensations and conceptions of man with each other,[3] which by no means contradicts the above-mentioned individualising power (as in general so much that is apparently contradictory in her is reconcilable); for antipathy, as well as sympathy, has its roots in her, because

[1] The eyes of Juno with the nose of Apollo, the brow of Minerva, and the smile of Venus, produce an absurdity, not a masterpiece of fancy. See Wieland's 'Ideal of the Greek Artists.'

[2] Ideen. Ph. d. G. ii.

[3] In pathomatologia rite conficienda præcipue phantasiæ, *sine qua nullus animi adfectus cogitari potest*, ratio est habenda.—Langermann, Diss. Inaug.

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both are only respectively the expression of repulsive or attractive individualities.[1]

She appears, by these harmonizing qualities, as the nurse of intellectual life, as the vegetative power of the mind; for, as the humorous Hippel not unaptly says: "Every one is mentally consumptive whose powers of imagination are weak, for fancy is the lungs of the mind."

After these general remarks on fancy, we may proceed to the further discussion of her physiological influence on the body.

§ 37. In the somatic operations of fancy, we have to assume the same motion in the nervous system, from within to without (centrifugal), as takes place in the sensitive perceptions from without to within (centripetal) (§§ 12 and 23), for images of ideas arise in the sensorium commune as the *rendezvous* of the central ends of the nerves; and fancy, as the highest degree of the spontaneity of the imagination (§ 32), is, in some measure, a reversed sensibility. In her operations, the images previously excited and preserved by the memory called forth by a stimulant from within (subjective), instead of a stimulant from without (objective), are contemplated, and, in the higher degrees of this operation, are propagated by innervation (§ 30) to the peripheral structures. Thus the processes of the inmost sanctuary of the mind agitated by the images which sweep before it, come to the surface, and betray themselves to the physiognomist in the look, features, and attitude. To these organic motions, excited by lively conceptions, the explanations adduced on the motions arising from obscure conceptions (§ 30) are applicable only when they occur in a higher degree.

From all this it may be conceived how important an influence on the whole organism fancy must possess, as that energy by which intellectual life transfuses itself into somatic life, through the central organ of sensation. That influence manifests itself even on the unborn man, through the so-called fright of the mother,[2] at a period of development, when intellectual existence is not yet called into activity; a period

[1] Comp. Zur. Diatetik. d. s. p. 34.

[2] On this subject, which is sub judice, I have endeavoured to give the state of the case.—Verhandl. d. Ges. d. Aerzte in Wien. i.

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[2] On this subject, which is sub judice, I have endeavoured to give the state of the case.—Verhandl. d. Ges. d. Aerzte in Wien. i.

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which, in many men, continues throughout their whole life. It so manifests itself in the female sex, whose organisation, on the whole, is rather sensitive than intellectual, and especially in that partly transitory, partly pathological condition, of which we shall treat in the sequel.

To adduce special organic foci where fancy is particularly influential, such as the stomach, the ovaries,[1] &c., is unnecessary, because it is evident, from what has been stated, that it must be those organs which are either particularly abundant in their supply of nerves, or which have an especial consensual relation to the brain. (§ 22.)

However, the effect of exalted imagination on the secretions and excretions, as, for instance, the tears, saliva, milk, urine, semen, &c., deserves especial mention.

From the preceding development of the physical conditions of psychical life, the further questions on their relation to each other (§ 6) answer themselves. The mind, for instance, does not manifest itself in direct proportion to the body (as materialists must assume), for the greatest talents often appear in the weakest bodies, nor *vice versâ* (as may seem to the spiritualist), for the same advantages of intellect are often found in the most vigorous frames. But so far as its action depends on physical conditions, it will be in direct proportion to the energy of cerebral and nervous life, in the relations that have been described. Further, the physical reflex functions of intellectual life will be most lively in sensitive natures, with delicate organism, and weakest in the contrary case. The psychical reflex functions of corporeal life, on the contrary, will be strongest where the material predominates, whereas the intellect is least developed and weakest in the opposite case.

§ 38. If we should now attempt to pursue upwards the free activity of the intellect in the course we have commenced, we shall, on mature reflection, arrive at the result, that further on we have no more organic points of attack, and, therefore, again find prescribed[2] on this side also the

[1] Comp. de damnis quæ or. corp. hum. ex imag. Dr. Krause and Grohmann, Leipzig, 1805.

[2] Long after this passage had been written, I was delighted to read, in Maimon (Magaz. d. Erf. Scelenl. viii, 3), "all men have the same kind of understanding; the difference can lie only in the materials which the senses supply, or in the power

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limits of our inquiry. For, to go no further than fancy, psychical spontaneity is exercised in it by the combining and fashioning of the images received (§ 36). It now advances in the process of thought through the discrimination and combination of the characteristics of these images to notions, thence, by synthesis, to judgment, from this to conclusions, from conclusions to ideas, in the most intellectual, the purest abstractions, with which nothing sensual corresponds.[1] In this whole development, those images alone belong to the somatic side, which, having been furnished by the cœnæsthesis and the senses, stored up in the sensorium, and reproduced by memory, begin, in fancy, to lose their objective character, and to be assimilated by the spontaneous principle, which thenceforward develops itself more and more subjectively, and thus leads to the fact of consciousness (that pure subject, in which there is nothing external remaining), the separation of which from our inquiry we have decided to keep constantly in view (§§ 3-6).

It is, therefore, not without grounds that we have ascribed to fancy so much importance in this our task, because in her the psycho-physical relation vanishes in the last sensible breath, which diffuses itself, imparting life to the regions above and below[2]—to the intellectual and material world.

For the body would experience nothing of the heavenly contact of the intellect, if the latter were not enabled to make itself known to it through the medium of figurative language, and, if we are to recognise them as applicable to ourselves, all the reciprocal relations of the body to thought, which will further engage our attention in these lectures, can and must lie only in the first traits hitherto developed, of this figurative language.

of the imagination, which combines them. The higher powers of the mind must therefore be entirely excluded from medical psychology." It may certainly be said that thought is related to the other actions of the mind, which it receives under one unity, as the brain is to the nerves, which it likewise centralises; but in saying this, we have only expressed an analogy, and if there were or are biologists who take this occasion to make the brain the seat of thought, and the nerves the seat of other operations of the soul, this analogy, like many others, is thereby abused.

[1] This is not the place more closely to investigate the facts that, in this development, not only thought (see below) progresses, but the whole inner man; and that accordingly what the latter makes his own by means of development (*actu*), permanently remains as much a part of his being, as what is innate in him (*potentia*).

[2] This passage is very obscure in the original.—Ed.]

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The first of all duties in scientific investigation, and we must never forget this, is, to put our questions in clear and well-defined terms; the answer would be much more unconstrained and satisfactory, were it not that, *Quærit delirus quod non respondet Homerus!* But even the intellect would languish for want of food in the bonds of earthly relations, were it not for the happy power of vegetation in fancy (§ 36), which converts for it the matter of earthly images into palatable nourishment. Thought presupposes reproduction. This is regulated by the ever definite character of conception. On the one hand, therefore, we presuppose, for solid thinking, a sufficiently precise determination of the given conception that is presented to the intellect, and on the other hand, richness and suitable combination of that which is to be reproduced. This combination, as it is fit for thought, is for the most part founded in thought. Solid thought will, therefore, entirely depend on the suitableness of the reproduction of which a man is capable. "He who, in this respect, has nothing good in store, will produce nothing good; he whose reproductions are poor, will betray poverty of intellect; he whose reproductions are partial, will think partially; and he whose reproductions are disorderly, will think confusedly, and so on."[1] We shall perceive the great importance of these positions when we come to the pathological part of the work.

All that we have said is, however, to be understood only of that one manifestation of mental activity, which begins with the perceptions of the senses, and ends with the idea. We call it the intelligent form, or κατ' ἐξοχήν, thought. But two other manifestations of mental life may be distinguished, the reciprocal relations of which to corporeal life are founded on experience, and are, therefore, subjects of consideration for us; they are feeling and desire, and when combined form the disposition as contrasted with the intellect. To this union of extra-sensual susceptibility and capability within us corresponds the extra-sensual ideal above us, namely, the divine nature, which reveals itself in those divine ideas of the true (thought), the beautiful (feeling), and the good (will). Ordinary language, has, time out of mind, by the expression "the whole thought,

[1] Stiedenroth, Psychol. i, p. 140. Berl. 1824.

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imagination, and aim of a man," (das ganze Denken, Dichten und Trachten eines Menschen—a German phrase), designated this threefold form, as the sum of our knowledge of the inner man. The relation of this threefold form to the corporeal whole has been, as it were, felt, nay, in order to proceed consistently in this matter, the sphere of thought, according to the example of the Greek sages,[1] has been confined to the head, that of feeling to the breast, and that of desire to the abdomen;[2] or, with a more special regard to the nervous system, to the first, the cerebral; to the second, the cerebro-spinal (motor); to the third, the abdominal ganglionic system has been assigned. How far these suppositions find support in the psycho-physical organisation in which a receptive, a reactive, and a productive sphere may be similarly distinguished, appears partly from what has been said, and will further appear in the sequel; it is enough that the Trichotomy, or threefold division is founded on fact; for every division is good in which the given matter may be completely and precisely contained. Let it never be forgotten, however, that the division always refers only to the predominant phenomena of one energy. In all thought there is something of feeling and will, in will something of thought and feeling, &c.; a unity which has long been recognised by refined psychology; but has been ill defined by designating it as one power acting in different directions. A *direction* expresses relation to space or object, which does not take place here; they are "manifestations," or perhaps what Spinosa called "attributes."

The notion of the Platonic psycho-physiology has been renewed and carried further in the sense of the modern reflex action. Hegel, for every concrete sensation, sought a corresponding affection of a particular organ; for instance, courage in the breast, anger in the liver, &c. Klencke builds on this parallelism an entire "System of Organic Psychology" (Symbolik der Organe). Joh. Müller, and after him Rosenkranz, limit this embodying of the inward man to this: that the sthenic sensation has, corresponding with it, an exciting state of the body, the asthenic a depressing state, and the

[1] Plato's λόγος, θυμὸς, and ἐπιθυμητικον.

[2] Nasse, Zeitschrift, 1822, 1 Part, p. 21.

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mixed sensation, a state which manifests itself as cramp, yawning, convulsions, &c.; but they deny that the sensation is individualised in particular organs. "While one,"[1] say they, "has his liver affected by anger, another is disordered in his stomach from the same cause, while a third improves in his appetite; one person blushes from shame, another turns pale; some are blanched from fright, while some become red, &c. Suffice it to say, that the embodyment of the sensation is outwardly manifested only by a momentum of that organism in which the individual is particularly excitable." We agree, on the whole, in this view, without, however, desiring to impede the further study of these relations. In most individuals, certain psychical affections always act on the same organs; the differences adduced with respect to anger, all have reference to the digestive system, and vary precisely according to the excitation or depression. The main point remains, that we are not to speak of an "individualising of the sensations," which suggests no precise idea, but to seek for the mediate relations in which the individual organs stand to the central organ of sensation, the brain, with the nervous system. For this Nasse's earlier researches afford admirable aid. Moreover, we may, it is true, represent thought as unity with respect to the other powers of the mind, in the same manner as we represent the brain as unity with respect to the nerves; but this only affords us a simile, and we cannot hence conclude that the brain is the seat of thought, and the nerves the seat of the other faculties of the mind. (See page 126.)

§ 39. If we desire to examine feeling in its filiations, we must go back to sensation, and here, as in the investigation of the sphere of knowledge (§§ 31-38), we must repeat the operation of rising from the lowest step; for feeling is only the psychical climax of sensation, and we have still to do with the one mind, whose action develops itself with perception through discrimination till it arrives at notions, wherein its most general

[1] Rosenkranz, Psychol. p. 99. With regard to the development of the three mental faculties under the main scheme "intellect and disposition" out of one mind, I refer to the very satisfactory statement in Prochazkas' 'Psychol.' Vienna, 1841, p. 36. Moreover, there is no objection to the expressions "Power or Faculty," so long as we do not forget that the philosophical inquirer into nature always understands by them only the necessary explanatory foundation of given relations—The x of the Equation.

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scheme, "truth and error," serves as the principle; which, however, is almost, if not entirely beyond the limits of our inquiry. The activity of this principle advances from sensation to feeling, wherein there is likewise a difference, the most general scheme of which, "pleasure and displeasure," is much more within our province.

If, then, we go back to common feeling, where, as we perceive, the word "feeling" only stands for sensation (since, in the general corporeal sensation, which is still more fundamental (§ 7), nothing psychical is felt), we shall find, it is true (§ 13), psychical relations as we advance, but the so-called common feeling itself, through which we perceive only the vegetative sphere of our body, (§ 15) is wholly somatic. But if, from the psychical termination, we trace the relation downwards, we certainly come to a point at which the psychical element so loses itself, as respects our investigation, in the physical element of the common feeling, that we can no longer draw the boundary-line of the transition, no longer point out the share taken by body and mind. At this point, therefore, there would be common feeling, rising into the psychical sphere, and we could not designate it better than by the expression, "self-feeling," a feeling of personal existence in an empirical, not a metaphysical sense. (§ 3.)[1]

Self-feeling, then, combines in itself sensation and idea; its subjectivity pervades the organic body; it is what we mean by the *ego*, applied to the vital functions, and forms the basis of all individual feelings in their further development. Common feeling assumes, in the *ego*, a humane character; content thus becomes cheerfulness; discontent (restlessness)[2] becomes melancholy; and the mutations and blending of the two we designate as humour; and thus weal and woe come to man through this channel of his inward life.

Here, besides the ethical, which is out of our way, the medical significance of pain, which has justly been called "the

[1] Comp. Klotz, Seel. i, 106. Where we see a departure from the personality, we may conclude that the self-feeling of the person is alienated.—Eschenmayer, Magn. p. 116.

[2] The definitions of humour are as varying and undefined as itself. German etymology, from Luna; Latin, from Humor, &c.—Comp. uber die Laune, von Sternfeld. Wien, 1838.

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awakener of intellectual (we may say, of active) life," becomes clear. The state of mind in which self-feeling is void of sensations, announces itself to us as *ennui*. When ennui condenses itself, as it were, into feeling, this feeling is one of pain; and excites us to action, like every other pain that does not exceed a certain limit; this general pain of self-feeling (*ennui*) is what poets have sung and celebrated as weariness of life.

The opposite state, where self-feeling is full of sensation, is called sensitiveness. But before we consider it more closely for our purpose, let us follow the psychical ascent of the feelings.

§ 40. As self-feeling is closely united with common feeling (§ 39), so sympathy, which is psychically higher than self-feeling, is combined with the sympathetic and antipathetic images of the fancy (§ 36). It is, indeed, still but one root, the stem of which we continue to follow; "it is," as Schiller says, "our own feeling when we are impressed with that of another;" but it is our own feeling in a higher state of development. It is equally true that it is *our* own senses which perceive extraneous objects, but they no longer, like the cœnæsthesis, inform *us* alone.

The sympathetic feelings follow the general scheme of "pleasure and displeasure" (§ 39), and are divided into compassion and sympathetic joy, the first of which, in the very fluctuating states of human existence, is much more frequently and easily excited than the second.

§ 41. Allied to fancy, in her higher action, are the ideal feelings, in which the scheme of "pleasure and displeasure" is changed into that of "the beautiful and the disgusting." It may be easily deduced from the preceding representation, that they exercise a powerful influence through the medium of the senses upon the machinery of the organism.

§ 42. But we are led in this direction also to the extreme limit of reciprocal action if we pursue it still further, and attempt to connect it with thought (§ 38), which, however, is no longer within our province; and yet there is evidently such a limit, namely, the very remarkable, yet undeniably existing intellectual feelings; for, unquestionably the striving after knowledge (doubt) is accompanied with a feeling of displeasure (discontent), and the acquisition of knowledge with a feeling of pleasure, but it is as inexplicable as the twofold nature

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of man itself, and here, as in so many other points, we must and ought to be content with the phenomenon and its relations, and leave the explanation to those who, in order to make a parade of their understanding, find more pleasure in demonstrations than in truth. We may consider these feelings as a revelation of the intellectual impulse of self-preservation. To assimilate objects to itself,[1] affords pleasure to the mind as well as to the body.

It may be inferred that these intellectual feelings are very delicate and almost imperceptible (not weak) in their sensible effects, because the operations of thought are only indirectly connected with the organs on their material side (§ 38). They, may, however, become very intense if the individual be of an intellectual turn of mind, or if they be in reciprocal relation to those impulses which are to be noticed in the sequel. The acme of these feelings is the moral and religious feeling, which, as the expression of a free relation of the whole essence of man to a more exalted existence, masters his entire being. But here limits are placed to our inquiries, and we will now observe the whole series of feelings which we have described in another point of view, namely, as emotions.

§ 43. The feelings are called emotions, when, as sometimes happens through violent and sudden excitement, they rise to such a degree that they alone engage, for a time, the action of the nerves.[2] The feelings in the above series attain this degree with greater or less facility, in proportion as they are nearer the somatic or the psychical pole. The intellectual feelings attain it very rarely, in consequence of their imperceptible nervous action (§ 42). As here too the scheme of "pleasure or displeasure" is their basis, a distinction has always been made between agreeable and disagreeable emotions, and according to their influence on the bodily functions, they have been called exciting and depressing. We will point out, in the course of our representation, those which are the most important with respect to our purpose.

Self-feeling (§ 39) may be vehemently affected with emotion; as on the one side cheerfulness rises to rapture, and on the

[1] Töltenyi, Verf. einer Kritik. d. w. Gr. d. M., iii, p. 428.
[2] Klotz, Erf. sect. i, p. 164.

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other melancholy sinks to despondency. Nay, we see in the exhaustion of luxurious idlers, that *ennui* itself, by its fruitless longings after change, may lead even to despair.

Sympathy (§ 40) may be strongly affected with emotion, inasmuch as on the pleasurable side participated joy, and on the contrary side compassion, may attain such a height, that we wholly lose sight of self-feeling.

The ideal feelings (§ 41) terminate in emotion on the pleasurable side by enthusiasm, and on the opposite by disgust, which seizes the man of refined taste at the sight of that which is devoid of beauty; as exemplified by the artist who lost his reason on beholding the distorted productions of his own pencil.

The intellectual feeling (§ 42) rises, in such cases on the pleasurable side (for instance, in Archimedes), to enthusiasm, which absorbs the whole nervous action, and on the contrary side to that despair which at length seizes the sceptic, when not a ray of truth sheds a gleam into his benighted soul. That even the moral direction of this feeling may become an emotion, in joyful zeal or painful repentance, may be seen in the history of the human heart.

§ 44. It remains for us to consider the psychological relation of feeling in general, and of emotion in particular. The most comprehensive notion will be suggested by a retrospect of the preceding genetic development. Feeling acts like a psychical augmentation of sensation, upon the vascular system (§§ 12, 39), and in the same manner partly through those nerves which constitute the apparatus of common feeling (§§ 13, 14), partly through those which furnish the apparatus of the senses (supplying materials to the fancy, § 37)—with which that system is intimately connected, and through which the several organic structures derive from it form and life. It acts more or less powerfully in proportion to its degree—most powerfully in the emotions (§ 43), and here again, according to the difference already pointed out—on the pleasurable side exciting the vital functions, on the contrary side impeding them.[1]

[1] In the ethical sense, which is only indirectly medical, the disagreeable feelings act in an exciting manner upon the mind as pain acts upon the body (both to a certain limit); in which lies their deeper import.

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In particular cases many phenomena connected with this subject are of importance to us.

Of the states of heightened self-feeling (excitements), hope in particular has a most active influence on the body. It leads the current of vitality gently and equably through all the organs and systems, and never acts too violently except when it suddenly seizes a person already overpowered by despair, and so exhausts at once the whole power of vitality.

Every joy, and even hope is one, has a peculiarly beneficial effect when it acts in a gentle but durable manner, and, in this sense, Schiller could say with truth that virtue is the frame of mind most conducive to health, because it excites the most durable of all joys. But if joy rise to a lively emotion, the brilliancy of the eyes, the inclination to sing, jump, and laugh, the quickened respiration, the accelerated full pulse, increased warmth, perspiration, turgor, all indicate accelerated circulation, and, according to circumstances, congestions in the head, chest, &c.

We see the contrary effects in melancholy, especially in its highest degree, hopelessness. Here the senses, memory, and reaction give way, the nervous vitality languishes at its root, and the vitality of the blood, deprived of this stimulant, is languid in all its functions. Hence the slow and often difficult respiration, and proneness to sighing, the slow weak pulse, diminished warmth, pale, dry, shrivelled skin, the impediment to peristaltic motion, and to all secretions and excretions, which phenomena indicate stases and their consequences.[1] When the painful emotions are acute, they might be called convulsions of the mind, which rapidly spread through the whole nervous system; when they are chronic, they deeply affect vegetative life, and the body wastes away. Yet, especially in the female sex, there is a certain pleasure in sadness (Ideler calls it the bliss of suffering, the luxury of woe), which belongs in some, individually, to a state of comparative health.

Among the acute emotions of self-feeling, fright deserves particular attention. If fear[2] (its chronic form) share the above-mentioned phenomena with hopelessness, terror suddenly throws the organs affected into a state of convulsion, or, through

[1] Cura in visceribus veluti spina est, et illa pungit.—Hippocr.

[2] See Ideler, i, 416.

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sudden arrest of the influence of the motor nerves of the spinal marrow, into a state of paralysis; or, in more favorable and rarer cases, by inducing violent reaction, into the opposite state, whereby it cures pre-existing paralysis. All these states, so long as they are transitory, may be reckoned among the relatively physiological. We shall have frequent occasion to speak of the higher degrees of the passions, as well as of their consequences, in the pathological section.

Among the emotions of the higher feelings, religious enthusiasm and remorse, which often go hand in hand, are especially within the province of the physician. The former, which in its lower degrees, is exciting with reference to the vital functions, disposes them, in its higher degrees, to a state of paralysis, which usually accompanies ecstacy, and of which we shall speak more fully afterwards. Remorse, on the other hand, which belongs to the chronic, depressing diseases of the mind, the higher its motive is, the more deeply does it undermine the root of all the vital energies of man, inasmuch as it deprives the unhappy sufferer of his last psycho-ethical support, not suffering itself or him, as Hartmann[1] observes, unhappily with as much truth as feeling, to find repose, except in the waves of Lethe.

§ 45. Besides knowledge and feeling (§30), we have already mentioned desire, as a third psycho-physical direction of mental action. If we wish to examine it, in its filiations, it can scarcely escape our attention that, in perfect conformity with that unity of action which exists in the human mind, it likewise has its root in feeling, and bears the same relation to it as motion does to sensation, for the scheme of "pleasure and displeasure" (§ 39) presupposes the subdivison "love and hatred" (liking and disliking), which includes desire. What the individual sensations are in feeling, such are the impulses in appetite. What the emotions are there, the passions are here. As disposition is the sum of feeling and desiring, so is its manifestation the genus, the species of which are represented by the emotions and passions.

§ 46. Many attempts have been made, for the purposes of our object, to delineate the human impulses as a whole, and at the same time to reduce them to separate divisions.

[1] Patholog. 451.

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Ideler's endeavours in this department deserve especial commendation.[1] As, however, we are not treating here of pure psychology, but of its medical application; and, besides, have to do not with divisions, but with facts, we proceed in the course of genetic development on which we have entered, and connect the impulses in the foregoing series with their roots —the feelings. Here then we find, rising from self-feeling (§ 39):—

The impulses of self-love; egoism in its general acceptation. In the cœnæsthesis it appears as a purely corporeal impulse for self-preservation, such as is proper to every thing organised.[2] Here it is humanised; the feeling of "pleasure and displeasure" here becomes desire for the agreeable, and aversion from the disagreeable. In this, the most powerful of all impulses, many of those impulses are combined and connected which are usually enumerated separately, but the ground and the phenomena of which may be satisfactorily deduced and explained from its nature; for instance, the impulse or inclination for patriotism,[3] ambition,[4] avarice,[5] &c.

To sympathy (§ 40) is allied sociability, which again appears in various shades and manifestations, but chiefly according to the fundamental scheme; as pleasure or displeasure. Family affection,[6] love of imitation,[7] philanthropy,[8] belong to this class.

From the ideal feelings (§ 41) arises an ideal impulse, which might be called the impulse to indulge in fancy (eccentricity),[9] and which, according to education and circumstances, assumes the most diverse forms. It is far more frequent in life than we might be inclined, at first sight, to suppose; and many men who are seen to fritter away their whole existence, recklessly following now one, now another, often fantastic plan, pursue the bent of this impulse, the aberrations of which will furnish us in the sequel with many a pathological problem. Wieland, in his 'Peregrinus Proteus,' has, with profound

[1] Seelenh. k. Berl. i, ii, 1835, 1836. We recommend everybody to read the development of the passions in this work, where they are described with as much practical knowledge as moral gravity.

[2] Töltenyi, Krit.

[3] Ideler, i, 257, 266.

[4] Ibid. 275.

[5] Ibid. 280.

[6] Ibid. 302.

[7] Ibid. 293; His Weltphënomen. die Mode.

[8] Ibid. 316.

[9] Klotz, Erf. sect. i, p. 82.

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knowledge of the human mind, drawn an admirable picture of such a character, which he designates a "demoniacal nature." The religious impulse,[1] in so far as it owes its origin more to images of fancy than to ideas, belongs rather to this class than to the following.

From the intellectual feelings (§ 42) proceeds the impulse or turn for inquiry, which, as an inclination for truth, according to the scheme of the impulses, certainly implies aversion from error and falsehood, consequently a love of polemics, such as is usual in zealous inquirers after truth, as, for instance, in Lessing. When ill-directed, it brings in its train scepticism, pedantic erudition bestowed upon trifles, &c., &c.

It appears from this statement, which, it is true, leaves much to your own further inquiry, and is therefore calculated to lead you to self-reflection, that the division of the impulses, according to their objects, though common, is by no means strictly scientific, and may easily be reduced, by the standard here given, to the nature of man himself. Thus the impulse or inclination for honour and for gain manifestly belongs to the first of our categories, because honour and wealth produce an exalted self-feeling. Thus a confusing multiplication of divisions into all sorts of particular impulses may, for the sake of organic unity, be avoided as a useless subtlety.

§ 47. The impulses are called passions when, by excitements repeated and combined with emotions, which at times occur, they persevere in their direction to their special object, to such an extent, that the subject suffers by it; hence we clearly see the affinity and the difference between the passions and the emotions; the former have their root in the latter, because human nature loves that which gives it pleasure, and hates that which gives it displeasure; both are excitements of the disposition, but the emotions are passive, the passions active, concussions. The difference of their object certainly does not necessarily constitute the distinction between them; but objectiveness is characteristic of the passions. The difference of longer or shorter duration gives no ground for a distinction between passion and emotion, for we have seen that there are chronic emotions, such as sorrow and remorse. The term *passion* (from *patior*, I

[1] Ideler, l. c. 212.

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suffer), which does not appear to be exactly suitable to the active emotions of the mind, having been introduced into ordinary language, must be understood of the state of suffering or passion, in which, during this excitement, the subjective principle, the spirit in man, is placed.[1] As the scheme "pleasure and displeasure" (§ 45) is the foundation, and as the exciting emotions increase, and the depressing ones diminish it, so the passions are to be distinguished into exciting and depressing (Kant's "rüstige und schmelzende"), only it is to be observed, that the former, as soon as they have exceeded a certain degree, pass into the latter, because, according to an organic law, after a certain duration of extreme tension, relaxation succeeds, and spontaneity is thrown more and more into the background.

From the genetic manner in which this subject has hitherto been developed, it appears further that if we would remain true to nature, psychological distinctions, on which so much stress is laid, cannot always be marked so decidedly as is attempted. This is self-evident, if we consider that passions are only heightened impulses, that these are derived from feelings, which again rise to emotions, and that all these manifestations belong only to the one mind and its operation. We shall soon explain this by our transfer of some phenomena hitherto reckoned among the emotions, which we rather place among the passions, though we willingly leave every one to follow his own method, since the arrangement by no means affects a decision on the essence of the object.

Self-love (§ 46), as a natural impulse, being seldom excited by the emotions, seldom checked by continual resistance, does not easily assume the character of passion. Yet we shall have to speak of conditions in which it manifests itself, sometimes more on the somatic, sometimes more on the psychical, side, especially in the direction of abhorrence; sometimes in the form of anxious apprehension of danger, poison, &c.; sometimes in that of the supposition of constant persecution, &c. The inclination for life augments, as it is natural that it should, especially in diseases where life is threatened, except in those diseases, as, for example, typhus, which cloud the consciousness.

[1] Comp. Spinosa's Ethics.

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It is originally the impulse to sociability, in which those active types of passion, love and hatred, make their appearance. Here the propriety of a transfer first forces itself upon us. If we reckon, which is the custom, love among the emotions, we must also reckon hatred among them, which is not the custom. But if the criterion of a passion be *desire*, in relation to its *object* (see above), love manifestly must belong to this class. Of course we do not speak here either of mere sexual impulse, which belongs to the purely somatic sphere, nor of that exalted inclination, hallowed by the purity of its object (§ 46), but only of that love which ordinary language has long since designated as passion. Here our deviation from usage is for the second time exemplified. If, as is the custom, we class hatred among the passions, we must likewise, which is not the custom, class anger among them. The criterion of passion, on its negative side, namely, *reaction* in relation to its *object*, is far more suitable to it than the notion of a merely heightened feeling; that the suddenness or permanency of the seizure makes no ground of difference, we have seen above; we can always say anger is a passion with emotion, and the old maxim, *ira furor brevis*, might be changed into *ira odium breve*. Common parlance, likewise, seems to support our opinion, since nobody calls an angry man *feeling* (emotions belong to feeling), but it is very common to call him passionate. Chagrin and vexation, as those lower degrees of indignation, in which feeling still remains, and in which the reaction which makes anger a passion has not yet taken place, may, therefore, according to our view, which aims at comprehending all genetically and transitorily, be very well classed among the emotions.

The impulse of fancy, as already intimated (§ 46), becomes a passion in a variety of forms and hues, as fanaticism, rage for novelty, capriciousness of taste, &c.

Lastly, an impulse or inclination for research engenders that passion which Goethe, in his 'Faust,' has drawn in immortal colours. It is only by a rhetorical paraphrase that, as we have done above (§ 46), it can be called a search after truth, because genuine striving after truth is the surest preservative against the germination and growth of all passion.

It remains to consider the physiological relation of desire in general, and of the passions in particular. The most general

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points are at once suggested on a retrospect of the genesis of the feelings. Impulse acts as a psychical stimulus of motion (§§ 29, 38); as the latter, through the motor nerves, acts, in the manner stated at § 29, on all the organs assigned to it, exciting or depressing their function and vegetation, and, in a violent paroxysm of the passions (§ 47), doing both by an oscillation from the one to the other.

Some particulars deserve to be mentioned here. It is a main point to observe the stages and degrees (§ 47) in which a passion exists, in order that we may estimate its affection accordingly. For, since every passion may, as increased mental impulse, pass, in its course, from one emotion to the other, for instance, love, from anxiety and fear, through hope to rapture, or through sadness to despair, this stage, more than the special character of the passion itself, determines its physical influence.[1] If we compare the emotions with convulsions (§ 44), we may, with Plato, call the passions "fevers of the mind."

Who does not know the constant excitement, fluctuating between pleasure and pain, in which love keeps the body and the mind? A continual state of abstraction, now and then interrupted by deep sighs, and a change in the temper and habits, betray its commencement; change of colour, of expression, of the pulse,[2] denotes its object. The pale countenance, the languid eye, the low pulse, want of sleep, declining bodily health, its loss or its hopelessness;—the flushed cheek, the brilliant expression, the accelerated pulse and breath, the increased vital turgor, plainly indicate its happiness and bliss. That all these phenomena are much more evident in the female sex than in the male, arises physically from their more delicate conformation, and psychically from the higher value which they attach to love as the proper business of their lives.

The effects of anger (as passion, rage, irascibilitas) are those which, of all the emotions of the mind, are the most manifest to our senses. Seneca's celebrated description gives a satisfactory and comprehensive view of them: "Ut furentium certa indicia sunt; audax et minax vultus, tristis frons, torva facies, citatus gradus, inquietæ manus, color versus, crebro et

[1] Comp. Ideler, i, 726.

[2] According to the well-known experiment of Erasistratus.

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vehementius acta suspiria: ita irascentium eadem signa sunt. Flagrant et micant oculi, multus ore toto rubor, exæstuante ab imis præcordiis sanguine! labia quatiuntur, horrent ac subriguntur capilli, spiritus coactus ac stridens; articulorum se ipsos torquentium sonus, gemitus mugitusque, et parum explanatis vocibus sermo præruptus, et complosæ sæpius manus, et pulsata humus pedibus et totum concitum corpus magnasque minas agens, fœda visu et horrenda facies depravantium se atque intumescentium." (De Ira, i, 1.) Anger being properly a passion compounded of several emotions (§ 47), these mixed phenomena admit of explanation. The clonic spasm of the muscles which manifests itself in tremulous motions, indicates the struggle in the conflicting excitement;[1] this excitement urges the circulation to the utmost vehemence; the respiration keeps equal pace with it, so that in the most violent cases bursting of the heart, and even pneumo-thorax, take place.[2] It acts through the vegetative nervous system, upon the secretions, the saliva, the milk and the bile, which often become actually poisoned. Tourtüal saw[3] a child die, as if struck with lightning, after taking the milk of its enraged nurse. Whether hydrophobia can be induced by the bite of an enraged man is still undecided, but that bilious diseases may be brought on by passion is well known. On the other hand, more rarely indeed, the vital energy, excited by anger, overcomes obstinate organic obstructions, contractions, paralysis, &c. (Examples may be found in Zimmermann, Ideler, &c.)

These facts have given rise to the notion of assigning to each passion its particular relation to certain organs of the body: love to the heart, anger to the liver, &c.; relations which, as we have seen, certainly exist, but which find a more general explanation in the mutual dependence of the organisation, and in the constitution of each individual.

§ 49. We have hitherto considered the psycho-physical relations of man, as they belong to every one: we have now to consider the psycho-physical relations of men whereby these differ from each other, and form groups and individuals. The ground of this difference is either within them or external to them.

[1] Ideler, i, 702. [2] Ibid. i, 707. [3] Ibid. i, 709.

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Here, again, we must not forget what is properly our task, and where is its limit. The purely spiritual differences of men, their intellectual worth or unworthiness belongs to the province of ethics; their purely corporeal differences, their constitution, habits, &c. to physiology; they engage our attention only on that line where they touch.

If we correctly draw this line, we shall soon perceive that, in the most general sense only, the predominance of the psychical principle (spontaneity), or of the somatic principle (receptivity), can be considered, so far as this predominance is innate, not acquired. On this proportion and its manifold modifications, partly by internal, partly by external relations, are, in fact, founded, all the various divisions which have been made in this case.

The most general internal psycho-physical difference between men is usually designated by the conventional term of temperament. We find, according to some inquiries, that the term is derived from the notions of the ancients, who, after Empedocles, explained the different constitutions of the whole man, from the several "tempered elements" in him; now, as they assumed four such elements, they also conceived four temperaments. Practical observations in life seemed to justify this supposition, and hence it became permanent, except that, with the increase of knowledge, much was gradually added, which was not originally comprehended in it, and by various combinations of the single temperaments into such as are called compound, it was attempted to overtake nature in the multiplicity of her phenomena. We shall see subsequently, in the pathological application, that there is something very appropriate in this ancient division; but we may here reduce it to the above-mentioned scientific principle. We find, namely, in general, either a predominant spontaneity or a predominant receptivity. The former gives us an active, the latter a passive temperament; but the greater or less permanency of actions or impressions certainly admits of a fourfold subdivision. The *passive* with a receptivity, which may be easily, but not deeply affected, gives the sanguine temperament; the same, with receptivity capable of being deeply affected, gives the melancholy temperament; the *active*, with quick, vigorous, but not

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durable activity, gives the choleric temperament; the same, with slow, but enduring activity, gives the phlegmatic temperament.[1]

§ 50. The sanguine temperament manifests, on the psychical side, easy apprehension and sensation, with little firmness; on the somatic side, facility, but not energy of the functions. The vital processes are carried on rapidly; consumption and reproduction quickly alternate, the circulation is brisk, predominating in the arteries; the nerves are irritable, the movements light, and fancy is prevalent in the operations of the mind. The feeling of the sanguine is attuned to cheerfulness; his desires are superficial and changeable; emotions are more proper to him than passions, and acute emotions more than chronic. The sympathetic feeling, the inclination for sociability, which has its root in it, and the passions proceeding from it, are the most current with him. *Vive la bagatelle!* is his motto.

§ 51. The melancholic temperament (which must by no means be confounded with melancholy, or even with the melancholy disposition, see above,) presents, though also passive, a contrast with the preceding. It manifests, on the psychical side, deep and enduring sensibility, on the somatic, sluggishness of the functions, with permanency. The vital processes are carried on more slowly; plasticity furnishes its organic matter slowly, but duly wrought out; the circulation is less brisk, the venous system predominates over the arterial; the nerves are excitable, the movements are quieter, but more durable; the fancy, as arising from receptivity, predominates likewise in this passive temperament. The feeling is disposed to sadness; desire shows itself more as longing (yearning); chronic affections are more peculiar to the melancholic than acute; intellectual feeling, the inclination for inquiry rooted in it, and the passions hence arising, are most current with it. Aristotle of old, on this account, ascribed this temperament to men eminent in art and science. Our age, in the form of its tedium vitæ, has brought the melancholy complexion into vogue. Nevertheless,

[1] Kant's Anthrop. 273. It is hardly necessary to observe here, that we must avoid (what occurs in life) confounding temperaments and ethical designations, declaring, for instance, that the sanguine person is heedless, the melancholic gloomy, the choleric passionate, and the phlegmatic indolent.

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thus much is certain, that neither complexion nor temperament make a great man.

The choleric temperament (with which we must not confound irascibility as resulting from habitual indulgence in passion; see above) manifests, on the psychical side, violent, but not durable reaction, on the somatic side, predominant irritability. The vital processes are carried on vigorously and rapidly; consumption and reproduction, both brisk, keep pace with each other; the circulation is rapid, the motor-nervous system is active; fancy is less prominent than the more decided operations, partly of the senses, partly of the intellect; feeling less prominent than desire; the latter is violent, but changeable; transient passions are peculiar to the choleric man; the ideal feeling, the inclinations rooted in it, and the passions resulting from it, are most prevalent with him.

The phlegmatic temperament (which no one will own to, because it is erroneously confounded with apathy, and in the delineations of it has often been degraded to idiotism), though also active, forms a contrast to the preceding. It manifests, on the psychical side, strong and continued tenacious reaction; on the somatic, preponderant vegetation; the vital processes go on slowly, but satisfactorily; the consumption is small, the plasticity great, the circulation moderate; the nervous system subordinate in its power. Here fancy and feeling fall still more into the background, and desire seems to convert itself rather into a composed stability, and does not therefore so easily rise to passion. Sensibility, self-feeling, which is seldom capable of exciting it (§ 47), and self-love, which has its root in it, agree best with this temperament; we draw, therefore, this deduction, and it is proved in life, that the phlegmatic temperament is by no means a passive one, for the energy of indolence (vis inertiæ), is perhaps the most invincible of all energies.

§ 51. Next to the most general, innate, psycho-physical differences of mankind, taken as a whole, comes the difference of the sexes.

Keeping constantly in view here also our subject and its limits, we find our attention directed to the predominance of the spontaneous or receptive principle, and shall therefore here again resume the clue which has led us through the temperaments.

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The male sex shows us, on the physical side, in the conformation more firmness, in the movements more strength and durability. The former is shown in the more solid formation of the bones, muscles, and nerves; whence, as they require more time to come to maturity, the age of manhood is later. Of the nerves, only those of the pelvis and loins are not so strong in their structure. The receptivity is less, the reaction more vigorous; the vitality of the blood and the respiration more energetic, the heart, arteries, and lungs, for this purpose, being larger and firmer.[1] On the psychical side, we here find the fancy predominant and more active in production, the feeling too more easily controllable, to suit the objects and command of the will; the emotions less overpowering, and of these, the acute more active than the chronic; and likewise those passions the most powerful, which are the most founded on ideal and intellectual impulses, love of honour, love of inquiry, &c. We cannot fail to perceive in these features the essential characteristics of the active temperament. I have here purposely refrained from alluding to the often extolled superiority of reason in man above woman, because the disposition and facility which he possesses, so far as they depend upon organisation, are self-evident from what has been said, but reason itself is the prerogative of no sex.

The female sex shows us, on the physical side, in the conformation softness, in the movements more weakness, but agility and elasticity. The former is shown in the more delicate structure of the tissues and organs; the latter in the rapidity of development, on which account woman arrives sooner at maturity. The nerves of the female are more excitable, the receptivity greater, the reaction less; the absorbent system is predominant; the pelvis and the organs lying in it are especially distinguished by their volume and importance. On the psychical side, we here find feeling and reproductive fancy predominant, and hence the energy of the judgment and will is impeded; the emotions are overpowering, not only the acute but the chronic exercising most potent influence, so also those passions that are chiefly founded on the social impulse which has its root in sympathy (§ 16); such as passion for imitation, desire

[1] Bischoff, i, 70.

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of pleasing, but, above all, love, which, as the centre of this world of feeling, of suffering, and of joy, is to the female, by the will of nature, the sum and substance of her being. In these features we cannot but see the essentials of the passive temperament.

§ 52. The psycho-physical difference between men is marked, not only internally, but also, at the same time, externally (§ 49); the powers which exercise their influence here are—

a. The element which determines the formation of the human races;[1] but, as I must not lose sight of the object of practical physicians, who will scarcely have to treat all the races of mankind, and as, moreover, the factors concurring in the genera of the races have yet by no means amounted to evidence, and I am not able to decide and clear up anything here from my own experience—this subject, which people are so fond of illustrating with pretty stories from books of travels, can be but cursorily touched upon. The black race, the Negro, seems to be physically characterised by the colour of the skin, the curly, woolly, black hair, the flat nose, low forehead, projecting lower jaw, the muscular build, and ardent, conspicuous sensuality; psychically by those qualities which we have ascribed to the sanguine temperament. The yellow race, which is divided into the Malay, Mongol, and American groups, is characterised, physically, by the prominent cheek-bones, the obliquity of the eyes, smooth, but coarse hair, and the tint of the skin, which is of a variety of shades, from dark brown to copper colour and yellow. The psychical character is very variously described, but, on the whole, it is represented as highly imaginative, and as having the peculiarities of the melancholic and choleric temperaments. Lastly, the white or Caucasian race, to which the learned men who describe the races belong, do not fail to represent themselves, both in a physical and psychical sense, much to their own advantage. At all events it is certain that—

b. The national differences with which we are better acquainted in this race, seem to be rather more decidedly marked. There are, indeed, here so many and such various circumstances

[1] Rosenkranz, Psychol. p. 10. Races are the differences *in the same kind*, which necessarily come of a mixed breed.—Kant.

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knowledge of the human mind, drawn an admirable picture of such a character, which he designates a "demoniacal nature." The religious impulse,[1] in so far as it owes its origin more to images of fancy than to ideas, belongs rather to this class than to the following.

From the intellectual feelings (§ 42) proceeds the impulse or turn for inquiry, which, as an inclination for truth, according to the scheme of the impulses, certainly implies aversion from error and falsehood, consequently a love of polemics, such as is usual in zealous inquirers after truth, as, for instance, in Lessing. When ill-directed, it brings in its train scepticism, pedantic erudition bestowed upon trifles, &c., &c.

It appears from this statement, which, it is true, leaves much to your own further inquiry, and is therefore calculated to lead you to self-reflection, that the division of the impulses, according to their objects, though common, is by no means strictly scientific, and may easily be reduced, by the standard here given, to the nature of man himself. Thus the impulse or inclination for honour and for gain manifestly belongs to the first of our categories, because honour and wealth produce an exalted self-feeling. Thus a confusing multiplication of divisions into all sorts of particular impulses may, for the sake of organic unity, be avoided as a useless subtlety.

§ 47. The impulses are called passions when, by excitements repeated and combined with emotions, which at times occur, they persevere in their direction to their special object, to such an extent, that the subject suffers by it; hence we clearly see the affinity and the difference between the passions and the emotions; the former have their root in the latter, because human nature loves that which gives it pleasure, and hates that which gives it displeasure; both are excitements of the disposition, but the emotions are passive, the passions active, concussions. The difference of their object certainly does not necessarily constitute the distinction between them; but objectiveness is characteristic of the passions. The difference of longer or shorter duration gives no ground for a distinction between passion and emotion, for we have seen that there are chronic emotions, such as sorrow and remorse. The term *passion* (from *patior*, I

[1] Ideler, l. c. 212.

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suffer), which does not appear to be exactly suitable to the active emotions of the mind, having been introduced into ordinary language, must be understood of the state of suffering or passion, in which, during this excitement, the subjective principle, the spirit in man, is placed.[1] As the scheme "pleasure and displeasure" (§ 45) is the foundation, and as the exciting emotions increase, and the depressing ones diminish it, so the passions are to be distinguished into exciting and depressing (Kant's "rüstige und schmelzende"), only it is to be observed, that the former, as soon as they have exceeded a certain degree, pass into the latter, because, according to an organic law, after a certain duration of extreme tension, relaxation succeeds, and spontaneity is thrown more and more into the background.

From the genetic manner in which this subject has hitherto been developed, it appears further that if we would remain true to nature, psychological distinctions, on which so much stress is laid, cannot always be marked so decidedly as is attempted. This is self-evident, if we consider that passions are only heightened impulses, that these are derived from feelings, which again rise to emotions, and that all these manifestations belong only to the one mind and its operation. We shall soon explain this by our transfer of some phenomena hitherto reckoned among the emotions, which we rather place among the passions, though we willingly leave every one to follow his own method, since the arrangement by no means affects a decision on the essence of the object.

Self-love (§ 46), as a natural impulse, being seldom excited by the emotions, seldom checked by continual resistance, does not easily assume the character of passion. Yet we shall have to speak of conditions in which it manifests itself, sometimes more on the somatic, sometimes more on the psychical, side, especially in the direction of abhorrence; sometimes in the form of anxious apprehension of danger, poison, &c.; sometimes in that of the supposition of constant persecution, &c. The inclination for life augments, as it is natural that it should, especially in diseases where life is threatened, except in those diseases, as, for example, typhus, which cloud the consciousness.

[1] Comp. Spinosa's Ethics.

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It is originally the impulse to sociability, in which those active types of passion, love and hatred, make their appearance. Here the propriety of a transfer first forces itself upon us. If we reckon, which is the custom, love among the emotions, we must also reckon hatred among them, which is not the custom. But if the criterion of a passion be *desire*, in relation to its *object* (see above), love manifestly must belong to this class. Of course we do not speak here either of mere sexual impulse, which belongs to the purely somatic sphere, nor of that exalted inclination, hallowed by the purity of its object (§ 46), but only of that love which ordinary language has long since designated as passion. Here our deviation from usage is for the second time exemplified. If, as is the custom, we class hatred among the passions, we must likewise, which is not the custom, class anger among them. The criterion of passion, on its negative side, namely, *reaction* in relation to its *object*, is far more suitable to it than the notion of a merely heightened feeling; that the suddenness or permanency of the seizure makes no ground of difference, we have seen above; we can always say anger is a passion with emotion, and the old maxim, *ira furor brevis*, might be changed into *ira odium breve*. Common parlance, likewise, seems to support our opinion, since nobody calls an angry man *feeling* (emotions belong to feeling), but it is very common to call him passionate. Chagrin and vexation, as those lower degrees of indignation, in which feeling still remains, and in which the reaction which makes anger a passion has not yet taken place, may, therefore, according to our view, which aims at comprehending all genetically and transitorily, be very well classed among the emotions.

The impulse of fancy, as already intimated (§ 46), becomes a passion in a variety of forms and hues, as fanaticism, rage for novelty, capriciousness of taste, &c.

Lastly, an impulse or inclination for research engenders that passion which Goethe, in his 'Faust,' has drawn in immortal colours. It is only by a rhetorical paraphrase that, as we have done above (§ 46), it can be called a search after truth, because genuine striving after truth is the surest preservative against the germination and growth of all passion.

It remains to consider the physiological relation of desire in general, and of the passions in particular. The most general

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points are at once suggested on a retrospect of the genesis of the feelings. Impulse acts as a psychical stimulus of motion (§§ 29, 38); as the latter, through the motor nerves, acts, in the manner stated at § 29, on all the organs assigned to it, exciting or depressing their function and vegetation, and, in a violent paroxysm of the passions (§ 47), doing both by an oscillation from the one to the other.

Some particulars deserve to be mentioned here. It is a main point to observe the stages and degrees (§ 47) in which a passion exists, in order that we may estimate its affection accordingly. For, since every passion may, as increased mental impulse, pass, in its course, from one emotion to the other, for instance, love, from anxiety and fear, through hope to rapture, or through sadness to despair, this stage, more than the special character of the passion itself, determines its physical influence.[1] If we compare the emotions with convulsions (§ 44), we may, with Plato, call the passions "fevers of the mind."

Who does not know the constant excitement, fluctuating between pleasure and pain, in which love keeps the body and the mind? A continual state of abstraction, now and then interrupted by deep sighs, and a change in the temper and habits, betray its commencement; change of colour, of expression, of the pulse,[2] denotes its object. The pale countenance, the languid eye, the low pulse, want of sleep, declining bodily health, its loss or its hopelessness;—the flushed cheek, the brilliant expression, the accelerated pulse and breath, the increased vital turgor, plainly indicate its happiness and bliss. That all these phenomena are much more evident in the female sex than in the male, arises physically from their more delicate conformation, and psychically from the higher value which they attach to love as the proper business of their lives.

The effects of anger (as passion, rage, irascibilitas) are those which, of all the emotions of the mind, are the most manifest to our senses. Seneca's celebrated description gives a satisfactory and comprehensive view of them: "Ut furentium certa indicia sunt; audax et minax vultus, tristis frons, torva facies, citatus gradus, inquietæ manus, color versus, crebro et

[1] Comp. Ideler, i, 726.

[2] According to the well-known experiment of Erasistratus.

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vehementius acta suspiria: ita irascentium eadem signa sunt. Flagrant et micant oculi, multus ore toto rubor, exæstuante ab imis præcordiis sanguine! labia quatiuntur, horrent ac subriguntur capilli, spiritus coactus ac stridens; articulorum se ipsos torquentium sonus, gemitus mugitusque, et parum explanatis vocibus sermo præruptus, et complosæ sæpius manus, et pulsata humus pedibus et totum concitum corpus magnasque minas agens, fœda visu et horrenda facies depravantium se atque intumescentium." (De Ira, i, 1.) Anger being properly a passion compounded of several emotions (§ 47), these mixed phenomena admit of explanation. The clonic spasm of the muscles which manifests itself in tremulous motions, indicates the struggle in the conflicting excitement;[1] this excitement urges the circulation to the utmost vehemence; the respiration keeps equal pace with it, so that in the most violent cases bursting of the heart, and even pneumo-thorax, take place.[2] It acts through the vegetative nervous system, upon the secretions, the saliva, the milk and the bile, which often become actually poisoned. Tourtüal saw[3] a child die, as if struck with lightning, after taking the milk of its enraged nurse. Whether hydrophobia can be induced by the bite of an enraged man is still undecided, but that bilious diseases may be brought on by passion is well known. On the other hand, more rarely indeed, the vital energy, excited by anger, overcomes obstinate organic obstructions, contractions, paralysis, &c. (Examples may be found in Zimmermann, Ideler, &c.)

These facts have given rise to the notion of assigning to each passion its particular relation to certain organs of the body: love to the heart, anger to the liver, &c.; relations which, as we have seen, certainly exist, but which find a more general explanation in the mutual dependence of the organisation, and in the constitution of each individual.

§ 49. We have hitherto considered the psycho-physical relations of man, as they belong to every one: we have now to consider the psycho-physical relations of men whereby these differ from each other, and form groups and individuals. The ground of this difference is either within them or external to them.

[1] Ideler, i, 702. [2] Ibid. i, 707. [3] Ibid. i, 709.

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Here, again, we must not forget what is properly our task, and where is its limit. The purely spiritual differences of men, their intellectual worth or unworthiness belongs to the province of ethics; their purely corporeal differences, their constitution, habits, &c. to physiology; they engage our attention only on that line where they touch.

If we correctly draw this line, we shall soon perceive that, in the most general sense only, the predominance of the psychical principle (spontaneity), or of the somatic principle (receptivity), can be considered, so far as this predominance is innate, not acquired. On this proportion and its manifold modifications, partly by internal, partly by external relations, are, in fact, founded, all the various divisions which have been made in this case.

The most general internal psycho-physical difference between men is usually designated by the conventional term of temperament. We find, according to some inquiries, that the term is derived from the notions of the ancients, who, after Empedocles, explained the different constitutions of the whole man, from the several "tempered elements" in him; now, as they assumed four such elements, they also conceived four temperaments. Practical observations in life seemed to justify this supposition, and hence it became permanent, except that, with the increase of knowledge, much was gradually added, which was not originally comprehended in it, and by various combinations of the single temperaments into such as are called compound, it was attempted to overtake nature in the multiplicity of her phenomena. We shall see subsequently, in the pathological application, that there is something very appropriate in this ancient division; but we may here reduce it to the above-mentioned scientific principle. We find, namely, in general, either a predominant spontaneity or a predominant receptivity. The former gives us an active, the latter a passive temperament; but the greater or less permanency of actions or impressions certainly admits of a fourfold subdivision. The *passive* with a receptivity, which may be easily, but not deeply affected, gives the sanguine temperament; the same, with receptivity capable of being deeply affected, gives the melancholy temperament; the *active*, with quick, vigorous, but not

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durable activity, gives the choleric temperament; the same, with slow, but enduring activity, gives the phlegmatic temperament.[1]

§ 50. The sanguine temperament manifests, on the psychical side, easy apprehension and sensation, with little firmness; on the somatic side, facility, but not energy of the functions. The vital processes are carried on rapidly; consumption and reproduction quickly alternate, the circulation is brisk, predominating in the arteries; the nerves are irritable, the movements light, and fancy is prevalent in the operations of the mind. The feeling of the sanguine is attuned to cheerfulness; his desires are superficial and changeable; emotions are more proper to him than passions, and acute emotions more than chronic. The sympathetic feeling, the inclination for sociability, which has its root in it, and the passions proceeding from it, are the most current with him. *Vive la bagatelle!* is his motto.

§ 51. The melancholic temperament (which must by no means be confounded with melancholy, or even with the melancholy disposition, see above,) presents, though also passive, a contrast with the preceding. It manifests, on the psychical side, deep and enduring sensibility, on the somatic, sluggishness of the functions, with permanency. The vital processes are carried on more slowly; plasticity furnishes its organic matter slowly, but duly wrought out; the circulation is less brisk, the venous system predominates over the arterial; the nerves are excitable, the movements are quieter, but more durable; the fancy, as arising from receptivity, predominates likewise in this passive temperament. The feeling is disposed to sadness; desire shows itself more as longing (yearning); chronic affections are more peculiar to the melancholic than acute; intellectual feeling, the inclination for inquiry rooted in it, and the passions hence arising, are most current with it. Aristotle of old, on this account, ascribed this temperament to men eminent in art and science. Our age, in the form of its tedium vitæ, has brought the melancholy complexion into vogue. Nevertheless,

[1] Kant's Anthrop. 273. It is hardly necessary to observe here, that we must avoid (what occurs in life) confounding temperaments and ethical designations, declaring, for instance, that the sanguine person is heedless, the melancholic gloomy, the choleric passionate, and the phlegmatic indolent.

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thus much is certain, that neither complexion nor temperament make a great man.

The choleric temperament (with which we must not confound irascibility as resulting from habitual indulgence in passion; see above) manifests, on the psychical side, violent, but not durable reaction, on the somatic side, predominant irritability. The vital processes are carried on vigorously and rapidly; consumption and reproduction, both brisk, keep pace with each other; the circulation is rapid, the motor-nervous system is active; fancy is less prominent than the more decided operations, partly of the senses, partly of the intellect; feeling less prominent than desire; the latter is violent, but changeable; transient passions are peculiar to the choleric man; the ideal feeling, the inclinations rooted in it, and the passions resulting from it, are most prevalent with him.

The phlegmatic temperament (which no one will own to, because it is erroneously confounded with apathy, and in the delineations of it has often been degraded to idiotism), though also active, forms a contrast to the preceding. It manifests, on the psychical side, strong and continued tenacious reaction; on the somatic, preponderant vegetation; the vital processes go on slowly, but satisfactorily; the consumption is small, the plasticity great, the circulation moderate; the nervous system subordinate in its power. Here fancy and feeling fall still more into the background, and desire seems to convert itself rather into a composed stability, and does not therefore so easily rise to passion. Sensibility, self-feeling, which is seldom capable of exciting it (§ 47), and self-love, which has its root in it, agree best with this temperament; we draw, therefore, this deduction, and it is proved in life, that the phlegmatic temperament is by no means a passive one, for the energy of indolence (vis inertiæ), is perhaps the most invincible of all energies.

§ 51. Next to the most general, innate, psycho-physical differences of mankind, taken as a whole, comes the difference of the sexes.

Keeping constantly in view here also our subject and its limits, we find our attention directed to the predominance of the spontaneous or receptive principle, and shall therefore here again resume the clue which has led us through the temperaments.

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The male sex shows us, on the physical side, in the conformation more firmness, in the movements more strength and durability. The former is shown in the more solid formation of the bones, muscles, and nerves; whence, as they require more time to come to maturity, the age of manhood is later. Of the nerves, only those of the pelvis and loins are not so strong in their structure. The receptivity is less, the reaction more vigorous; the vitality of the blood and the respiration more energetic, the heart, arteries, and lungs, for this purpose, being larger and firmer.[1] On the psychical side, we here find the fancy predominant and more active in production, the feeling too more easily controllable, to suit the objects and command of the will; the emotions less overpowering, and of these, the acute more active than the chronic; and likewise those passions the most powerful, which are the most founded on ideal and intellectual impulses, love of honour, love of inquiry, &c. We cannot fail to perceive in these features the essential characteristics of the active temperament. I have here purposely refrained from alluding to the often extolled superiority of reason in man above woman, because the disposition and facility which he possesses, so far as they depend upon organisation, are self-evident from what has been said, but reason itself is the prerogative of no sex.

The female sex shows us, on the physical side, in the conformation softness, in the movements more weakness, but agility and elasticity. The former is shown in the more delicate structure of the tissues and organs; the latter in the rapidity of development, on which account woman arrives sooner at maturity. The nerves of the female are more excitable, the receptivity greater, the reaction less; the absorbent system is predominant; the pelvis and the organs lying in it are especially distinguished by their volume and importance. On the psychical side, we here find feeling and reproductive fancy predominant, and hence the energy of the judgment and will is impeded; the emotions are overpowering, not only the acute but the chronic exercising most potent influence, so also those passions that are chiefly founded on the social impulse which has its root in sympathy (§ 16); such as passion for imitation, desire

[1] Bischoff, i, 70.

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of pleasing, but, above all, love, which, as the centre of this world of feeling, of suffering, and of joy, is to the female by the will of nature, the sum and substance of her being. In these features we cannot but see the essentials of the female temperament.

§ 52. The psycho-physical difference between man is marked, not only internally, but also, at the same time externally [illegible] the powers which exercise their influence here are—

a. The element which determines the formation of the human races;[1] but, as I must not lose sight of the object of practical physicians, who will scarcely have to treat as the races of mankind, and as, moreover, the factors concerning the genesis of the races have yet by no means amounted to evidence, and I am not able to decide and clear up anything here from my own experience—this subject, which people are so fond of illustrating with pretty stories from books of travel, can be but cursorily touched upon. The black race, the Negro, seems to be physically characterised by the colour of the skin, the curly, woolly, black hair, the flat nose, low forehead, projecting lower jaw, the muscular build, and ardent, capricious sensuality; psychically by those qualities which we have ascribed to the sanguine temperament. The yellow race, which is divided into the Malay, Mongol, and American genera, is characterised, physically, by the prominent cheek-bones, the obliquity of the eyes, smooth, but coarse hair and the hue of the skin, which is of a variety of shades, from dark brown to copper colour and yellow. The psychical character is very variously described, but, on the whole, it is represented as being imaginative, and as having the peculiarities of the melancholic and choleric temperaments. Lastly, the white or Caucasian race, to which the learned men who describe the races of man, do not fail to represent themselves, both in a physical and psychical sense, much to their own advantage. At all events it appears that—

b. The national differences with which we are better acquainted in this race, seem to be rather more decidedly marked. There are, indeed, here so many and such various circumstances

[1] Rosenkranz, Psychol. p. 19. Races are two different in the same kind, which necessarily come of a mixed breed.—Kant.

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acting with and upon each other, that it is sufficient for medical psychology to have pointed out the influence of nationality in general, that the physician, in individual cases, may not forget to attend to it. It is usual here, again, to make use of the temperaments as types, because they are the principal differences of the psycho-physical characters. And, in fact, we may in general remark, in the French the sanguine, in the southern nations the choleric, in the Sclavonian nations the melancholic, and in the Germanic, the phlegmatic type, without marking the boundary-line too strictly, or attributing to these remarks a greater value than this, that we should pay attention to them in the psycho-medical estimate of individuals. The same holds good of the—

c. Psycho-physical differences occasioned by occupations and conditions. To repeat what is already known on this subject would be superfluous, and to discuss all the circumstances that have an influence here, would require a special and extensive work. As a clue we have here the rule: to examine what organs of sense, and what psychical powers are called forth especially and permanently, in every individual occupation, and what mode of life is connected with it. With this clue we shall soon find, for instance, that the scholar and the official employ chiefly the eye and the mental faculties, and are used to a sedentary life; that the shoemaker, though accustomed to the latter, and a still more compressed position of the abdomen, yet not being fixed by any intellectual tendency, can pay more attention during his mechanical work to the play of his fancy; that the soldier acquires the character of his profession, psychically, by a continual excitement of the desire for honour, and physically, by constant exercise inuring the body to fatigue, &c.[1]

The following are the outward circumstances determining character which we have to mention here. The difference arising from climate, which is often adduced, is chiefly physical, and is comprehended under *a* and *b*; that arising from religion is properly only ethico-psychical, and at the most, in respect to particular usages, as, for instance, those of the Israelites,

[1] Kant, in his 'Anthrop.' p. 315, &c., has many very pertinent remarks on this subject.

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psycho-physical; that arising from diet, on the contrary, the mildness of the Phytophagi (vegetable-eaters), and the more ardent character of the Sarcophagi (flesh-eaters), is on the whole very relative.

§ 53. Besides those differences which divide men psychically and physically into groups, there are yet others which belong to them as individuals, nay, which seem, as it were, to divide the individual himself. They, too, have either an internal or an external foundation; the external is furnished by—

a. Education; observation teaches us how this determines the character of that intellectu-corporeal being, man. A preponderating attention to the psychical at the expense of the physical factor, or the contrary, or the neglect of both, or the partial cultivation of some faculties, as well as the partial excitement of some impulses, hinder the attainment of the psycho-physical balance, with that due subordination of the body to the mind, which is necessary to the completion of the human character. Where discipline has predominated in education, the result differs from that which follows where culture has been made the principal point. These circumstances must be particularly attended to by the psychological physician; but he will never be able wholly to overcome the primary internal cause of the individual difference of character, of which we shall now proceed to speak. This is—

b. The natural capacity of the individual; it consists, with reference to our subject, in the superior development and strength of those organs, and consequently of those functions, which facilitate the exercise of certain faculties, in preference to others. Thus the specially developed sense of hearing gives a qualification for music; connected with a similar development of the organs of speech (§ 20), for languages; of the sense of sight, for the fine arts, &c. The same applies to the more intricate proportions of individual parts of the brain, the cerebro-spinal and vegetative-nervous system, to each other, to the other somatic structures, and to the innate spiritual energy (the entelic monas). That this psycho-physical individual capacity is an inheritance which descends from the parent to the offspring scarcely admits of a doubt. The general law of nature, that the product includes the type of its factors, and fashions it for further development, is attested by the daily

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observation of the resemblance in mind and body of children to their parents, and especially to their grand-parents, and by the pathological relation, to be mentioned in the sequel. But that, to use an expression of Goethe, "something anonymous" is also concerned, is specially indicated, by that wonderful talent exalted to creative subjectivity, which we know by the name of genius—a term which, on account of its pre-eminence, is very often abused. Genius is, in fact, an expression for the highest development of energy in intellectual life, and that, like the power of bodily procreation, it again imparts life, is its seal and its mission. The second internal cause of differences in men lies in—

c. Time of life; which is easily accounted for on the same principles that we have hitherto followed for our purpose. We see, without entering into useless minutiæ, that—

α. In childhood, the psychical as well as the physical elements, still engaged in self-formation, sensitive to every external influence, lively, but weak in the reaction, present a combination which reminds us of the sanguine temperament; that—

β. In youth, the two spheres come into lively conflict, which increases the reaction to a degree of violence that wants only permanency, as in the choleric temperament; that—

γ. In manhood, the reaction preserves a beautiful equilibrium, with equal vigour and permanency, as, according to our notion, is the case in the phlegmatic temperament,[1] and that—

δ. In old age this energy begins to decline, and only the early, profound impressions abide and act with mature calm thought, in the now passive mind.

These analogies, which others have pursued in a different, nay, in an opposite direction, but which we deduce as consequent upon our premised data, are not intended to do more than indicate the road for further research, to be followed out for himself by each inquirer. On the physical side, in the child, vegetation predominates; in youth, nervous vitality, especially in the sphere of generation; in manhood, sanguineous vitality; in old age, the process of reduction. On the psy-

[1] This explains the remark long ago made by Hippocrates, that nervous disorders often vanish with the development of manhood; but if they do not then vanish, are incurable.

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chical side, in childhood, apprehension (§ 23); in youth, imagination (§ 32); in manhood, reproduction (§ 36); in old age, thought. In conformity with this, the affections will have their full scope chiefly in youth; the passions in manhood: childhood and old age are more exempt from them. We shall have occasion to perceive the pathological bearing of these affirmations.

d. Habit, likewise, greatly modifies the psycho-physical character; it is chiefly induced by education (*a*) and mode of life (§ 52, *c*), and depends upon the laws of association (§ 34), which (§ 35) holds good in general, not only for the function of memory, as being a nervous action, but for all sensations and motions, and even the most influentially, where these are most obscure (most beyond the influence of spontaneity). In so far as habit relates to sensations, it renders excitements habitual, which are not generally so, provided they be not received merely passively, and are not thus blunted, which proves that the senses are rendered more acute by exercise.[1] In so far as it relates to motion, it confirms the partly innate and partly acquired impulses, and thereby becomes the nurse of the passions, which it allows to take deep root. Since in every respect it thus impresses on man a peculiar stamp which must never be lost sight of, the old proverb is applicable to it: *Consuetudo est altera natura.*

Thus the most diverse conditions act in and upon each other, in order to make the individual man that definite compound organism of spirit and body, which he actually appears to be. You see that here, as everywhere, nothing is to be considered partially, but all, as a whole and in its reciprocal effects, if we would comprehend it, and that the psychological physician, in actual practice, must not only be acquainted with the general laws of life, but apply them according to all the above-mentioned circumstances, that is to say, individualise them according to the exercise of his own judgment. To inculcate this doctrine has been the purpose of the last five paragraphs, which, in order not to repeat what is already known from physiology, &c., have been drawn up in as concise and compressed a form as the connexion admitted.

[1] Ideler, i, p. 529.

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But all the above-mentioned differences still admit of further concentration into one point.

ε. This last internal cause of the individual difference of men may be simply designated by the word idiosyncrasy, which, according to the etymology, means the last individual result of the combination and mixture of all the hitherto enumerated particulars, and thus signifies the peculiar character of a man, though we usually understand by it only special particulars, that is, properties founded in it. The peculiar character of an individual, as we understand it, consists in this—to apprehend the exterior world in a manner peculiar to himself alone, and so to react upon it. Now, as man is the most delicate and subtile reagent in nature with which we are acquainted, phenomena are certainly brought to light by this extract of his properties, which we do not observe, and cannot explain in any other way, and which appear to be, in many cases, still within the pale of physiology, but in many others to have passed over to the pathological side. Hobbes as soon as he was in the dark fell into a state bordering on madness, from which he immediately recovered when light was admitted. John Peele had an idiosyncratic antipathy to all kinds of money. His father believing that imagination was concerned, secretly put into his pocket some pieces of copper coin wrapped in paper; convulsions followed. He tried the experiment with silver coin, the result was the same.[1] The antipathies and sympathies of the idiosomnambulist and the longings of pregnant women are idiosyncrasies of a concrete state with a concrete personality. Numerous examples of this are too well known to need repetition here. As they belong still to physiological conditions, that is, exist with free self-mastery, I need not say how far their gratification is a matter of necessity. Even the individual enchantment of a lover with the object of his affection may be here adduced. Yet, in this case, the possibility that there is a morbid separation of the personality from the general humanity (i. e. that the individual is beside himself, and out of his own control) is undeniably granted, and is confirmed by experience.

Here then we should have the point of junction for the con-

[1] This, and the antipathy to cats, proceed most frequently from partial mental derangement. In both cases an electro-magnetic tension seems to be co-operative. For instances of idiosyncrasies, see Dr. Beer's 'Gesundheitszeitung,' vi, 364.

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sideration of certain states, which, though they belong to the physiological relations between psychical and somatic life, yet, in more respects than one, form the transition to pathological conditions. But, before we enter on their consideration, we have yet to examine, with respect to the difference of the intellectu-material temper, how far it may be externally recognised, and thereby, with a retrospect of the results hitherto obtained, to solve a main psychological problem.

§ 54. The expression of intellectual through material life is either in general—physiognomical, or in particular—craniological. The history, and therefore the genetic momentum of both the above doctrines, which is not unimportant here, has been given in the historical sketch (see above, p. 23, &c.) We have here to indicate their place in science as a whole.

The fundamental principle of physiognomy[1] is, that everything internal manifests itself to the sense of man by an external character. The human organism, as the most perfect symbol of the spiritual in the corporeal world, and of this organism the head, as assigned to the psychical organs, is the most appropriate locality for this manifestation. This principle admits of no objection; nay, the very objection that physiognomy deceives us, that, for instance, a blockhead sometimes looks like a wise man, is a most decided proof in favour of physiognomy; for this is in fact admitting that there is a physiognomy peculiar to a blockhead and to a wise man. In the most decided and extreme cases no one can well be in doubt; but there arises the further question, whether the signs, on which all depends here, are so stable and so well-founded, especially in their more delicate transitions, that a complete theory can be built upon them. The circumstance that, judging by the physiognomy, the first impression is generally the most correct, and that it is its further analysis which for the most part leads us astray, and the fact that Lavater, who, according to the testimony of Goethe,[2] and some other of his best-informed friends, was an eminent practical physiognomist, was able to communicate, in his

[1] Physiognomy is the general idea; the expression of the features (which is also affirmed), as well as craniology, are portions of it. The latter is especially brought forward only on account of its historical importance.

[2] Vol. xlviii, pp. 146, 151.

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'Fragments,' so little that is positive and tenable, must make us hesitate. Let us examine the matter more closely.

The physiognomical expression may refer to (*a*) the fixed, and (*b*) the moveable structures. *a*. The fixed structures in general (of the form of the skull we shall have to speak under craniology), belong to the congenital type of the organisation. They differ, as we have mentioned *en passant*, according to sex (§ 51), race or tribe (§ 52), and generation (§ 53), and can therefore only afford us some conjectural intimations, respecting those psychical qualities, which may be founded on these momenta.[1] But, in the first place, these very general qualities are much too modified in the individual case, and in the second, we have no need of physiognomy to enable us to find out these differences. *b*. The moveable structures are under the power of spontaneity (§ 29); here, therefore, we may hope to derive more fruit from our researches, and such is indeed the case. According to the habitual tone of feeling and desire, the motions of the voluntary muscles, and thence the so-called visible features, are formed. From frequent repetition every trait in the countenance, laughing, twitching, sneezing, weeping, anger, leaves as it were a trace of itself in the soft structures, the combinations of which at length become permanent, and mould the countenance. This is true not only of the features of the face; the same thing takes place in all the other soft structures of the body. That which is indicated by the pale wrinkled countenance is betrayed by the low voice, the tottering gait, the trembling hand, the unsteady writing, the soft light breathing, &c.;[2] and *vice versâ*. These are the letters of the physiognomical alphabet, which expresses more especially affections, passions, and habits; but in order to read it, far more practice in life is required, and far more divination than can be communicated by books. Lavater's error was this, that he attempted to raise physiognomy, which is an art, to the rank of a science. All the well-founded objections of his opponents affect only this error, and Lichtenberg is justified in that observation

[1] This fixedness of the physiognomy is strikingly brought out after death, when motion has ceased. Hence the likenesses which often reappear in death.—Lav. ii, p. 62.

[2] Zur Dict. d. s. p. 20.

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respecting which he expressed a wish, that of all that he had written on physiognomy, the following might descend to posterity: "Physiognomy will be stifled in its own fat."[1]

Mindful of the warning contained in this observation, and which I myself fully subscribe to, I will add only a few physiognomical results of experience, which are applicable to our study.

a. Of the three divisions of the face, the forehead evidently expresses the operations of the intellect; the nasal region, those of the feeling; the region of the mouth and chin, those of the appetites.

b. There exists a certain harmony in the parts of an organic whole, by which the practised observer is able to judge of that whole from those parts, or from a disturbance of that harmony, of the departure from nature, which is its consequence; to this, therefore, the physiognomist must direct his attention, and to this end he must be schooled by the professor of the fine arts, but it is here, as above, scarcely possible to communicate instruction by words.

c. There is an assimilation of the features from similar habits, similar sentiments, passionate attachment, long cohabitation. I think I have myself often observed the acquired resemblance between man and wife, or between servants and their masters, which, however, may be designedly obtained by imitation. Menogenes, the cook of Pompey the Great, looked like Pompey the Great himself.[2]

d. Vigorous reaction (the purely active temperament, § 49, called by Lavater *Felsenstärke*, adamantine strength) is chiefly found in men of well-proportioned make; rather short body, thick neck, broad shoulders, bony rather than fleshy face, deep-set eye, steady look, sonorous voice, firm step, and repose of manner. Lively, but not enduring reaction (§ 49. Lavater's *Federstärke*, elastic strength), is found, for the most part, in a slender long body, with rapid mobility, and light gait. Want of reaction (the purely passive temperament, § 49) is generally found with much flesh, sleek skin, small chin, tottering or slow motion, a step deficient in firmness, dull look, half-open mouth and weak voice.[3]

e. Emotions and passions (§§ 44-48), of which we have

[1] Verm. Schrif., 9, 116. [2] Plin. vii, 17. [3] Lavater, iii, 15.

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briefly characterised the most important, are especially objects of physiognomy. They are difficult to conceal, and when they are concealed are apt to betray themselves by their constraint. When a person (observes Kant on this subject),[1] who does not usually squint, looks down upon his nose while making a statement, and thus squints, what he states is a falsehood. Such observations must be made abstractedly by each man for himself, if he would become a physiognomist. The advice to imitate for this purpose the gestures of certain persons, and, from the feelings thus acquired, to divine their sensations,[2] recommends a very equivocal experiment.

f. Next to emotions and passions, nationalities are perhaps the most prominently stamped. Descriptions of them, which have their place in ethnography rather than here, are of less use than portraits; and these again, as the play of feature is wanting in them, are less useful than personal observation.

g. The same may be said of the undoubtedly very decided physiognomical expression of conditions of life, particularly among mechanics, on which subject there are some striking observations in L.Tieck's novel, 'The Insurrection in the Cevennes.'

h. With respect to intellectual culture, Lichtenberg observes,[3] that men who are very much older than they appear seldom possess great intelligence, but that the contrary is the case with young people who look old. He warns us, however, not to understand by youth, rosy cheeks, or by age, pale ones.

i. We must never forget the concomitant operations of external circumstances. The human countenance gives equal significance to all; and, as the same writer observes, a slight convulsive movement may look like derision, a scar like falsehood. We may impute to a man who looks nobody in the face, a bad conscience, whereas he may be suffering from sensitive, inflamed eyes; or pride to another who is short-sighted.

In physiognomical descriptions, therefore, we should state at once our self-received impressions, which another person can and will feel with us, rather than indefinite delineations. If, for instance, we say a scornful mouth, everybody knows what is meant; not so, if we say, the corners of the mouth drawn downwards, the lower lip prominent, &c.

[1] Anthrop. p. 298. [2] Archenholz, l. c. 291. [3] L. c. iii, 9.

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§ 55. The fundamental principle of cranioscopy is, that every power is materially bound to an organ. Power and organ augment and decrease with each other. The intellectual power of man is bound to the organ of the brain (§ 23); it consists in faculties and impulses; these must therefore find their organs in the brain; experience and induction must be able to discover them; this is the business of phrenology; the brain, which is in continual motion, has evidently an influence on the formation of the bones of the skull; so far, therefore, as the development of the parts of the brain is not confined merely to the interior, (basis), or the inferior (facial) surface, its differences will be expressed in the form of the skull. We may thereby (following the above premises) be allowed to infer the faculties and impulses from the degree of development of the organs: here phrenology, as cranioscopy, becomes physiognomy.

It is difficult to raise any objection to the first of these positions, so long as we adhere to the correct notion of "organ," and understand by it, not "seat," but "instrument;" "condition" but not "origin" of action. It is likewise manifest that the cerebral structures in which the medullary nervous matter buries itself, and the several regions where the primitive filaments of the nerves surround this or that organ of the body, cannot be idle in the action of the mind. It remains for further researches more accurately to ascertain *how* the convolutions of the brain are related to the external surface of the skull, the protuberances of which, for instance, Foville ascribes to the ventricles of the brain, and in respect to which the cerebro-spinal fluid (page 103) must be taken into consideration. The further question resolves itself into this: have experiment and induction carried us so far, that we may venture to say anything positive respecting their functions? We have followed the nerves of the organs of the senses pretty well to their terminations in the brain, and may therefore, in some measure, assign to the ideas through the senses their cerebral organs.

On the psychical side, we endeavoured to deduce the impulses in their operations, in simple filiation from the one mind (§ 53 *b*). It would therefore be the faculties chiefly whose organs it might be of importance to the psycho-physiologist to know; in other words, that intellect, in itself free and common to all men, which is modified by individual organisation. But in such

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investigations the greatest caution and a solid psychological basis are necessary. Comparative physiology must be used with much circumspection, because the psychology of animals recognises a principle different from that of man. At the same time, external influences on the bones of the skull, and the possible difference existing between the outer and the inner surface, must not be forgotten. Sound philosophy further teaches us to recognise the compound functions of the mind as such, and not to seek simple organs for them, or even, as has been done, for functions of the mind, which are not only general, but result from certain historical and social circumstances (as if, for instance, we were to appropriate an organ to phrenology). Moreover, sound phrenologists do not forget to direct our attention to the proportions of the faculties to each other, to the influence of spontaneity, education, &c. Their maxim is very correct, not to make the impulses depend on the ideas acquired from without alone, but to accord them an operation from within outwards (comp. § 46); lastly, pathological anatomy will perhaps some day afford us more insight into the relation of *certain* defects of the brain to *certain* disordered functions of the mind, than we have at present. At all events, and this is a most important maxim, let us here, as everywhere in life and science, consider nothing in an isolated manner, but include every circumstance in the calculation; we shall then be more tardy in setting up dogmatic assertions. (Comp. on this subject, J. C. A. Grohmann, Untersuchung. über Phrenol. Grimma, 1842.)

While this maxim is observed, the study of phrenology and craniology will always retain its interest; and it is only the fanaticism of its adherents, and the premature conclusions of the thoughtless, that have brought it into disrepute; that, with an enlightened view of organ and mind (see above), the free agency of the spirit is not thereby impaired has been shown, among others, by Grävell.[1] Hartmann's objections[2] contain the same psychological errors, on which we have animadverted, and which were occasionally committed in the beginning. And thus we allow with Goethe,[3] that neither physiognomy nor craniology is destitute of a foundation, but only that the time is not yet arrived for appreciating this kind of knowledge.

[1] Der Mensch. p. 116. [2] G. d. M. p. 256. [3] Vol. xxxi.

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The attempt of C. G. Carus to explain cranioscopy[1] has perhaps been taken up too polemically by phrenologists. Both parties agree in the principle, that the measure of the relation of thought, sensation, and desire is indicated by three relations of space.[2] (That the organs of the brain of somnambulists when engaged in thought have a self-magnetising power is problematical.) Those who desire to obtain more precise information respecting phrenology in its present state, may read Combe's 'System of Phrenology.'

§ 56. In the preceding paragraph but one we have spoken of the free agency of the spirit, and now, at length, for the first time after the previous statements, is it possible to solve this grand question of psychology (§ 53, at the conclusion), which is of such especial importance in the application of our doctrine to forensic medicine.

In the first place it is here necessary accurately to distinguish metaphysical from psychological freedom. The former is the irrefragable postulate of the moral idea, *necessity*, in the region of the spirit. The psychological is that of the individual in whom the spirit has become mind—that is, has become linked to the body (§ 3). The metaphysical question of freedom is this—is the spirit free? and must be answered unconditionally in the affirmative, for the very idea of *spirit* supposes the independence of all corporeal limitations. The psychological question of freedom is this—is this man as a person, free? for freedom may—

1. Limit *itself* in so far as the spirit makes itself the servant of sin or of error. This limitation is *above* our task (§ 4), it appertains to ethics and logic.

2. It may be limited from without, in so far as the laws of nature impede our actions or determine their consequences. This limitation is *beneath* our task, and belongs to physics, &c.

3. It may be limited by organisation, which, in the fact of personality, reconciles the psychical principle with the somatic. To indicate this limitation, its boundaries and degrees, is our task.

[1] Grundz. einer neu. u. wissens. begründ. Kranioskopie. Dresd. 1842.

[2] Likewise in the chief determination of these three regions: the anterior, for the impressions of thought; the central, for those of feeling; the posterior, for those of the will.—See Minding, d. Org. d. Geh., p. 18. Berlin, 1844.

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In the first of the above-mentioned cases the free man is good and wise; in the second, powerful; in the third, *healthy;* and this last it is, with reference to his responsibility, which we require to know of the physician.

Metaphysical freedom, therefore, is the self-mastery of the spirit, viewed apart from empirical personality; psychological freedom is the self-mastery of the spirit within that personality. To measure out the extent of this mastery we must take a retrospect (§ 53, at the conclusion) of the results which we have hitherto obtained. We have seen that the psychical principle, *in receiving* through the organs of sensation (§ 12) and of the senses (§§ 16-20) is corporeally connected with the fact of consciousness (§§ 25, 26), from which downwards, by reaction, it is connected with the will (§ 45) by the organs of motion (§ 30). We have seen the whole complication of these reciprocal relations determined from within by temperament (§ 50), by sex (§ 51), by capacity (§ 53), age (§ 53), habit (§ 53), nay, by idiosyncrasy (§ 53); from without, by race, nationality, profession (§ 52), and education (§ 53). Lastly, the result of *all* these relations is what we call person (personality in the abstract) (§ 3).

After this retrospect we may give a more explicit answer. When the psychical principle in a man has obtained such a mastery over his organs as, consistently with his individual personality, it is capable of obtaining—when the man so thinks, feels, and wills as, for example, in the character of a person of sanguine temperament, of a youth, of a person of eminent talents, of strict behaviour, of a Frenchman, of a nobleman and soldier, he can and ought to think, feel, and will, he is psychologically free; i. e. with respect to psycho-physical circumstances, in health. If he cannot do this, he is not free, i. e. he is out of health. This is the point which the physician, as such, has to judge of and determine. But to settle this point, might, on consideration, appear more difficult than on a yet nearer view it really is. For instance, it might be asked, how are we to determine the limit of the influence of all these conditions? We have seen that the psychical principle is prescribed only to a certain point. This point (§§ 25, 26) is the fact of consciousness. Here begins the domain of pure thought, which discriminates between good and evil, truth and

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error, and thereby determines the existence of pure will (not desire). This function of the spirit is free with *every* personality. Even the most sanguine, so soon as the fact of consciousness is awakened in him (and prior to this he has no personality § 3), is able to govern himself. When he can no longer do this, he is out of health; the causes of which may certainly lie in all those impediments which are the conditions of personality.

I will illustrate this rather bare demonstration by some examples. If a man, travelling on a railroad, is prevented by the rapid shifting of the scenery from discerning the landscape, he is (see above, 2) mechanically unfree. If he does not attend, because his heart is stupidly insensible to the beauties of nature, he is (see above, 1) ethically unfree. If he does not attend, because he has not learnt what is to be seen and discriminated in these objects, he is (see above, 1) logically unfree. If he does not attend, because he is engaged by an interesting conversation, he is hindered by his personality, which he may, however, command. If he *cannot* attend, because he is suffering from headache, or because a mental image floats so vividly before him, that he does not perceive outward objects with his bodily eye, he is out of health, and consequently irresponsible.

Here the measure at least is furnished for the determination of freedom and non-freedom, but we would by no means affirm that this determination is so easy in every actual case. It is often extremely difficult to determine the boundary of a healthy personality; but, moreover, there is a state of transition, in which this limit is still further obliterated. This transition is caused by certain half-free conditions, which we shall immediately examine, and as they take place, or may take place, in every personality, we shall further investigate them in the pathological chapter.[1]

§ 57. These conditions are: sleep, dreaming, intoxication, and that kind of vertigo in which the psychical causes have

[1] We must not confound the conscientia sui ipsius with the conscientia boni et mali. Even where emotions are the cause of want of freedom, they are not always immoral; for instance, fear, terror; they are often, on the contrary, moral; for instance, religious, &c.; it is not disturbance of the conscience, but a disturbance of personal consciousness, which constitutes loss of freedom in a medical (physical) sense.—Bericht. über die Petersburgher Irren Anstalt, von D. Herzog, 1842.

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the greatest share, and which is to be called physiological rather than pathological.

In order to understand sleep in its twofold psycho-physical relations, it is necessary to examine what precedes it and what takes place during its operation. The causes of sleep are,—

1. Fatigue (suspended powers).
2. The intense and prolonged effect of cold and heat.
3. Stupefaction (through odours or strong liquor).
4. Mechanical pressure on the brain.
5. A voluntary yielding to reveries.
6. Monotonous noise. What influence the periodicity of day and night has, besides the withdrawal of light, as a stimulant of the nerves, is undecided.

The causes, 1-3, manifestly act by lowering the nervous vitality; the 4th, probably by impeding the connexion with the sensorium commune (§ 23); the 5th and 6th, by impeding spontaneity in the psychical formation of ideal images.

If we consider what takes place during sleep, we find—

1. A suspended communion of the mind with the external world.

2. A continuance (consequently *pro tempore* predominance) of vegetation, whence awaking appears as resuscitation.

We see, therefore, in sleep, on the physical side, vitality lowered in the organs of sense and motor nerves, and at the same time continued in the vegetative nerves;[1] on the psychical side spontaneity checked in its manifestation for want of external images conducted to the brain through the sensitive nerves. Thus viewed, the phenomenon and many of its peculiarities receive an explanation. In a teleological point of view, sleep appears to be a repose of the proper instruments of thought, by which, not only these, but also the rest of the corporeal vitality, to which the psychical world is an internal, as the outward world is an external excitement (§ 48), are refreshed. "The masterpiece of creation," observes Lichten-

[1] It is necessary, in order to go to sleep, that the excitement should be relaxed (fatigue), since otherwise its continuance would disturb sleep by restlessness. In this sense, though not positively, the vitality of formation predominates at the expense of the vitality of motion. In this sense also Marshall Hall's observation is to be understood: "Sleep is a cerebral affection; the spinal and ganglionic systems never sleep."

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berg, "must, for a time, become a plant in order to be enabled to represent, for a few consecutive hours, this same masterpiece of creation."[1]

That spontaneity is not suspended in sleep, but only impeded in its manifestation, and that not entirely, is proved (should the psychologist desire a still further proof) by voluntary waking at a certain predetermined hour.

Cause 3 shows its affinity to intoxication. Causes 5 and 6 to vertigo, which is more psychical.

That spontaneity is checked only for want of external images, serves to explain its intercourse with internal images, which constitutes dreaming.

§ 58. Dreaming is nothing more than the occupation of the mind in sleep[2] with the pictorial world of fancy. As the closed or quiescent senses afford it no materials, the mind, ever active, must make use of the store which memory retains (§ 33), but, as its motor influence is likewise organically impeded (§ 57), it cannot independently dispose of this store. Thus arises a condition in which the mind looks, as it were, on the play of the images within itself, and manifests only a faint or partial reaction. Hence the obscure ideas, which are not in this condition dispelled by others that are more lucid, attain peculiar prominence, and, as these (§ 28) are supplied chiefly by the cœnæsthesis, this plays, in consequence, a principal part in dreaming. The only difference is, that when awake we are aware of the cœnæsthesis *as such*, but in dreaming, being incapable of reflection, we ascribe its condition to external or other, as for instance, moral, &c., causes. In this manner we may understand why it is not the most recent nor most striking events, but the older, nay, the oldest images in the memory, which had been thrust into the background in the waking state, that principally form the subject of dreams; which I, at least (contrary to the usual supposition), have constantly observed. We shall again refer in the sequel to these phenomena, but, after what we have said, it is not necessary to assume, by way of explanation, a double cerebral pole.[3]

[1] Vol. ix.

[2] Eschenmayer, Mag., p. 115.

[3] Hartmann's Definit. p. 315.

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That we, in fact, never sleep without dreaming is placed beyond doubt, not so much from reasoning, *a priori*, on the unceasing presence and activity of the mind (which might be impeded for a time in its action by a check upon the organs), as from the observation that, whenever we are suddenly awakened, we are conscious of an image just vanishing,[1] and that we always fall asleep with dreams, which we afterwards forget. But as the organs of perception are not dead, but dormant, external impressions, when they are strong enough to interrupt the internal play of the fancy, and not strong enough to dispel sleep itself, penetrate to the sensorium, though more obscurely and slowly. The mind then lightly interweaves them with its other images. If, for instance, we are awakened by a noise, as by a book falling from a table, it may happen that in our dream we imagine a duel, which that noise terminates as a pistol-shot. But how does it happen that, at the very moment when the noise strikes my ear, I conceive the shot to be the result of an event which must have taken place before I heard it? I know of only two possible solutions: *a*, either the fancy, with the rapidity of lightning, interweaves the impression on the senses in her ready weft (which can hardly be imagined); or, *b*, the communication being checked in sleep, the internal apperception follows only *after a while*, the impression on the external organ of hearing; so that I, in some sort, hear two shots, and have time between the two, by the power of the imagination, excited by the first obscure impression, to conjure up the story of the duel. This explanation, as well as the other, leaves much room for investigation, but it has more in its favour than the former. "When I," says Lichtenberg,[2] "had drunk much coffee, and therefore was startled at every noise, I could distinctly observe that I was startled before I heard the sound; therefore we hear, as it were, with other instruments than with the ears." An observation, which, though it belongs to another place, may, on account of its relation to the present subject, stimulate to further reflection.

The teleological import of dreaming (§ 57) seems[3] to be that,

[1] Bischoff, l. c. vol. ii, p. 346.

[2] On this and on the subject of hypochondriasis a most acute observer.—Vol. iii, p. 26.

[3] Kant, Krit. der Urth. p. 298.

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during the relaxation of all the moving powers of the body, it supplies the place of this useful motion by the play of the fancies, which often rise to emotions. When the stomach is overloaded, and this motion is more necessary, dreaming also is more lively; "perhaps," adds Kant, "without this wearying but salutary pain of dreams, sleep would be death."

Here Lichtenberg's question may be answered: "why, in dreaming, we make people speak so exactly in their character which we do not so well succeed in doing in writing?"[1] We do not, in fact, make them speak, we only internally hear them speak. When our own activity is suspended, we are, as it were, spectators of the ideal images within us (§ 25), as they are organically preserved by memory (§ 53). So long as we are awake these images sleep; if we desire to produce them by our own effort, we need the power to represent the objects completely as they are, a power which appertains only to the gifted poet, or to the organs themselves. If we only accurately examine ourselves, we may perceive many analogies to this circumstance. How often does something, a melody, for instance, float distinctly in our minds, although we do not possess the power of calling it into life. In dreams we hear the melody, and fancy that we have sung it. In general, all Lichtenberg's[2] very refined observations on dreaming may be satisfactorily referred to the simple principles here laid down.

As the individual (§ 56) is an individual through his organisation (in intellect we are all one), he is reflected as such in dreaming, but it must be well observed, in order to avoid hasty conclusions, that this is according to his natural disposition, not according to spontaneity. On this account every one, when asleep, has his own world, when awake, that of others.[3] This world too is usually a distinct and continued whole, parallel to the waking world, without interfering with it. When awake, we scarcely remember the dreams of our deepest sleep, whereas, often in the dreams of to-day we remember those of yesterday. In dreams we know persons, places, &c.

[1] Verm. Schrift. b. Klar z. vol. ix. p. 72. [2] [illegible]

[3] Conformably with this position of Aristotle [illegible] Sch. vol. ii) goes further: "When, therefore, of several [illegible], it is to be conjectured that he is dreaming." [illegible] we have in waking as in dreaming, each his own world, and all one in common.

that we never knew when awake, which reappear, however, in our succeeding dreams; nay, persons who are known to us, often appear to us in dreams otherwise than they are, but in one dream the same as in another.

It is self-evident that the understanding, fettered in dreams, can give no instruction to the understanding when unfettered. Rosenkranz (Psychol. p. 121) expresses himself admirably on this subject: "The truly religious man, that is, he who loves freedom for its own sake, will pay no regard to his dreams, however interesting they may be, even if they should really come to pass. If a man once pays attention to his dreams, he is a slave to superstition, and does not act, as he ought to do, from his own free resolve, but like a heathen bound by his belief in fate. Ought a general to abandon a good position because he has had an ill-omened dream? To extol the uncertain, imaginative language of dreams as a universally intelligible, originally spiritual language, and, on the other hand, to depreciate the language of words, may be classed among the greatest aberrations of those who have yet undertaken the justification of dreaming."

But that dreams may, nevertheless, become psychologically and even ethically of deep importance as respects an individual, follows from the above-mentioned power of obscured ideas. Through this power, dreams may give a man historical information respecting himself, and hence, according to a favorite expression, "he may divine like a prophet looking backwards." As when the sun has gone down, the countless stars, not visible in the daytime, appear on the dark ground of the firmament, so, at the call of fancy, the forgotten images of bygone days rise up and show the mind its former shape. This observation likewise points to the delicate affinity of dreams with pathological states of the mind, where, too, as it were, "the old Adam" appears, and is in every sense interesting to the psychological physician.

It may be conceived, from the foregoing remarks, that, for the more complete kind of dreaming and the power of recollecting them, there is need, first, of a considerable stock of images; and, secondly, of a rather more vigorous reaction of the psychical spontaneity. Burdach remarks that children, under seven years of age, are not able to remember their dreams.

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Persons who have lost their sight before the age of five years do not dream of visible objects, while those do who have become blind at a later age. The observation of Rosenkranz too is correct,[1] that strictly intellectual problems are not solved in dreams, because intense thought is without images, whereas dreaming is a creation of images. I perfectly recollect having dreamt of such problems, and, being happy in their solution, endeavoured to retain them in my memory; I succeeded, but on awaking discovered that they were quite unmeaning, and could only have imposed upon a sleeping imagination.

I have treated this subject more at length, because, as we shall see, pathological conditions are genetically attached to these transitory states. In proportion as the vitality of the different nervous spheres, whether in their more individual or more collective parts, or finally, of the whole nervous system, is interrupted for a shorter or longer time, in the same proportion must the manifestation of psychical spontaneity, which is connected with this medium (§ 8), likewise appear interrupted.

§ 59. Intoxication is a state of impeded spontaneity in the organs of sense and of motion, with increased vitality in them, in which latter circumstance (§ 57) it differs from sleep, into which however it passes, when, according to the natural law of equilibrium, tension is succeeded by relaxation. The causes of this state are, 1, spirituous liquors; 2, narcotics (§ 57); 3, exaltation of the imagination.

Wine (1) appears, by accelerating the circulation, to heighten the vitality in the organs of sense and motion, and, by so doing, to hasten the course of the images conducted through them, and thus throw the central organ, for the reception of these images (the brain, § 23) into a state of excitement. This state, when it has continued long, or has attained a high degree, either changes, according to the above-mentioned laws of equilibrium, into relaxation, or, according to the law *ubi irritatio ibi adfluxus* (§ 30), the brain becomes oppressed with a congestion of blood, and stupefaction from pressure arises on the physical side, while, on the psychical side, the mind is no longer able to command the vast, confused, and rapid accumulation of ideas.

[1] L. c. p. 111.

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Narcotic substances (2) appear likewise to produce, only more immediately, through the nerves themselves, at first a state of excitement, and afterwards, in consequence of it, a state of stupefaction. All these conditions are, like all those proceeding from excitement, relative, according to individuality, habit, &c. In one, excitement predominates; in another, stupefaction; nay, what is only a stimulant to one, is a narcotic poison to another. The opium-eaters, in the East, furnish examples of all these varieties. Did not the transition of these conditions into sleep (§ 57) and their theoretical explanation show that they are all nearly allied to each other, this would appear empirically, from the fantastic dreamy state which inspired the Delphic priestess amid narcotic clouds of incense, and, in modern times, has supported many quackeries by similar means.

3. Psychical intoxication, properly so called, a phenomenon that appears in delicate, and at the same time highly excitable, and consequently sanguine, temperaments, and so long as it is still physiological passes rapidly off, presents the same basis as the preceding, and a psychical excitement has two stages precisely as the physical excitement had in the preceding case. This state has an affinity with psychical vertigo, which we shall immediately discuss. The fancy excited by wishes and feelings chases before the mind a crowd of images, which it is unable to control. It drops the reins, and willingly yields to the sway of the waking dream which rapidly sweeps before it. Here, too, all is relative; and the same thought which throws into ecstacy the youth, the maiden, the sanguine, the Frenchman, leaves the man, the phlegmatic, the Englishman, sober.

May we say that intoxication reveals the character of the individual? (in vino veritas?) In its first stage, which alone concerns us here (the second being equally a stupefaction in all), it heightens the tension between the sanguineous and the nervous vitality, and consequently the tone of the drinker. This tone is either *a*, that of the moment; or *b*, habitual; or, *c*, a tone usually repressed by conventional life, but now excited, and no longer under restraint. Thus much and no more does wine betray the character of the man. A person who is naturally lively will weep in a state of intoxication (like the crocodile in Tieck's pictures), if he become inebriated

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after some misfortune has befallen him *a*, otherwise he will laugh *(b)*, especially if he has not ventured to laugh for a long time. That intoxication is a psycho-physical state of variable proportions, that is, with a preponderance either to the one side or the other, is proved by the fact that by bodily pain a man may be roused from psychical intoxication, and from physical by a sudden event requiring presence of mind.

§ 60. Vertigo, so far as we have to consider it here, occurs when the ideal images too rapidly succeed each other. Hence arises at first a greater excitement of psychical activity, which endeavours to arrest and to control these fleeting movements of images, but is gradually followed by a state of weariness and stupor. This is, therefore, the same condition as takes place in intoxication (§ 59). The spontaneity of attention is here impeded by the rapid succession of images (§ 57). Of course the individual proportion is here also to be considered (§ 58, 2). A person who is in the habit of being very slow and meditative in the act of thinking, will be affected with vertigo by the same quick succession of thought which agreeably excites the lively thinker. The more sensitive the nerves of sensation are which have to receive the images, the greater is the predisposition to vertigo. Of the images of the external senses, those of sight and hearing alone immediately cause vertigo. The images of the inferior senses contrast too little with each other, and, therefore, when they rapidly follow each other, give a *single*, mixed idea. Those of sight excite it the most frequently, because in the normal condition they succeed more slowly than those of hearing.[2]

The following are causes of predominant psychical vertigo:[3]

1. Impressions on the sight caused by the *rotatory motion* of one or several objects. The mind has in this case the least time to follow the change of images, yet the rapid succession of objects in a straight line will likewise produce this effect, for instance, an iron railing, &c.

2. Impressions on the hearing, which follow each other with extraordinary rapidity; here a still greater predisposition is required. Herz[4] was acquainted with an eminent man who

[1] M. S. Herz, Versuch. über den Schwindel. Berlin, 1791. This essay still remains a classical authority.

[2] L. c. 178. [3] Ibid. 345. [4] L. c. 364.

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In the first of the above-mentioned cases the free man is good and wise; in the second, powerful; in the third, *healthy*; and this last it is, with reference to his responsibility, which we require to know of the physician.

Metaphysical freedom, therefore, is the self-mastery of the spirit, viewed apart from empirical personality; psychological freedom is the self-mastery of the spirit within that personality. To measure out the extent of this mastery we must take a retrospect (§ 53, at the conclusion) of the results which we have hitherto obtained. We have seen that the psychical principle, *in receiving* through the organs of sensation (§ 12) and of the senses (§§ 16-20) is corporeally connected with the fact of consciousness (§§ 25, 26), from which downwards, by reaction, it is connected with the will (§ 45) by the organs of motion (§ 30). We have seen the whole complication of these reciprocal relations determined from within by temperament (§ 50), by sex (§ 51), by capacity (§ 53), age (§ 53), habit (§ 53), nay, by idiosyncrasy (§ 53); from without, by race, nationality, profession (§ 52), and education (§ 53). Lastly, the result of *all* these relations is what we call person (personality in the abstract) (§ 3).

After this retrospect we may give a more explicit answer. When the psychical principle in a man has obtained such a mastery over his organs as, consistently with his individual personality, it is capable of obtaining—when the man so thinks, feels, and wills as, for example, in the character of a person of sanguine temperament, of a youth, of a person of eminent talents, of strict behaviour, of a Frenchman, of a nobleman and soldier, he can and ought to think, feel, and will, he is psychologically free; i. e. with respect to psycho-physical circumstances, in health. If he cannot do this, he is not free, i. e. he is out of health. This is the point which the physician, as such, has to judge of and determine. But to settle this point, might, on consideration, appear more difficult than on a yet nearer view it really is. For instance, it might be asked, how are we to determine the limit of the influence of all these conditions? We have seen that the psychical principle is prescribed only to a certain point. This point (§§ 25, 26) is the fact of consciousness. Here begins the domain of pure thought, which discriminates between good and evil, truth and

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error, and thereby determines the existence of pure will (not desire). This function of the spirit is free with *every* personality. Even the most sanguine, so soon as the fact of consciousness is awakened in him (and prior to this he has no personality § 3), is able to govern himself. When he can no longer do this, he is out of health; the causes of which may certainly lie in all those impediments which are the conditions of personality.

I will illustrate this rather bare demonstration by some examples. If a man, travelling on a railroad, is prevented by the rapid shifting of the scenery from discerning the landscape, he is (see above, 2) mechanically unfree. If he does not attend, because his heart is stupidly insensible to the beauties of nature, he is (see above, 1) ethically unfree. If he does not attend, because he has not learnt what is to be seen and discriminated in these objects, he is (see above, 1) logically unfree. If he does not attend, because he is engaged by an interesting conversation, he is hindered by his personality, which he may, however, command. If he *cannot* attend, because he is suffering from headache, or because a mental image floats so vividly before him, that he does not perceive outward objects with his bodily eye, he is out of health, and consequently irresponsible.

Here the measure at least is furnished for the determination of freedom and non-freedom, but we would by no means affirm that this determination is so easy in every actual case. It is often extremely difficult to determine the boundary of a healthy personality; but, moreover, there is a state of transition, in which this limit is still further obliterated. This transition is caused by certain half-free conditions, which we shall immediately examine, and as they take place, or may take place, in every personality, we shall further investigate them in the pathological chapter.[1]

§ 57. These conditions are: sleep, dreaming, intoxication, and that kind of vertigo in which the psychical causes have

[1] We must not confound the conscientia sui ipsius with the conscientia boni et mali. Even where emotions are the cause of want of freedom, they are not always immoral; for instance, fear, terror; they are often, on the contrary, moral; for instance, religious, &c.; it is not disturbance of the conscience, but a disturbance of personal consciousness, which constitutes loss of freedom in a medical (physical) sense.—Bericht. über die Petersburgher Irren Anstalt, von D. Herzog, 1842.

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the greatest share, and which is to be called physiological rather than pathological.

In order to understand sleep in its twofold psycho-physical relations, it is necessary to examine what precedes it and what takes place during its operation. The causes of sleep are,—

1. Fatigue (suspended powers).
2. The intense and prolonged effect of cold and heat.
3. Stupefaction (through odours or strong liquor).
4. Mechanical pressure on the brain.
5. A voluntary yielding to reveries.
6. Monotonous noise. What influence the periodicity of day and night has, besides the withdrawal of light, as a stimulant of the nerves, is undecided.

The causes, 1-3, manifestly act by lowering the nervous vitality; the 4th, probably by impeding the connexion with the sensorium commune (§ 23); the 5th and 6th, by impeding spontaneity in the psychical formation of ideal images.

If we consider what takes place during sleep, we find—

1. A suspended communion of the mind with the external world.

2. A continuance (consequently *pro tempore* predominance) of vegetation, whence awaking appears as resuscitation.

We see, therefore, in sleep, on the physical side, vitality lowered in the organs of sense and motor nerves, and at the same time continued in the vegetative nerves;[1] on the psychical side spontaneity checked in its manifestation for want of external images conducted to the brain through the sensitive nerves. Thus viewed, the phenomenon and many of its peculiarities receive an explanation. In a teleological point of view, sleep appears to be a repose of the proper instruments of thought, by which, not only these, but also the rest of the corporeal vitality, to which the psychical world is an internal, as the outward world is an external excitement (§ 48), are refreshed. "The masterpiece of creation," observes Lichten-

[1] It is necessary, in order to go to sleep, that the excitement should be relaxed (fatigue), since otherwise its continuance would disturb sleep by restlessness. In this sense, though not positively, the vitality of formation predominates at the expense of the vitality of motion. In this sense also Marshall Hall's observation is to be understood: "Sleep is a cerebral affection; the spinal and ganglionic systems never sleep."

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berg, "must, for a time, become a plant in order to be enabled to represent, for a few consecutive hours, this same masterpiece of creation."[1]

That spontaneity is not suspended in sleep, but only impeded in its manifestation, and that not entirely, is proved (should the psychologist desire a still further proof) by voluntary waking at a certain predetermined hour.

Cause 3 shows its affinity to intoxication. Causes 5 and 6 to vertigo, which is more psychical.

That spontaneity is checked only for want of external images, serves to explain its intercourse with internal images, which constitutes dreaming.

§ 58. Dreaming is nothing more than the occupation of the mind in sleep[2] with the pictorial world of fancy. As the closed or quiescent senses afford it no materials, the mind, ever active, must make use of the store which memory retains (§ 33), but, as its motor influence is likewise organically impeded (§ 57), it cannot independently dispose of this store. Thus arises a condition in which the mind looks, as it were, on the play of the images within itself, and manifests only a faint or partial reaction. Hence the obscure ideas, which are not in this condition dispelled by others that are more lucid, attain peculiar prominence, and, as these (§ 28) are supplied chiefly by the cœnæsthesis, this plays, in consequence, a principal part in dreaming. The only difference is, that when awake we are aware of the cœnæsthesis *as such*, but in dreaming, being incapable of reflection, we ascribe its condition to external or other, as for instance, moral, &c., causes. In this manner we may understand why it is not the most recent nor most striking events, but the older, nay, the oldest images in the memory, which had been thrust into the background in the waking state, that principally form the subject of dreams; which I, at least (contrary to the usual supposition), have constantly observed. We shall again refer in the sequel to these phenomena, but, after what we have said, it is not necessary to assume, by way of explanation, a double cerebral pole.[3]

[1] Vol. ix.

[2] Hartmann's Definit. p. 315.

[3] Eschenmayer, Mag., p. 115.

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That we, in fact, never sleep without dreaming is placed beyond doubt, not so much from reasoning, *a priori*, on the unceasing presence and activity of the mind (which might be impeded for a time in its action by a check upon the organs), as from the observation that, whenever we are suddenly awakened, we are conscious of an image just vanishing,[1] and that we always fall asleep with dreams, which we afterwards forget. But as the organs of perception are not dead, but dormant, external impressions, when they are strong enough to interrupt the internal play of the fancy, and not strong enough to dispel sleep itself, penetrate to the sensorium, though more obscurely and slowly. The mind then lightly interweaves them with its other images. If, for instance, we are awakened by a noise, as by a book falling from a table, it may happen that in our dream we imagine a duel, which that noise terminates as a pistol-shot. But how does it happen that, at the very moment when the noise strikes my ear, I conceive the shot to be the result of an event which must have taken place before I heard it? I know of only two possible solutions: *a*, either the fancy, with the rapidity of lightning, interweaves the impression on the senses in her ready weft (which can hardly be imagined); or, *b*, the communication being checked in sleep, the internal apperception follows only *after a while*, the impression on the external organ of hearing; so that I, in some sort, hear two shots, and have time between the two, by the power of the imagination, excited by the first obscure impression, to conjure up the story of the duel. This explanation, as well as the other, leaves much room for investigation, but it has more in its favour than the former. "When I," says Lichtenberg,[2] "had drunk much coffee, and therefore was startled at every noise, I could distinctly observe that I was startled before I heard the sound; therefore we hear, as it were, with other instruments than with the ears." An observation, which, though it belongs to another place, may, on account of its relation to the present subject, stimulate to further reflection.

The teleological import of dreaming (§ 57) seems[3] to be that,

[1] Bischoff, l. c. vol. ii, p. 346.

[2] On this and on the subject of hypochondriasis a most acute observer.—Vol. iii, p. 26.

[3] Kant, Krit. der Urth. p. 298.

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during the relaxation of all the moving powers of the body, it supplies the place of this useful motion by the play of the fancies, which often rise to emotions. When the stomach is overloaded, and this motion is more necessary, dreaming also is more lively; "perhaps," adds Kant, "without this wearying but salutary pain of dreams, sleep would be death."

Here Lichtenberg's question may be answered: "why, in dreaming, we make people speak so exactly in their character which we do not so well succeed in doing in writing,?" [1] We do not, in fact, make them speak, we only internally hear them speak. When our own activity is suspended, we are, as it were, spectators of the ideal images within us (§ 25), as they are organically preserved by memory (§ 53). So long as we are awake these images sleep; if we desire to produce them by our own effort, we need the power to represent the objects completely as they are, a power which appertains only to the gifted poet, or to the organs themselves. If we only accurately examine ourselves, we may perceive many analogies to this circumstance. How often does something, a melody, for instance, float distinctly in our minds, although we do not possess the power of calling it into life. In dreams *we hear* this melody, and fancy that we have sung it. In general, all Lichtenberg's[2] very refined observations on dreaming may be satisfactorily referred to the simple principles here laid down.

As the individual (§ 56) is an individual through his organisation (in intellect we are all one), he is reflected as such in dreaming, but it must be well observed, in order to obviate hasty conclusions, that this is according to his natural disposition, not according to spontaneity. On this account every one, when asleep, has his own world, when awake, that of others.[3] This world too is usually a distinct and continued whole, parallel to the waking world, without interfering with it. When awake, we scarcely remember the dreams of our deepest sleep, whereas, often in the dreams of to-day we remember those of yesterday. In dreams we know persons, places, &c.

[1] Verm. Schrift. b. Klang., vol. ix, p. 73. [2] Schriften, vols. viii, ix.

[3] Conformably with this position of Aristotle, which is generally true, Kant (Kl. Sch. vol. ii) goes further: "When, therefore, of several men one has his own world, it is to be conjectured that he is dreaming;" but viewed accurately, we have, in waking as in dreaming, each his own world, and all one in common.

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could not bear, for even a few minutes, the conversation of a very lively and loquacious friend without becoming giddy. But nervous sensibility is by no means the only cause of this. I know this sensation very well, at least in its inferior degree. It arises very easily in men who are accustomed to think at every word when they are conversing with animated speakers, who have not this habit.

3. Emotions, and especially mixed ones, in which the mind, led from one object to another, passes from spontaneity to indecision. Under this head fear may especially be classed (§ 44), in which, as Mendelsohn sagaciously observes,[1] "there is a crowd of obscure ideas, which, by their number and alternation, paralyse the power of the more lucid impressions, as respects the will."

All other causes of vertigo, which may be known from general pathology,[2] produce a pathological vertigo, in which the somatic preponderates.

Syncope and apparent death, in like manner, do not appertain to transitory, but to pathological states, and the relation of the mind to them is no longer within the scope of our investigation, for their very essence consists in this, that this relation ceases in them, or, what is the same, so far as investigation is concerned, wholly eludes our perception.

§ 61. But as it is thought that physiology cannot be complete without appending to the doctrine of life a chapter upon death, nor therapeutics without a chapter on the euthanasia, we, too, will yet cast a glance at the mind on this dark path, before we search into its abnormal conditions. This glance cannot discover much, for how can an analysis be possible where the synthesis is inconceivable? What Lichtenberg says of the sensation of being hanged, namely, that it is inexpressible, is applicable to dying in general (nay, more so than to this, especially if the experiments of § 24 were correct). Here, therefore, we have only conjecture.

Bichat makes death commence from the heart, the lungs, or the brain. In the first case, the decreasing excitement of the gradually failing blood would stimulate the action of the heart less and less, and at length not at all. Such would be death from the weakness of old age, from anæmia, or from

[1] L. c. 369. [2] Töltenyi, p. 691.

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atrophy. Here the psychical functions, as from the very foundation of their conditions they would be impeded by the want of nourishment for their organs, would cease to manifest themselves the latest and slowest.

In the second case, the passage of the blood through the lungs, that is, what is called the lesser circulation, would be disturbed, the heart would be overcharged with blood, and venous blood be driven into the aorta. This would be death by suffocation. Here the psychical functions checked, as it were, at second-hand, by the impediment which the blood would offer to the nervous action (§ 12), would more quickly cease to manifest themselves.

In the third case, dying would commence immediately with stupor, and terminate in death, by the stoppage of the innervation in all the functions (§ 30). Here the action of the mind would be impeded in its peculiar organ (§ 23). These are the cases where consciousness first becomes extinct, which, however, it would be difficult to prove as a matter of fact in a concrete instance.

Bischoff[1] adduces a fourth case, namely nervous action suddenly checked by prussic acid, lightning, &c., which, in a psychical point of view, seems to belong to the third category.

The question of natural philosophers, whether reproduction, irritability, or sensibility first expires, may be easily answered from what precedes, since this favorite arrangement expresses only the modifications of the single vital action, according to the several organic systems. In the first case, reproduction will first expire; in the second, irritability; and in the third, sensibility. Of the senses, according to repeated observation, hearing expires last.

The investigation of the direction of the one mental action is more difficult. There can be no doubt that, in this case, much depends upon what was predominant in the life of the individual, and what most exercised, and consequently most vigorous. The enfeebled hand of a dying Raphael would still trace a fine contour, some vision of ideal beauty would still float before his dimming eye; some melody would linger in the ear of an expiring Mozart, already insensible to every articulate sound; nay, a Kant might still be capable of thought even in his dying moment. But, in general, we may take

[1] L. c. vol. ii, p. 465.

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it for granted that this highest psychical revelation—thought, as being the dominion of spontaneity over the complicated functions of the organs, is the first to disappear, and that death is preceded by a state like that of dreaming (§ 58), in which the mind has no longer sufficient spontaneity to control the varied play of confused ideal images. It would, therefore, be fancy, which, in most cases, would be the last to expire. Thus, and not from any gifts of divination, are the visions of dying persons to be accounted for, which have a special and ideal value only when they include a certain presentiment of death, but with organs still unimpaired. As when, for instance, Madame Roland, on the scaffold, called for pen and ink, "to note down the very peculiar thoughts which hovered around her in her last moments," or when Herder, a short time before his death, said, "everything now appears to me so clear that I regret not being able to communicate it." On the other hand, the harmonies in the midst of which Jacob Böhme, like the running down of a musical clock, breathed out his spirit were probably more of organic origin. Whether the cheerfulness and the feeling of release which, in consumptive patients, frequently announce the approach of death, is founded in the paralysis, that is, painlessness of the organs, or in the extinction of the vegetation, by which the nervous vitality is increased (§ 57); or in the heightened activity of the mind, which is so often remarked in such patients (of which, Spinosa, Schiller, and even Novalis are instances), or in some other circumstances, appears not to be fully decided.

But however all these relations of the mind to the body may be modified in the awful moment of death, we know that the tie which binds the knot of our researches is here unloosed; the body becomes insensible to the excitements of the mind; the spirit, as an ἐντελέχεια, like the sun, which at night, only disappears from our eye, yet nevertheless continues in existence, cannot vanish from the chain of being, and we are to seek an answer to its further problems elsewhere, and not before our tribunal. "If no mortal," according to the inscription, "lifts the veil, we must seek to be immortal. He who will not lift it, is no true disciple at Saïs."[1]

[1] V. Hardenberg.

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CHAPTER IV.

ETIOLOGY, SEMEIOLOGY.

§ 62. We must, above all things, bear in mind, that we have not here to deal with an etiology and semeiology of what are termed disorders of the mind; we rather follow, consecutively, the clue which the prosecution of our task (§§ 1-6) has put into our hand, and, as we have done in the physiological chapter, in regard to the healthy relations, we now proceed, on the same plan, to represent generally the morbific influences: 1st, of the body on the mind, and 2dly, of the mind on the body.

In doing this, we dwell wholly on facts furnished by experience, which alone should be brought forward in a course of lectures, and leave the explanation and proof, partly to your own cautious deductions from the given premises, partly to the study of the most reputed hypothetical and symbolical essays of the kind.[1] When we have followed out this plan, the inverse relation of the effects to the causes, where a short retrospect will spare us many repetitions, gives us the semeiology, which is, in fact, nothing more than an inverse etiology.

§ 63. In order to take a full survey of our subject, we shall follow out, first, the somatico-psychical influences, namely: on the one hand, 1, of the vitality of the blood; 2, of the respiration; 3, of the action of the skin; 4, of the digestion; 5, of the sexual instinct; 6, of the relations of individual corporeal structures; 7, of the nervous system itself. Here we find the point of transition for considering in the reverse direction the psycho-somatic influence on the bodily functions, namely: on the other hand, 1, of the feeling; 2, of the will; 3, of the perception. We must here always have regard to the morbid conditions of

[1] e. g. Klencke, Syst. der Org. Psychol. Leipzig, 1842.

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the body, because those which are called psychical will form the subject of the pathological chapter.

The view with which Nasse set out, and which, after many other attempts, Klencke, in his 'System of Organic Psychology,' (see above,) has been lately endeavouring, after Carus, to carry through, that there is a positive reciprocal relation between the several organic systems and the several psychical functions—that, so to speak, every organ has its psychical signature, though not always according to the overstrained explanation of Klencke, is certainly founded on experiment, and we must pay due regard, in the proper place, to these fundamental experiments. The disputes between the advocates of this view and their opponents might perhaps be adjusted by more accurately defining our notion of the *degree* of the psychical affections; alterations occurring in the most indifferent tissue-sphere, including organic fluids, such as belong to the first steps of organisation, are made known to the mind only in the most general way, in so far as the body thus changed is *their* body, through the medium of general sensation, but without being conducted by the nerves (§ 7); changes in the vegetative animal-sphere, being half conducted by the vegetative nerves, half isolated by the superincumbent ganglionic masses, will reach the mind only as obscure ideas (§ 28), but as such will certainly have an influence on its tone; while only those changes which the nerves communicate directly to the central cortical substance will, when the communication is unchecked and complete, give to the mind positive consciousness. It is only this last which the opponents of the above-mentioned view may justly claim, and which its advocates may justly concede. But what it is that properly makes the innervations operate so *differently*, that, for instance, a hypochondriacal attention to any organ promotes degenerations, while a cheerful attention strengthens it, is very insufficiently accounted for by the supposition of increased, diminished or variously localised, nervous influence. It is always increased, in hypochondriasis locally, in cheerfulness generally, therefore also in the affected structure. Is it merely the harmony of the nervous vitality which determines it, or is it that these are specific processes?

We have changed (§ 50) the ancient division of the temperaments, which rested entirely on the notion of the crasis of

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the blood, into a more comprehensive one, but, at the same time, (ibidem,) have not failed to refer constantly to that relation. It falls within the province of physiology to show *how* the blood affects the action of the nerves (§ 12), and thereby acquires psychical importance. We here rest on the facts before us. Probably the most important of these are the results of transfusion. Tried first experimentally on animals, these observations afforded only very uncertain results, because the want of speech in animals always left doubt respecting the nature of the change that had taken place, and the psychical functions of animals do not admit generally of a well-founded comparison with those of men. Yet wilder animals, into which the blood of tamer ones had been transfused, showed themselves to be more timid, and, on the other hand, older animals, into which the blood of younger ones was transfused, to be more lively and active.[1] The experiments on man in a state of sickness seem to be more important. The patient on whom Denis made the first experiment of transfusion in a human subject, who had wholly lost his memory, and was affected with great indolence and drowsiness, became much more lively, and his indolence vanished. His second patient, prior to the operation, lay in a state of lethargy accompanied with occasional convulsions, but after the injection of some calf's blood, gave every possible proof of active consciousness. The third patient was cured of insanity by transfusion, and the fourth of paralysis and mental debility.[2] Although in these, and several other concurrent observations, the effect of the operation itself, and of the bleeding which generally preceded it, are to be taken into account, still the quality of the blood itself is not to be denied its share of influence, and from its salutary, we may infer its morbific effects. The chemical relations of different states of the blood to each other, and to the nervous substance, are still much too imperfectly known to admit of our drawing any decided conclusions. On this account, we must, after considering the quantitative relations of the blood, give more attention to states of disease furnished by observation.

The repletion and increased action of the vessels stimulate

[1] Nasse ps. Bez. d. Bl. Zeitschrift f. ps. A, 1822, i, p. 95.

[2] Ibid. and Friedreich's Litterargeschichte, p. 177.

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to activity the centripetal nervous filaments which encompass these vessels, and heighten thereby the facilitated psychical affections and reactions, which, in the lower degree, manifest themselves in cheerfulness and courage, in the higher in arrogance. Increased plasticity and predominant arterial action lead to the same results; both, however, only to a certain degree, beyond which oppression ensues.

Vacuity and a relaxed condition of the vessels produce, by a sinking of the nervous power, a contrary effect, similar to the tone of mind which exists after venesection and considerable loss of blood. The same result is produced by diminished plasticity and preponderant venous action. It is certain that a corrupt state of the blood, whether it arise from a sporadic, miasmatic, contagious, or any other cause, has the effect of depressing the spirits. The spleen of the English is partly attributed to an endemic influence of this kind, which corrupts the blood through the atmosphere. Among the dyscrasies, the gout especially acts on the mind through the brain. Among the cachexies, it is the scurvy. This latter and melancholy, reciprocally promote each other.

Organic lesions of the heart and great vessels, whether originating in hypertrophy, torpidity, ossification, enlargement, or any other cause, produce a feeling of discomfort, anxiety, and lowness of spirits. Ossification of the internal coat of the arteries, and especially of the heart, are said to be accompanied by a certain phlegmatic tone of mind, and Klencke[1] connects the endemic phlegma in England with the endemic ossifications of these membranes which occur in that country.

The delirium of fever patients, the psychical consequences of intermittent fevers, are well known to physicians. Examples are not wanting which confirm these etiological relations of the vitality of the blood to the mind; a dose of nitre or digitalis can convert cheerfulness into low spirits. Remedies which excite action in the vessels have a contrary effect. Numerous cases of anomalies of the heart, coupled with mental sufferings, in which, however, the sequence or priority is not always easily discovered, are everywhere mentioned.[2] Young women who suffer from chlorosis are low-spirited.

[1] L. c. p. 176.

[2] Klencke, l. c. p. 181.

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The exciting and depressing effects of alimentary and medicinal substances are produced through the blood. Klencke adduces many proofs of this;[1] he affirms that, after taking a dose of nitre when he was in a cheerful mood, he became indolent and oppressed, and after taking a grain of *Sulph. aur. antimonii* he grew hot and in lively spirits. He depressed the mind of a patient, who was of a cheerful disposition and sanguine temperament, by *Potassæ sulph. et Potassæ nit., āā Scrup. semis.* It is certainly a fact, whether the result be wholly referable or not to the experiment, that the practice of drinking salt water, after exciting mental emotions, is founded on similar experience; and that remedies which immediately affect the vitality of the blood change the mood or frame of mind, e. g. *Tinct. Cinnamomi* exciting, *Digitalis* depressing the tone, &c.

§ 64. The respiration is intimately connected with the circulation. Here, then, similar causal relations will be found. We have already alluded (§§ 13, 15) to the *consensus* between the lungs and the brain. The vicarious and reciprocal interchanges between diseases of the lungs and diseases of the brain and its membranes, which are proved by numerous examples,[2] seem to indicate that this *consensus* is much greater than is usually supposed; and hence it may be readily understood that, from their organic dependence, a reflex action on the psychical functions will not be wanting.

The unimpeded function of the lungs excites in general an open, cheerful temper, the impeded function, a feeling of depression, which, in common language, is expressed by a "free" and an "oppressed" chest.

The inspiration of a free, sufficiently oxidised atmosphere, by promoting the functions of the circulation (§ 63), produces a feeling of heightened vitality, as well on the receptive side, especially indicated by a sharpened sense of smell, as (§ 18) on the reactive side, by facilitated muscular motion. The inspiration of certain kinds of gas heightens this feeling to exhilaration, so that a sort of ethereal intoxication (§ 59) takes place.[3] The inspiration of vitiated air, as for instance, that of a close room, which is generally united with an impediment to

[1] L. c. 174. [2] Hamburger, Lungenschwinds, p. 27.

[3] Priestley, in the "Sketches of the Philos. of Apparit." By S. Hibbert, Edin., and Lichtenberg, ix, 114.

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the mechanism of breathing caused by a sitting posture, produces a peevish, timid, gloomy temper, of which the hypochondriasis of the learned is a well-known example.

How far the frequently cheerful, sanguine, nay, thoughtless frame of mind, and the often very refined and heightened intellectuality (e. g. in Spinosa) of consumptive patients depends on the organism, has been more frequently proved by observation than explained by physiology. In like manner, the phenomenon of their cheerfulness when dying remains problematical as to its cause (§ 61).

There are numerous examples of the reciprocal action of the respiratory and psychical functions. The courageous and cheerful disposition of the inhabitants of mountains in comparison with that of the inhabitants of low lands, and especially of those who breathe the close air of towns, is well known. This influence is very remarkable in persons dreaming. The ideal images which float before their fancy are dolorous and frightful when respiration is impeded, friendly and hilarious when it is easy.[1]

§ 65. The function of the skin is so extensively connected with the above-mentioned functions of the circulation and respiration, and through them and in itself with all structures of the organism, that, from its very universality, we may infer the existence and the foundation of its psychical relations.

But the transplantation of pathological processes from the skin to the brain and its membranes (metastasis) deserves to be particularly noticed here as a cause of disease in the psychical organ. The relation of metastases to the existence of mental diseases in particular, belongs to the pathological chapter, and makes more accurate etiological foundations every way necessary and desirable.

Of the internal system of membranes, it is especially the mucous membrane of the intestinal canal which, through the medium of the ganglionic system, has the most decided influence on the temper, and through it, upon the activity of the mind, and on which, *vice versâ*, the changes of the latter are principally reflected—an observation which reminds us of the relation between the processes going on in the intestines and those in the nerves, in typhus fever.

[1] Klencke, l. c. 256.

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§ 66. The function of digestion, with all the assimilating, secerning, and excerning actions that proceed from it, which together form the process of nutrition, has especial influence on the mind, through the medium of the phrenic and solar foci of the cœnæsthesis (§ 13, *b*, *c*).

The feeling of depression which accompanies hunger and thirst, as well as the revival of all the functions of the mind which follows the gratification of this longing of the digestive organs, are too well known to render it necessary to do more than mention them here. If any one should raise, as an objection, on the one hand, the mental exertion to which hunger has given occasion, and, on the other, the "plenus venter," he would only still further confirm this psychical relation. For those very exertions are proofs of the distressing sensation from which a man seeks to be relieved at any price, and those intellectual productions, which owe their existence only to hunger, betray their miserable origin. The "plenus venter," however, shows the consequence of excessive indulgence, which has the effect of paralysing the mental faculties, as moderation has of exciting them (vide § 39).

The changes are equally well known which the temper suffers through the regularity or obstruction of the normal excretions. Could we penetrate into the secret foundations of human events, we should frequently find the misfortunes of one man caused by the intestines of another, whom the former endeavoured to inspire with sympathy in his fate at a moment when the frame of mind of the latter was affected by impeded secretion. An hour later, and his fortune would have been made.

The predominant importance given by some to the business of digestion, by gastronomic education and habits, restrains the development of the higher intellectual spontaneity, by giving it, through the medium of the heightened cœnæsthesis, an egotistical sphere of action which too much absorbs their attention. Hence those men of whom it is vulgarly said that "their God is their belly."

How far the preponderance of animal food gives greater energy and wildness, and the preponderance of vegetable diet greater mildness of the psychical character, remains to be confirmed by further experiments (§ 52).

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The peevish, ill-humoured, irritable, often too, gloomy hypochondriacal, egotistical, and dissatisfied mood of persons whose digestion is disordered by dyspepsia from the most diverse causes, is unhappily a matter of daily experience. Clinical pathology teaches us how the ileotyphus fever operates upon the brain, and how the functions of the mind are thereby disturbed. In these relations the strictest attention must always be paid to individual proportion and real causality, that we may avoid false conclusions. The greatest disorganisations of the ganglionic system have frequently no influence on the state of the mind, and the smallest disturbances of that system are often sufficient most deeply to disorder it. We are hereby again reminded how very delicate, and yet how undefined is the psycho-physical union (ενχειρεσις).

There is scarcely any need of examples here, since they occur in every-day life.

§ 67. Still greater, and perhaps the most active of all physical influences on mental life, is the influence of the sexual function, effected through the medium of the generative focus of the cœnæsthesis (§ 13, *a*), and manifesting itself chiefly at the periods of development and change of life (§ 53, *c*), and in the differences of the sexes (§ 51). Schiller, therefore, with reference to these two influences, was perhaps justified in saying of Nature, that, till the influence of the spirit shall govern the fabric of the world, it is held together by "hunger and love."

From the very first period of sexual life we observe that, with the retarded development of its organs and functions, there is a more tardy development of the mental activity, and with the more rapid formation of the former, a more active development of the latter. Whether the development of the cerebellum, as is generally supposed, is proportional to these relations, seems to be at present problematical. Many facts are in favour of the supposition;[1] others against it, such as the cessation of the instinct when the organs are injured, and a comparison of the instinct with the cerebellum of animals.[2]

The psychical metamorphosis, which takes place with puberty

[1] Carus, Phys. Larrey saw the genitals disappear on an injury of the cerebellum.

[2] Nasse's Zeitschrift, 1822, vol. 1, p. 7.

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itself, is too great to escape the notice of the most careless observer.[1] The mind of the young man is powerfully impelled in the direction of the will, that of the maiden, in the direction of feeling: images of undefined delight float before their minds; the enchantress Fancy reigns in all her loveliness; soothing and rapturous emotions alternate in a constant tumult of ecstacy; and love as a passion (§ 47), with flattering but despotic hand—fortunate those who are able calmly to guide it—seizes the sceptre. When happily controlled, whether designedly, through education and self-reflection, or undesignedly, by an harmonious proportion of the desires in the natural disposition, love becomes the source of the most beautiful psychical developments; and he who never loved, is, or will become, egotistical, mean, narrow-minded, covetous, timid, and but too often an unnatural sensualist.[2] If ill-directed, this terrible passion becomes a source of the most deplorable sufferings, which we shall have further to consider in the sequel.

The act of coition itself has a decidedly psychical effect. If exercised with moderation, at full maturity, and at the right moment, it leaves (notwithstanding the "*omne animal post coitum triste*") a pleasurable feeling; nay, it invigorates the powers of thought, as is shown by the example of the ingenious voluptuary Casanova, who at such moments solved the most difficult mathematical problems. If not gratified when urgent desire exists, it may, indeed, occasion psychical uneasiness, and especially distract the attention; but as the corporeal ill consequences of abstinence have always been estimated much too highly, so also a cultivated understanding and a vigorous will, will not have, psychically, much to suffer from them. If inordinately indulged, it leaves, through the exhaustion of the nervous power, a sensation of mental depression, and, if too often repeated, total debility of every mental power. We shall have occasion, in the pathological chapter, to consider the lamentable effects which this cause has its share in producing. Intellectual dullness, melancholy, and weariness of life are the least of them.

[1] Vide Osiander, die Entwickelungs Krankheiten.

[2] Hartmann, Glückul. p. 187.

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Menstruation is always attended, in sensitive individuals, with mental uneasiness, which manifests itself according to the temperament (§ 49), as irritability or sadness.

Pregnancy, considered as to its somatic process, involves a predominance of the abdominal nervous system (§ 11), particularly of the nerves of vegetative life, and, together with them, of the cœnæsthesis (§ 15), rather than of the more spontaneous nervous spheres. Hence the uncontrollable longings of pregnant women and their general excitability.

The puerperal state and the period of lactation more frequently occasion congestions of the brain, and thus give occasion to mental diseases, of which we shall have to speak in the sequel.

Lastly, the climacteric change, in many women indicating the completion of their earthly destination, besides a state of congestion on the somatic side, gives also, on the psychical side, occasion to an altered and chiefly a melancholy frame of mind, which, though organically caused, are but too well known, in the whims of hysterical women, to physicians and to husbands.

Morbid conditions of the sexual activity have as decided an influence on the mind as their physiological state. Retarded or impeded development contributes to the melancholy of chlorotic girls; licentious voluptuaries are mentally dull and egotistical; all their powers of thought are devoted to sexual ideas; the enervated are melancholy, pusillanimous, misanthropical, and weary of life: those, on the other hand, who are totally abstinent, are inaccessible to softer sensations. Of strictly pathological conditions we are not here treating. It is sufficient to remark, that the most numerous and intense have their origin in this source.

All these phenomena are more acute and intense in woman (§ 51) than in man.

Here, also, examples are too common to need enumeration.

§ 68. The proportions of individual structures of the body have, both in a consentient and antagonistic way, a manifold influence on the development and activity of the brain, and hence on the degree of the activity of the mind.

General hypertrophy occurs, though not often, apart from hypertrophy of the brain, and in that case is mostly combined

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with atrophy of the brain; and, therefore, with organic obstruction to psychical development. General atrophy, without simultaneous atrophy of the brain, is not rare, and is occasionally combined with hypertrophy of the brain. Whether the often extraordinary precocity of atrophied children is connected with these circumstances is not decided. These proportions of volume are, for the most part, hereditary, and the physical powers accordingly correspond with them.[1]

Distortions of the skeleton may act prejudicially upon the psychical tone, by obstructing the functions of the viscera contained in the cavities of the chest and the abdomen. On the other hand, the purely psychical characteristic peculiarity of deformed persons, which has been repeatedly manifested in distinguished men, for example, Pope, Lichtenberg, Scarron, &c., shows itself in a somewhat similar expression of countenance, and consists of wit, humour, and acute sensibility, amounting to an easily excited sensitiveness, which has its origin in purely mental and social relations, but here it is only the remote predisposition and not the somatic origin which is to be sought in the deformed growth.

Hypertrophy and atrophy, as well as softening of the bones of the skull, will naturally react more immediately than the same conditions in more remote, solid structures, upon the brain, as well as upon the mind, which will principally be shown in individual forms of mental diseases.

With respect to the spleen, Friedreich observes that it is totally wanting in acephalous monsters, and that in hemiacephalous monsters it is, for the most part, very small.[2]

§ 69. We should have had now to examine etiologically the relations of nervous to psychical vitality, but if we bear in mind that these organs are, in fact, the immediate manifestation of psychical personality itself (§ 8-30), it hence follows—since we do not know the connexion between the polar processes in the nervous medulla (§ 12) and thought)—that there can be no question here of any etiology; for what passes organically in the nervous sphere itself, announces itself also simultaneously, in the psychical sphere. The *post* and *propter* are here indiscernible, and from a partial espousal of

[1] Ritgen's Pers. Kr. p. 317. [2] L. c. 344.

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the one side or the other arise the many unsolvable and sterile disputes on our subject. If the nervous sphere is affected, the corporeal personality of the individual depending on it (§ 56) is likewise affected, and we have no etiological, but a pathological momentum before us.

In the lower degree these relations bear predominantly a somatic character, and (especially through the medium of the cœnæsthesis) form those transitions, which we quitted at the end of the Physiological chapter (§§ 57-60), and shall resume at the beginning of the Pathological chapter. In the higher degree the (*strictiori sensu*) so-called psychopathies, are formed. Thus, faithful to the course we have laid down, we are here again at the limit of our present task. But the psycho-somatic relations (§ 63) remain to be examined etiologically, with respect to the feeling, the will, and the perception. It is, however, to be distinctly borne in mind that these influences are here to be considered only as causing diseases, since their physiological import has already been discussed (§§ 29-48).

If we have here considered the states of the body as causes of those of the mind, it is clear that we may continue this consideration progressively, in a more extended series; for whatever is a cause of the corporeal condition, must likewise become, indirectly, a cause of the mental. Thus we here pass from the material but internal psycho-etiological powers to the external, and might continue this proceeding *ad infinitum*, if we had any intention of repeating all that we know of etiology. Yet we find, in the repetition, some powers, the especial psychical importance of which is taught and confirmed by experience, and which, therefore, deserve particular notice. As such the following may be instanced:

a. The weather. The animating and cheering influence of serene weather, of spring, &c., as well as the oppressive influence—stimulating to suicide,—of gloomy autumnal weather, &c., are established by observation.[1]

b. Diet. It is well known that moderation keeps the mind cheerful, while intemperance or indigestion disturbs its actions.

c. Cosmical influences. That besides these telluric, there

[1] Comp. Serrurier, über den Einfluss der Witterung; Nasse's Zeitschrift, ii, 1829.

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are yet other—cosmical influences (another example of the continued progression of causal relations), which also act upon mental life, is to be presumed from the organic reciprocal connexion of general life, but cannot be proved.

We may, however, weigh all these powers as minutely as our knowledge of physics will allow, and yet the only certain result is, that they act upon the mind through the medium of the nervous vitality; and, therefore, like all the rest, terminate in this centre, whither we are led by the former (§ 69).

We here find a confirmation of what we concluded from the human phenomenon, even previous to the development of our task, viz. that there is no physical state which is not psychically reflected; that, therefore, the knowledge of these psychical reflexes is useful, nay, necessary, not only to the physician of the mind, but to every medical man.

§ 70. Feeling, which we have already noticed, in its general corporeal relation (§ 44), acts as an etiological momentum, according to its scheme, of pleasure and displeasure (§ 39), exciting or depressing, so as to cause disease when it exceeds that measure of personality (§§ 50-53) which occurs constantly only in the emotions.

The proper pathological processes which excessive pleasurable feeling may occasion, as a consequence of an overflow of innervation, are—convulsions, congestions, inflammations, hemorrhage, apoplexy.

Whether sudden joy can cause death sooner than sudden grief,[1] I leave undecided. Examples of this (especially from antiquity, such as that of the Roman matrons, who, after the battle of Cannæ, on seeing their sons, whom they supposed to have been killed, dropped down dead upon the spot) have been often enough quoted, but relate chiefly to a joy succeeding sorrow; that is, to a sudden change of the vital temperature. The reaction of this somatic impression on the mind, or rather the joint effect of both causes, is confirmed in this case also. Hale, director of the largest lunatic asylum in London, reckoned, after the notorious South Sea scheme, that more persons had become insane from a sudden accession of wealth than from being suddenly reduced to poverty.[2]

[1] Zimmermann, von der Erfahrung, s. 641.

[2] Zimmermann, s. 642. Excessive shame produces the same effect.

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The pathological processes arising from excessive feelings of displeasure in consequence of a deficient supply of innervation, are muscular debility, languor of the vessels (amenorrhœa); difficulty of respiration, typhus, chlorosis, scurvy, dropsy, scirrhus, tubercular phthisis (§ 44), cancer, medullary sarcoma, &c.

With respect to the latter diseases, Ramadge[1] ascribes most of the cases so common in England to the delay of justice, and, therefore, to depression of the spirits. Dr. C. Haller's observations in the House of Correction in this city[2] (Vienna) seem to confirm this remark.

Excessive fright is seen to be succeeded by hemorrhages and retentions, convulsions, especially epilepsy and catalepsy, likewise tetanus and apoplexy, and even hydrophobia. Fear causes especially enuresis, diarrhœa, seminal discharges,[3] erysipelas, and eruptions about the lips; facilitates the reception of contagion and miasma,[4] disturbs crises, and aggravates every disorder.

Instances are known in which the violent struggle caused by it has been followed by bursting of the heart and universal paralysis. From an alternation of exertion with relaxation arises tremor, by which the degree and the relation of the excitement is characterised. Thus the *tremor cordis* of the timid is distinguished from the *palpitatio cordis* of the fearless, angry man. According to the testimony of the most experienced practitioners, an especially frequent consequence of this depressing emotion is the jaundice (icterus). It occurs most readily in individuals who are badly nourished, especially when they are at the same time deprived of sleep, and have a cholotic (bilious) diathesis. This icteric hue is attributed to the endeavours of the organism to throw off the bile accumulated in the blood, which, the normal channels being closed, is effected through abnormal channels by exosmosis; the accumulation of the bile, again, is attributed to a morbid state of the blood, caused by that of the nerves.

[1] Treatment of Diseases of Lungs.

[2] M. Jahrb. 841, Part 1.

[3] Zimmermann, l. c. p. 650.

[4] Not on account of the increased absorption, but from the diminished reaction (see Lenhossek, des Menschl. Gemüth., &c.) through suppressed perspiration.

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Here we ought to go further, and pass on to the psychical causes which act on the nervous principle; but the quality of these by no means explains their mode of action.[1] Fear and horror act, moreover, variously, either exciting or paralysing, according to the greatness of the danger, and according to the individuality of the persons affected by them.

Indignation, which has not been mentioned above (§ 44), deserves particular notice; it is an oppressive, very mixed feeling, which manifests a peculiarly undermining effect on the whole organism. Vexation, mortification, contempt, self-respect, and an enduring violently-suppressed reaction have their share in this emotion. Its effects on the body are chiefly vertigo, nausea, and præcordial anguish; the psychical reflex action is extremely dangerous, and happy is it for any one who can console himself with *facit indignatio versum.*

The effects of melancholy on the body are most completely represented in what we call home-sickness (nostalgia); a disease which has been unnecessarily classed among the proper psycopathies, since it has no other specific pathognomonic signs except that of a heavily oppressed spirit, with the influence of this on the body, and exists without alienation of the personality.[2] It can only pass into insanity when in its higher degree, and after a long duration, and then it represents a "melancholy with a fixed idea of domestic happiness" (that is, with a special cause). An autopsy generally exhibits the brain and lungs overcharged with blood, the former indurated, and its membranes in an inflamed state, the heart hypertrophied, the stomach contracted; appearances which are also found on the post-mortem examination of other persons who have died of grief. A similar condition in seamen is called by the English *calenture.*

As a special physical effect of excessive grief, arises that well-known phenomenon where the hair, more or less rapidly, nay, suddenly turns gray, which the modern poets, for want of poetical, have often used for its pathological effects. It

[1] See Dr. Horaczek, d. gall. Krankhietsprozess. Wien, 1844.

[2] See Zangerl, d. Heimweh. Wien, 1840. The author observes very justly, that we might with as much reason establish an *apodemialgia*, a longing for foreign countries; an observation which again confirms our view.

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indicates an extreme sinking in the process of vegetation, because by the perishing of the vascular rete, nothing but the gray-white outer covering of the hair remains. Lenhossek mentions the case of a woman whose whole body turned black on her being reproached by her daughter as having been guilty of the death of her tenderly beloved grandson. A proof how relative is the quantity of every human grief, is afforded by the philosopher who suddenly became gray on losing, in a storm at sea, an ancient manuscript which he had recently discovered. But that in all cases, whatever may be the object of it, the contrast caused by disappointed hope, has a most intense effect is confirmed by experience, as well as anticipated from reflection. It is well known that terror causes the hair to stand on end, and that grief or melancholy makes curly hair straight.

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In the first place, it is always the activity of the vessels, and through it the contents of the vessels, namely, the blood, and primarily the arterial blood from the heart, which take here the pathological initiative. Hence congestion, symphoresis, inflammations, stasis, hyperæmia, hemorrhage, retentions, altered secretions and excretions, and apoplexy.

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With respect to motion, the law of oscillation is to be considered as the standard; for, as in motion itself a constant alternation with repose is included, as a condition of its duration,[1] and a certain amount of this alternation is normal, the disturbance of which acts etiologically, so does the action of the will on the body undoubtedly take place, as it were by fits, not continuously. If this energy is not permanent, very short intervals take place, and the impulse must be often repeated. Oscillation—tremor, is therefore exertion and repose connected together in rapid alternation[2] (§ 70). In this manner the origin of spasms, convulsions, epilepsy (which is more frequently of psychical origin than is supposed) is deducible from the passions (see the note to § 30); but further, the above-mentioned psychical reaction of muscular motion—a motor, mental reflex function—is remarkable. The excessive or often repeated mimic expression, for instance, of anger, or melancholy, &c., may in the end bring on these very sensations. After Garrick had acted his Lear or Othello, he passed some hours in convulsions in bed. Less discriminating artists are in danger of transferring the character of their dramatic parts to ordinary life.[3]

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Intense exercise of fancy has a more powerful effect upon the organs than that of pure thought has, because the former has more to do with organic ideal images (§ 25), from which the latter abstracts the attention, and because the former comes more in contact with the emotions (§ 70).

It is in the nature of things that all these relations should be more prominent when they exist in a more tender, pliable, nervous system. This is the case, in the first place, in the female sex; secondly, in early youth. We have, therefore, especially to consider here premature development (hot-house education) as an important etiological momentum; incipient marasmus, curvature of the spine, affections of the heart, the formation of tubercles, are common consequences of it. A second consequence is over-excitement, and relaxation of the action of the brain thereby caused, which reacts on the vegetative life of the organ, and through it at length on the action of the brain itself, so that idiocy ensues. (In a psychophysical respect the effect is frequently again the *cause* of its *cause*.) Thus premature education is one of the predisposing causes of what are called mental diseases—conditions, the evidently increasing frequency of which, in the present day, may hence be partly accounted for.

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sopor or of delirium, and precedes cerebral inflammation the eruption of violent exanthemata and softening of the brain. In chronic diseases it indicates congestion, oppression of the brain, and all their consequences. Amnesia (loss of memory) always indicates preceding disorders of the brain, especially of the anterior lobes (?), or very depressed powers. In acute disorders it generally betokens a fatal termination, if not an instantaneous crisis; in chronic diseases, for the most part, it indicates incurability, or when it occurs suddenly in epileptic and hysterical patients, an immediately approaching violent paroxysm. Partial amnesia (forgetfulness of some things) indicates a probably violent, but not always permanent, effect on the brain.

Unwonted fear in diseases indicates considerable suffering of the nervous system, the brain, the spinal marrow, and their cavities. Moroseness is a symptom of determination of blood to the brain; apathy, of an imperfect perception on the part of the patient of his own condition, indicating in violent fevers, impending delirium.[1]

Lastly, the relation of abnormal impulses, feelings, and thoughts to corresponding bodily affections is remarkable, and opens a fertile field for further research. Anomalies of the stomach have often been found with diseased inordinate appetite; old disorders of the intestinal canal with fanatical fasting; indurations of the glands, &c., with a fixed delusion of serpents, &c. in the body; diseases of the sexual organs with the extravagances of love.

§ 74. In the same manner we may draw semeiotic inferences from the physico-psychical part of etiology. On the appearance of spasms, congestions, &c. (§ 70), we shall not fail to inquire after any psychical pleasurable excitements that may have been indulged in, and in chlorosis, scirrhus, &c., after mental suffering. The occurrence of tetanus (idiopathic) will lead us to conjecture that it has been occasioned by fright, &c. Sleeplessness, disorders of the vegetative system, &c. (§ 71), will often give us cognisance of perhaps carefully concealed passion, or direct our attention to a previous employment of the mind on anxious lucubrations (§ 72).

[1] Vide Albers, Semeiotik, p. 390, &c.

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Here, however, more special physico-psychical signs have to be considered, which, as being peculiarly pathognomonic, perhaps furnish a more effective collateral aid to physiognomy than those just mentioned (§ 54); at least, more palpable and more to be depended upon.

§ 75. And first the form of the skull indicates with more certainty pathological than physiological conditions.

Thus an extraordinary abnormal smallness of the head in proportion to the body indicates an impeded development of its organs; consequently a tendency to psychical imperfection, such as is peculiar to the Cretins. Yet this is true only within certain limits, since we find a (not abnormal) smallness of the head, for the most part, in distinguished individuals, and a larger size in persons of weak intellect. The latter may also be the remains of water on the brain, rhachitis, &c.

The conical form of skull, when it is not (as in new-born children, or the Esquimaux) the effect of mechanical pressure, is of importance with relation to psychopathics, properly so called, of which we shall speak in the sequel.

The same may be said both of the square form of skull, which, when not a mark of the Mongol race (§ 52), does not become developed till after the fortieth year; and of the *caput depressum*, the head compressed from above downwards.

Imperfect symmetry in the formation of the two sides of the skull is, as De Grossi remarks, an ordinary occurrence; it proceeds from an unequal development of the two halves of the brain, which, however, adds Albers,[1] occurs even in a high degree without a state of disease.

The physiognomy of the countenance (§ 54) is in all cases more important in sick than in healthy persons, for in sickness this expression is more defined, more permanent, and less voluntary.[2]

The facial nerve is connected by many twigs with the cervical nerves. The fifth pair—the trigeminal, furnishes a branch for the formation of the great sympathetic, and then spreads over almost the whole face, for which reason it has been called, not inaptly, the lesser sympathetic.[3] Hence we

[1] Semeiot. p. 216. Comp. Pinel, Phil. m. Absch. v. Wahns.; übers. v. M. Wagner. Wien, 1801. gr. 8.

[2] Albers, l. c. p. 218.

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But there are still some psycho-physical signs which are of importance to the physician, and which deserve to be mentioned. General dysmnesia (difficulty of remembering) is often a symptom of hyperæmia of the brain, therefore a premonitory symptom of apoplexy. In acute diseases it is a symptom of

[1] Neither here nor in the physiological part (§§ 44-48) have I copied the shades and definitions of the several states of the mind, which are pointed out with the greatest acuteness in Spinosa's Ethics (De Affect.); and the complications of which, after all, are not to be comprehended in any enumeration; nor have I thought it necessary to be too diffuse in repeating the well-known results of experience. Crichton, Zimmermann, Weikard, Röschlaub, Hufeland, Ideler, &c. &c., fully exhaust this subject. In the same manner we can only indicate here that the psychical powers, as they operate in causing disease, may also be used, in many cases, for the purpose of cure. *Æsculapius ipse testis est, morbos graves apta directione affectuum animi sanari posse*, said Galen. (De San. tom. i.) Lichtenberg made use, as often as he could, of what he called a "fancy cure."

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sopor or of delirium, and precedes cerebral inflammation the eruption of violent exanthemata and softening of the brain. In chronic diseases it indicates congestion, oppression of the brain, and all their consequences. Amnesia (loss of memory) always indicates preceding disorders of the brain, especially of the anterior lobes (?), or very depressed powers. In acute disorders it generally betokens a fatal termination, if not an instantaneous crisis; in chronic diseases, for the most part, it indicates incurability, or when it occurs suddenly in epileptic and hysterical patients, an immediately approaching violent paroxysm. Partial amnesia (forgetfulness of some things) indicates a probably violent, but not always permanent, effect on the brain.

Unwonted fear in diseases indicates considerable suffering of the nervous system, the brain, the spinal marrow, and their cavities. Moroseness is a symptom of determination of blood to the brain; apathy, of an imperfect perception on the part of the patient of his own condition, indicating in violent fevers, impending delirium.[1]

Lastly, the relation of abnormal impulses, feelings, and thoughts to corresponding bodily affections is remarkable, and opens a fertile field for further research. Anomalies of the stomach have often been found with diseased inordinate appetite; old disorders of the intestinal canal with fanatical fasting; indurations of the glands, &c., with a fixed delusion of serpents, &c. in the body; diseases of the sexual organs with the extravagances of love.

§ 74. In the same manner we may draw semeiotic inferences from the physico-psychical part of etiology. On the appearance of spasms, congestions, &c. (§ 70), we shall not fail to inquire after any psychical pleasurable excitements that may have been indulged in, and in chlorosis, scirrhus, &c., after mental suffering. The occurrence of tetanus (idiopathic) will lead us to conjecture that it has been occasioned by fright, &c. Sleeplessness, disorders of the vegetative system, &c. (§ 71), will often give us cognisance of perhaps carefully concealed passion, or direct our attention to a previous employment of the mind on anxious lucubrations (§ 72).

[1] Vide Albers, Semeiotik, p. 390, &c.

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Here, however, more special physico-psychical signs have to be considered, which, as being peculiarly pathognomonic, perhaps furnish a more effective collateral aid to physiognomy than those just mentioned (§ 54); at least, more palpable and more to be depended upon.

§ 75. And first the form of the skull indicates with more certainty pathological than physiological conditions.

Thus an extraordinary abnormal smallness of the head in proportion to the body indicates an impeded development of its organs; consequently a tendency to psychical imperfection, such as is peculiar to the Cretins. Yet this is true only within certain limits, since we find a (not abnormal) smallness of the head, for the most part, in distinguished individuals, and a larger size in persons of weak intellect. The latter may also be the remains of water on the brain, rhachitis, &c.

The conical form of skull, when it is not (as in new-born children, or the Esquimaux) the effect of mechanical pressure, is of importance with relation to psychopathics, properly so called, of which we shall speak in the sequel.

The same may be said both of the square form of skull, which, when not a mark of the Mongol race (§ 52), does not become developed till after the fortieth year; and of the *caput depressum*, the head compressed from above downwards.

Imperfect symmetry in the formation of the two sides of the skull is, as De Grossi remarks, an ordinary occurrence; it proceeds from an unequal development of the two halves of the brain, which, however, adds Albers,[1] occurs even in a high degree without a state of disease.

The physiognomy of the countenance (§ 54) is in all cases more important in sick than in healthy persons, for in sickness this expression is more defined, more permanent, and less voluntary.[2]

The facial nerve is connected by many twigs with the cervical nerves. The fifth pair—the trigeminal, furnishes a branch for the formation of the great sympathetic, and then spreads over almost the whole face, for which reason it has been called, not inaptly, the lesser sympathetic.[3] Hence we

[1] Semeiot. p. 246. Comp. Pinel, Phil. m. Absch. v. Wahns.; übers. v. M. Wagner. Wien, 1801, gr. 8.

[2] Albers, l. c p. 248.

[3] Ibid.

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see how almost all morbid conditions mirror themselves in the countenance; but it is the diseases of the organs of sense which, under the states of transition hereafter to be mentioned, belong to the psychopathies, that are chiefly manifested by a peculiar expression of countenance.

We have already, in their proper place, pointed out the expression of the emotions and passions (§§ 44, 48, 54); that of the psycopathies belongs to a subsequent division. It only remains, therefore, to mention here some particular cases. A morose expression of countenance, with obstinate silence, indicates, when it is somatic, pains in the abdomen, and impending delirium; a cheerful expression, preceded by one that is morose or apathetic denotes (§ 73) approaching convulsions; an anxious expression, angina pectoris.

Jadelot[1] has again revived the observation, with which the older physicians were not unacquainted, that the diseases of the three principal cavities of the body are indicated by particular expressions of countenance. He distinguishes for this purpose (in children) three demarcations in the countenance: the *linea ocularis*, the *linea nasalis*, and the *linea labialis*. The first belongs more to the seat of disease in the cerebral system, the second to that in the abdomen (*face grippé*), the third to that in the cavity of the chest.[2] Now, inasmuch as these criteria must be applicable as well to adults as to children, for they are confirmed, at least in general, by frequent experience, and as the physiognomical expression may also be distinguished in a psychical point of view, in the three regions of the countenance (§ 54, *a*), and, lastly, as the energies of the mind, according to the ancient Platonic mode (§ 38), may certainly be in some degree specially assigned to the three corporeal cavities, this doctrine of Jadelot deserves to be considered and further examined with reference to medical psychology.

§ 76. We have now, in the course of our inquiries, to consider the semeiotic import of those conditions which we (§§ 57-60) have designated as transitory.

Sleep is a sign of health so long as, conforming to the telluric changes, it fulfils its teleological purpose, namely, compensation for what has been expended (§ 57). If it be

[1] Traité d. Malad. des Enfans. p. E. d. Salle, &c.

[2] L. c. p. 253.

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postponed or interrupted with spontaneity, it becomes an etiological power; if this take place without spontaneity, it has a semeiotic import. In the first case, all those organic conditions are brought on which follow an excessive and protracted exertion of the senses (§ 72), because sleep was meant to be a repose of the senses. In the second case, an excessive excitement of the action of the brain and nerves is indicated, which again is frequently occasioned by too great exertions of other organs, or by various states of disease. These are, for the most part, especially in automatically interrupted sleep (*pavores, jactatio*), congestions of the head and chest in nervously excitable individuals.

If, on the other hand, sleep be too long continued, or if there be an involuntary abnormal inclination to sleep (somnolentia), the first case is again etiological, the second semeiotic. In the first case, those states of the body are occasioned which the want of activity in the senses produces (§ 72). They are indicated, when inclined to the psychical side, as mental imbecility; when to the somatic side, as what is called leucophlegmatia. In a semeiotic view, somnolency indicates pressure, or a preexisting imperfect action of the brain. The higher degrees of excess of sleep, such as *sopor, coma, carus, lethargus*, are in themselves pathological states, the nature of which will be developed in our somatic pathology.

§ 77. Dreaming has very seldom an etiological, but, on the contrary, frequently a semeiotic indication. It may accidentally acquire the former if, in consequence of its automatic movements, a cold, &c., be caught; or it may acquire it by its contents, where the terrific images of unrestrained fancy (§ 58) act like an emotion, as, for instance, terror or affright, in producing disease (§ 44). In the rare cases of this kind which occur, we must, however, presuppose, in order to the production of such images, a greater or less tendency to disease. Dreaming has then already become semeiotic.

In this latter view, dreaming, as the precursor and accompaniment of diseases, deserves continued investigation, not because it is to be considered as a spiritual divination, but because, as the unconscious language (§ 58) of the cœnæsthesis, and of the *sensorium commune*, it often very clearly shows, to those who can comprehend its meaning, the state of the patient, though

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he himself is not aware of this; and the interpretation of dreams deserves the attention and study of the physician, if not of any one else.

The Greeks have taken this view, and the book Περὶ ἐνυπνίων, which is among those attributed to Hippocrates, contains some well-conceived hints. Albers[1] sets forth the following signs as the most approved:

Lively dreams are, in general, a sign of the excitement of nervous action.

Soft dreams are a sign of slight irritation of the brain; often in nervous fevers announcing the approach of a favorable crisis.

Frightful dreams are a sign of determination of blood to the head.

Dreams about fire are, in women, signs of an impending hemorrhage.

Dreams about blood and red objects are signs of inflammatory conditions.

Dreams about rain and water are often signs of diseased mucous membranes and dropsy.

Dreams of distorted forms are frequently a sign of abdominal obstructions and disorders of the liver.

Dreams in which the patient sees any part of the body especially suffering, indicate disease in that part.

Dreams about death often precede apoplexy, which is connected with determination of blood to the head.

The nightmare (*incubus, ephialtes*), with great sensitiveness, is a sign of determination of blood to the chest.

We may add that dreams of dogs, after the bite of a mad dog, often precede the appearance of hydrophobia, but may be only the consequences of excited imagination.

Very little can be concluded from dreaming, in a psychical, and still less in an ethical respect, because its essence consists in impeded spontaneity (§ 58), and since it is not always the more lively, but, on the contrary, rather the dormant ideas which are here prevalent (ibid.), nay, as the ideas of our dreams do not properly belong to *us*, the sentence of that Greek emperor was unjust and cruel, who condemned a man to death because he had dreamt that this man had killed the emperor.

[1] L. c. p. 408.

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§ 78. Intoxication (in so far as it is not produced merely by wine, but as stupor in general, § 59) has essentially the same etiological and semeiological import as vertigo (§ 60), that is, it causes and is a sign of the flight of ideas.

Etiologically, both are, when often repeated and continued, precursors, on the somatic side, of apoplexy; and, on the psychical side, of psychopathies, into which they form properly a state of transition. The next step beyond them is delirium.

Semeiologically, they indicate sanguineous repletion of the brain, and therefore they likewise indicate all the causes of it, or of irritation of the brain of a more nervous character, occurring in persons of a pale countenance and delicate sensitive frame; in a psychical point of view, they indicate an habitual slowness of conception (§ 60).

All these positions, here brought together, as proved by experience, are nothing more than points to be carried out, combined and applied by yourselves. He who should consider them as universally valid, oracular decisions, would as entirely misunderstand them, as (to the detriment of science and to the malicious joy of the enemies of Hippocratic medicine) have so frequently, I may say, for centuries, been misunderstood the aphorisms of Hippocrates, which do not appear in their real importance and true value till we investigate their foundations, examine the limits and conditions of their authority, and understand how to apply, to individualise, and to modify them. Never can I sufficiently repeat, that in all human research and endeavours it is indispensably necessary carefully to avoid every partial mode of consideration, to hold fast every problem as an enlightening point of intersection, whose radii are to be sought and traced everywhere to their origin; but that this process is most especially to be held sacred in our profession, which in every concrete instance presents a countless number of circumstances all equally worthy of attention to every one who has learned not merely to spell, but to read the Book of Life. You are therefore to consider the whole of this chapter only as an exhortation and inducement, by means of example, to seek and to hold fast in every particular case the intermingled relations of mind and body.

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CHAPTER V.

PATHOLOGY.

§ 79. HERE, too (as at § 62), we must especially remember that we have by no means to deal with a mere pathology of what are properly called the disorders of the mind, but have rather to follow, consecutively, that course of investigation which we have already entered upon; we must make no sudden jump in science where nature has made none; and as we have concluded the physiological (§§ 57-61) and the etiological chapters (§§ 76-78) with states of transition which have directed us to the pathological, we will at once begin this with the pathological gradation of those same states of transition; and, guided and supported by the physiological basis, we will advance forthwith from the lowest psycho-somatic manifestation (§ 15) to the higher, till we come to those anomalies of the psycho-physical relation, which, being established by experience under the name of psychopathies, undoubtedly require separate consideration, as a part only (though it be the most important) of our whole subject.

A correct notion of disease requires, first of all, as a postulate, a correct notion of health. In general pathology this notion is taken for granted with respect to the somatic organism, and with respect to the psychical, it consists in itself of a harmonious relation or proportion of thought, feeling, and will. But here, as has been separately set forth in various places, we have to do, not with any one of these taken singly, but rather with the reciprocity of all. In what, therefore, consists the normal notion of a healthy condition, as respects our investigation? In the harmonious relation of *all* these radii to the one centre of the empirical *ego*, namely, the individual personality. Its disturbance is disease—neither of the body nor of the mind *per se*, but of their reciprocal

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action; it is a functional disease, because the individual himself is thereby disturbed, or even totally impeded in the exercise of his collective functions, namely, that activity by means of which he manifests his own vital idea (§ 121).

We have no objection if, in this procedure, which is conformable with the genetic progress of nature, we are reminded of the ancient distinction, laid down by Galen, between "a diseased state" (*passio*) and "disease," (*morbus strict.*) The main point is, not to overlook that the formation (metamorphosis) of the one process is gradual and not *per saltum*. "It is evident," says Töltenyi[1] (quite in accordance with our meaning here), "how necessary it is to appreciate the *mean conditions* between health and mental aberration (the states of dreaming) in order to obtain an idea of the diseases of the mind. He who is not able to do this, labours in this field *invita Minerva*.

§ 80. Dreaming (§ 58) carried to a pathological extent, furnishes the phenomenon of night wandering, or rather sleep-walking, that is, what is called idio-somnambulism.

The circumstances of idio-somnambulism are the following: the sleeper, generally in his first, therefore deepest sleep, rises softly from his bed, performs various, often complex acts, avoids or overcomes obstacles which he meets with in so doing, even executes things which he is unable to execute when awake, enters into conversation with the bystanders, and, after an indefinite time, returns to his bed with entire composure; when he awakes he has not the smallest recollection of what has passed, and indeed, no trace whatever remains, except bewilderment or pain in the head.[2] In the next fit, however, he perfectly remembers the preceding, or enacts, through several successive fits, the part that he had commenced.

The eyes of some somnambulists are closed, of others open but fixed, and apparently without susceptibility to stimuli; nay, a candle may be held so close to the eye as to burn the eyelashes and eyebrows, without the slightest indication of sensation;[3] and even the enlarged pupil is not thereby contracted. The hearing, which, in normal sleep, is the last

[1] Vers. ein. Krit. iv, 420.
[2] Schönaug. über d. Idios. Wien, 1838.
[3] Ueber den Schlaf. &c., von Buchholz. Berlin, 1821.

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sense that becomes extinguished, is in general so closed that even the report of fire-arms does not wake the dreamer; to the call of his name alone he is extremely sensible. Conversation, however, is sometimes interchanged with bystanders. The smell is frequently altered; brimstone and phosphorus are said to have a pleasant scent to the somnambulist; often it wholly fails, as in the case of the apothecary's assistant, who held to his nose the tincture of castor, and murmured to himself, as if in excuse, "I have a cold;" or, as in the case of the man whose snuff-box was filled with coffee, which he took for tobacco.[1] The taste likewise is altered or wanting, so that the patient mistakes water which is presented to him, for wine which he has requested. Sensation is sometimes present, sometimes wanting; in general it is most perceptible in the scrobiculus cordis. Appetite is often keen. Speech the more distinct, the higher the degree of the condition. Respiration is slow. The pulse generally low and small; sometimes quick and spasmodic. The temperature is rather decreased than elevated; muscular action is vigorous, and often firmer than when awake, so that the sleeper is able to walk on the roofs of houses. The cœnæsthesis is heightened, and in general there is an aversion to metals. The psychical energies are manifested according to individual capacity, but under the sway of the fancy.

§ 81. If we impartially consider these phenomena, at the same time bearing in mind the normal transition state of dreaming (§ 58), with which we have become acquainted, they appear to be an advance of this state (which is often attended with speech, even in healthy persons) to a state of disease.

We cannot well agree with Hartmann (l. c. p. 323) and others, in representing somnambulism as partial waking, since, on the contrary, it is rather (with certain modifications it is true) a sign of a more intense sleep. Were that the case, it would be very easy to wake the somnambulist, which it is not. Even in ordinary sleep, a person who talks in his dreams is reckoned to be in a deeper sleep than one who is silent. The obscure ideal images (§ 28), which exert their influence even in ordinary dreams (§ 58), have evidently become so vivid in the somnambulist, under repressed spon-

[1] L. c. p. 45.

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taneity (§ 29), that they become, as they may in an inferior degree, even in a waking state (§ 30), invested with a motor power, and consequently take the place of spontaneity altogether, so that we might here certainly apply to the effect produced, the familiar expression of a "reversion of the poles." Thus, the walking on the roofs of houses, &c., which it would be impossible for a man to accomplish in a state of waking, may be in a degree explained, and here takes place, like the instinctive actions of animals, with unconscious security. If a partial waking existed, there would be a possibility of partial recollection, which is not the case (§ 80). In the same manner the bewilderment, which remains afterwards (ibid.), indicates deep sleep, during which the phenomenon most frequently occurs. The recollection from one fit to the next (ibid.) is likewise common to dreaming (§ 58). That the sensibility of somnambulists often appears more delicate than that of persons awake, probably arises from the circumstance that they receive impressions, not through individual waking organs, but with increased cœnæsthesis (ibid.) through the whole surface of the organism. Thus an organism otherwise disordered, or an inferior one, like that of birds and other animals, indicates changes in the barometer more correctly than one that is healthy and superior.[1] Thus polypi, in which no organ of sense is to be found, perceive, at some distance, the food that is laid before them. The poetical language, which somnambulists often use, is the language of fancy, which here rules over the intelligence, and likewise causes the sympathies and antipathies (§ 36) more prominently to appear in this state. That somnambulists easily awake at the mention of their names is, perhaps, because there is no other idea so intimately interwoven as this with the feeling of our empirical personality. "A man's own name," says Goethe, "adheres to him all over like his own skin."

It seems evidently to result, from all that has preceded, that somnambulism is not a more exalted state, nor even a state appropriate for divination, in which the mind acts more independently of the trammels of the body, but a lower and pathological state, in which it rather yields the sceptre to the physically-directed fancy, and which state we may rather place on

[1] Schönaug. l. c. 21.

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the same footing with certain states of animals, as, for instance, the sleep of birds, while standing on their legs. This conviction will serve as a clue to guide us in the sequel where these phenomena will be more and more developed, and to preserve us from many perplexities which have so frequently[1] arisen on this subject.

§ 82. The disposition to somnambulism depends somatically on a delicate nervous system, and psychically on a predominance of the direction of fancy over that of intelligence. These qualities in the personality, are often hereditary, they belong more properly to the female than to the male sex; to youth more than to mature age; and are manifested especially at the age of puberty; circumstances which follow directly from our representation, and are likewise confirmed by experience.

The occasional causes are, on the somatic side, enervating influences, such as excessive exercise, too frequently or irregularly gratified sexual appetite, abuse of spirituous liquors, an immoderate repast before sleep, indigestible or stimulating food, sleeping with the head too low; other diseases, such as menstrual anomalies, abdominal irritations, worms, gastric disorders, hysteria; perhaps likewise, sometimes, induration, or softening of the substance of the brain, and structural changes of its bony case. Larrey probed a wound which penetrated to the solar plexus. When the probe reached the bottom the patient began to yawn, to stretch himself, and to show a kind of talkative somnambulism, which could be prolonged at pleasure.

Occasional causes on the psychical side are afforded by acute mental sufferings, profound grief, excessive tension of the intellectual powers, passion; all which, with the abovementioned psychical disposition, may be promoted by a too effeminate education.

How far the moon has any influence over this phenomenon (whence the name, *selenogamia*) is not yet decided. It is affirmed that it increases at the full moon, and abates on the coming on of an eclipse. According to Burdach's statement, somnambulists contemplate the moon, even in the day-

[1] "A great perturbation in nature! to receive at once the benefit of sleep, and to do the effects of watching."—Macbeth, act. v, scene 1.

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time, when it is visible, with peculiar pleasure. As for explaining the propensity to walk on the roofs of houses by the attraction of the moon, it is a question which we shall leave undetermined.

§ 83. This malady often continues for many years; it seldom commences before the age of six, and scarcely ever continues beyond the sixtieth year. Some persons walk only two or three times in a month; some at the full, others at the new moon, but especially at its changes; some every two or three nights; a very few every night; it is often transitory and disappears of itself, even after long continuance. Sometimes it obstinately defies every remedy, and is a precursor of dangerous neuroses, as of epilepsy, catalepsy, &c., as the concomitants of which, as well as of hysteria, it often appears. In bad cases, incurable mental diseases have more frequently been observed as maladies resulting from it;[1] and thus experience indicates this state as a pathological transition to the psychopathies, before which we place it. Frightful dreams generally trouble the short sleep of the lunatic. They carry with them the form and the motive of concrete insanity, and they seldom fail to announce its approach.[2]

§ 84. Somnambulism (§ 80) in pathological gradation furnishes the much-talked-of phenomenon of what is called "animal magnetism," in so far as it arises spontaneously, and is not produced by influences purposely employed; in the latter form it belongs to the therapeutic chapter, in which it will be more fully developed.

The phenomena of idio-magnetism, so far as they are reported from credible observations, and I can confirm them as an eye-witness, are the following: in nervous patients, or in individuals otherwise disposed in the manner above mentioned (§ 82), there arises, even without preceding normal sleep, a state of somnambulism, the course of which it is usual to indicate by several

[1] Schönaug. l. c. s. 15.

[2] Mental disease "may be the most simply defined as a relapse into a state of dreaming while in a waking condition. Many persons labouring under mental disorders have, as in dreaming, no recollection, after the fits, of what they have said and done in them; and even the obstinate sleeplessness of many insane patients is in favour of the correctness of this view."—Rosenkranz, Psychol. 147. I also coincide in this view, but we must not fancy that we have thereby explained what lunacy is, for dreaming while awake must first be explained.

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degrees. The first degree, with individual modifications, presents in essentials, the phenomena of idio-somnambulism (§ 80), and differs from it only in the absence of preceding normal sleep, and in the inferior activity of the motor nerves. The impossibility of opening the eyes, which are as if glued together, is pointed out as a distinctive mark.[1] It is difficult to be convinced with certainty of these symptoms. The second degree (a transition, which, however, by no means takes place in all cases) presents the phenomenon of a more profound absorption in self, a more intense sleep, in which the patient, according to Heineken,[2] seems to be deprived of all consciousness, and all sensation. Yet even in this second degree, those sympathies and antipathies appear, which manifest themselves more decidedly in the third. The approach of certain men, or of metals, produces convulsions in the countenance or limbs of these patients; the approach of other persons, or of the magnet, relieves them. This latter circumstance connected with the artificial excitement of this state by the animal magnet, has caused the use of the term "animal magnetism." The third degree, exalted sleep, which is designated by many persons as "an inward waking" (to which I can attach no idea, because waking expresses the returning relation to the external world), produces the very surprising phenomena of the so-called *clairvoyance*. The patients now begin to answer or to speak of their own accord; they are sensible sympathetically or antipathetically of the quality of objects, as if through the instrumentality of the atmosphere that surrounds them; they describe the inside of their own bodies, foretell the time of their awaking, of their next sleeping-fit, the duration of their disorder, prescribe remedies for themselves, enter "en rapport" with persons who are in sympathy with them, and are then as sensible of the condition of these persons as of their own, often display capabilities which they did not seem to possess in their ordinary state, compose poems, have visions, speak in a more refined dialect, and frequently in a language with which they are otherwise not familiar, seem to be in a peculiar relation to telluric and sidereal influences; in short, undertake to play a part quite peculiar, which they carry through during the sleeping fits, but have forgotten when they awake. Of the symptoms

[1] Kluge, Magn. 120.

[2] Ideen und Beobachtungen, p. 56.

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of perception through the region of the stomach,[1] I have said nothing, because I have not observed them. The visions, poems, ideas, &c., in the cases which I have seen, were wholly in accordance with the individual education and mode of thinking of the patient, and never went beyond them. Of prophecies which have been fulfilled, where it was well ascertained that neither conclusions deduced from the understanding, nor deception were concerned, I have not met with any instance.[2]

§ 85. If we impartially consider these degrees, of what is called magnetism, and take a retrospective glance at the transition state of somnambulism (§ 80), the first degree would seem to be identical with it; the second to be a more intense sleep; and it is only the phenomena of the third, or the so-called *clairvoyance*, which remain to be explained, i. e. so far as they are in some degee authenticated, which authenticated phenomena, as every one who is acquainted with human affairs will readily allow, it is not always easy to distinguish.

We cannot well (in accordance with Kluge and others, (§ 84), consider this third degree as in itself an awakening. The profound absorption of the second degree leads us rather to conjecture an increased intensity of the state of sleep and dreaming, and the phenomena confirm this conjecture. The same reversal of the poles (§ 81), by which, in a heightened state of dreaming, a second fantastic personality, as it were, takes the place of the suppressed spontaneity, appears to occur in this case also. The obscure ideal images (§ 28), which for the most part have reference to the cœnæsthesis (ibid.), or indicate traces of memory (§ 33), become prominent, and the mind perceives what, in a waking state, and in ordinary sleep, almost imperceptibly passes before it, namely, the internal state of its body, and things supposed to have been long forgotten.[3] The ideas are not connected with spontaneity by notions, but

[1] Ideen und Beobachtungen, p. 121.

[2] An occasional "speaking in verse" occurs not only in idio-magnetism, but likewise in psychopathies proper, as is proved, among other instances, by the example of Schönemann (Beer's Ges. Zeit. i, 170), which is another confirmation of the pathological nature of the phenomenon—*Extasis poetica in delirio:* Nasse's Erfahr. I, 311.

[3] To this may be referred Lichtenberg's remark, "We hear, as it were, with other organs than with the ears."—Section 58.

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automatically by the laws of association (§ 34). The dreamer (§ 58), in his world of fancy, lives a distinct life which, however, through a general apperception of the external world (§ 81), (obtained not through the medium of the senses), connected with it in an wholly peculiar manner, and modified through the influence of the persons placed "en rapport" with him (§ 84), constitutes the whole of the magnetic phenomena which excite so much astonishment, give occasion to such erroneous conclusions and exaggerations, and have justly given rise to so much distrust. The second degree of magnetic sleep (§ 84) represents a profound slumber, in which the vitality of the cerebral nerves is, as it were, paralysed; automatic vitality, on the contrary, predominates. The third degree increases the latter to motor activity (§ 81). The cœnæsthesis takes the place of conscious personality, instinct that of will, conjecture, which existed even in a state of health as conjecture, that is, as an obscure conception, is now expressed as, a clear conception, positively, that is, as a divination; and sympathy, which has its root (§ 36) in the predominance of fancy, and exists in an inverse ratio to the strength of the spontaneity (since it presupposes a strong extraneous influence), obtains the mastery over the individual. The prediction of the fits and of their termination (§ 84) depends on the power of measuring time, which existed, but only obscurely, in regular sleep. Foreign languages (§ 84) are reproductions of dormant recollections, which, in a state of dreaming (§ 58), and still more therefore, here, outweigh those of daily occurrence. All the other phenomena are the results of an unrestrained fancy, whose wonderful flights, which often seem to call new worlds from the twilight of life, will not surprise the psychologist (§ 36), but will sufficiently warn him of the many dangers of self-delusion. A man even in a healthy and waking state, whose fancy is enchained, as in Raimund's fairy tales, is scarcely able to avoid these dangers.

How far electro-magnetism and psychical preponderance cooperate remains to be investigated under the head of therapeutical magnetism.

I have never witnessed or heard any credible assurance of the strictly intellectual or moral improvement of the inner man from this pathological state, or from its physiologically prefigured (§ 58) state of dreaming. The relation of the magnetic mental

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operations to the cerebral organs, of which I saw one instance which did not give me satisfactory information (§ 55), I leave undecided; and that connexion with the solar system, with which in his terrestrial orbits the somnambulist corresponds, I leave as a beautiful "ethereal fiction" to the poet, who, when like Goethe, he ventures to bring it forward, duly begs pardon for so doing.[1]

Thus then we believe that we have held fast, even here, where these phenomena become more and more complex, the clue which has conducted us, by a development in accordance with nature, from sleep through dreaming to idio-somnambulism (§ 81); and that we have simply deduced from those premises all that can in a degree be explained; in doing which, we willingly make up our minds patiently to trust what is unexplained to the working of a slowly maturing futurity.

Thus much appears here also (as in § 81), from the evidence produced, that what is called idio-magnetism is not a more exalted, but a more fettered state of the mind, in which it is subject to the will of other men, to the sway of its own instinct and of fancy, nay, even to the influence of mineral and telluric forces. That this condition must be considered as pathological cannot, therefore, be doubted. After the insight which we have thus gained, the following observations upon the uncertainty which has hitherto prevailed in this matter, may perhaps be sufficiently borne out.

§ 86. The chief obstacles to scientific progress on the subject of magnetism, are:—

1st. That those inquirers from whose judgment and impartiality the most was to be expected in this matter, concern themselves too little, or not at all about it, and prefer directing their attention to less hazardous branches of investigation. Those, on the contrary, who choose this subject of inquiry, are in general too much prepossessed in its favour to remain impartial. This difficulty is enhanced by somnambulists themselves, who, like spoiled girls, which they too often are, must have their own will, or they fall into convulsions. The presence of an indifferent or incredulous spectator excites their antipathy, and they produce their most astounding wonders only before believers; a fact of which I have often convinced myself.

[1] Goethe's Works, vol. xxiii, p. 222.

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2d. That instead of taking up this phenomenon in a purely pathological view, far too many foreign elements, which only cause confusion, have been mixed up with it, and all the value of a prophetic illumination has been attributed to the phenomena of a diseased nervous system, of a disturbed psycho-physical relation. Thus magnetism was removed from the sphere of medicine into that of theology, the physiological information which it could really afford was neglected, and yet religious information, which the simplicity of a virtuous mind can best give, was not obtained. I can produce no better confirmation of what I have advanced than in the words of a warm advocate of magnetism. "One limitation must not, however, be overlooked: we see in magnetism the feeling alone in an exalted state, while the perception and will are suppressed. This, then, is a partial state, the value of which, when we are estimating the whole, is far inferior to that of conscious waking, in which spontaneity does not permit itself to be governed by organic and mental disturbances. Though the mind be a conjuror, yet it is so only at the moment, and involuntarily, which entirely deprives it of all merit. For the behest of man consists in the ennobling of his moral nature, and in free self-regulation, which, the more efficient it is, the higher it rises above all sentimentality. Good is what we should aim at, and this towers above all the creations of fancy. There is therefore a *clairvoyance* superior to the magnetic, it is that of a wise, virtuous, and pious man."[1]

§ 87. The internal and occasional causes of idio-magnetism are so entirely the same as those of idio-somnambulism (§ 82), that a repetition is unnecessary. The same may be said of its course and results (§ 83), provided it do not appear, as is indeed often the case, as the crisis of chronic, particularly nervous disorders, especially at the period of development. In all cases what has hitherto been stated, as well as the often-observed mental disorders following it, indicate this condition as a pathological transition to the psychopathies.[2] For the rest we must never forget that, with respect to the value attached to these phenomena, much less is gained for science by the observation

[1] Eschenmayer, Vers. &c., p. 131.

[2] If this state of animal magnetism were permanent, it would become a peculiar kind of lunacy.—Eschenmayer, l. c. 117.

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of extraordinary phenomena than of those of daily occurrence. Memorable experiments moreover teach us how far designed imposition is still carried on in this matter, and how next to impossible it often is to expose it.[1]

§ 88. Vertigo and intoxication (§ 78), in their pathological gradation, lead to delirium. Between both, a dream, or a state which resembles dreaming, generally interposes, so that here too the affinity of all the above-mentioned states of transition[2] to each other is evident.

Delirium, in its milder degree, *paraphrosyne*, is the erroneous combination of manifold ideas often united with the patient's own inclinations, without his being aware of the error, or being able to overcome it.[3] These erroneous ideas then give rise to foolish speeches and actions. The more special phenomena of delirium are various. In general the following are seldom wanting. On the somatic side, flushed cheeks; turgor of the face; an unwonted aspect; a glistening eye; variable pulse; quick, and often uneasy breathing; involuntary excretions; floccitatio (picking at the bedclothes); changes of the voice and speech; soliloquising, first in a low, and then in a loud tone of voice; sighing. On the psychical side, it is the rapid flight and mutation of ideas, which the patient cannot command, that forms the criterion of the condition. Neither the thread of spontaneity nor that of association can any longer be discovered. "Consciousness," as Ideler expresses it, "seems to have been broken into fragments, which are thrown up in wild confusion by the flood." We distinguish—

1st. A fixed and a wandering delirium. The former, in which all the fleeting images turn, as it were, on one axis, indicates somatically, a more profound alteration in the organisation of the brain; psychically, the predominance of one mental emotion; the latter, which originates from it indicates, somatically, slight excitement of the brain; psychically, changing emotions of the mind.

2d. A *mussitans* and a *furibundum*. The first indicates, somatically, a succumbency of the vitality; psychically, depressing emotions of the mind, or weak psychical spontaneity; the second

[1] See Pr. Gerdy, in Wochenschrift, 1841. III.

[2] See Albers, Semiot. p. 408.

[3] Ibid. l. c. p. 393.

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indicates, somatically, a more inflammatory state, psychically, exciting mental emotions, or powerful reaction. The division into delirium, with a pale and with a florid countenance, is taken only from one symptom, and coincides with that which has just been mentioned.

3d. A cheerful or a wild. This distinction depends on the difference of the objects which constitute the materials of the morbid ideas. It is fruitless, as has been frequently done, to make this difference of the object a ground for division, and to distinguish, for instance, a religious, an erotic, a suicidal delirium, &c. We shall see in the combined degrees of disturbed psycho-physical relation that the objects of the delusion, though very important in respect to diagnostics and therapeutics, yet do not express the essence of the disturbance, but are modified, according to the most various motives, in the individual cases. Yet experience shows that certain ideas are undoubtedly peculiar to the delirium of certain diseases, which is partly to be accounted for by the translation of obscure bodily sensations into the confused language of the mind, and partly awaits a more precise explanation. To the former category often belong the erotic delirium arising from an excited state of the sexual organs; delirium, with ideas of the abnormal size of some parts of the body, when those parts suffer; delirium, with the delusion of being able to fly, in abnormal states of the organs of respiration; and delirium accompanied with visions of flames, in determination of blood to the brain; to the latter category belongs the delirium running on cats, rats, mice, in what is called the madness of intoxication, and *delirium tremens;* the delirium running on serpents, which is often observed in chronic inflammation of the bowels, &c.

4th. An acute and a chronic, according to the duration; the first being usually accompanied with fever, the second, free from fever. It is to be understood here, however, that the chronic always appears either remittent, or, as in most cases, intermittent.

§ 89. If we comprehensively consider these phenomena, we cannot fail to perceive that they form a progressive series, commencing with sleep (§ 57), as marked by stupor; with dreams, as marked by the predominance of fancy; with intoxication (§ 58), as marked by their causes and form (§ 59); and with

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vertigo, as marked by the rapid flight of ideas (§ 60). In all these conditions the nervous vitality is so lowered, that psychical activity is thereby impeded in its manifestation. They form the last step of the transition to the psychopathies properly so called, and we must now proceed to discriminate the scientific distinctions as nicely, but as decidedly, and to combine them as carefully, as nature does their phenomena.

§ 90. It will readily appear, from the preceding observations (§§ 88, 89), that the often-agitated question, whether delirium and insanity be identical or not, is a superfluous question. It has been most frequently answered thus: that acute delirium with fever is to be distinguished from chronic without fever, which latter is to be designated insanity. But the *duration* of a state can by no means determine its *essence;* a corporeal disease cannot, because it is of long duration, be called a mental disease, and *vice versâ;* nor can the presence or absence of fever, which is possible in every condition, decide the matter. Delirium therefore is identical with delirium, wherever it occurs.

On the one hand, we find by experience, delirium occurring frequently, as the state of transition above described (§ 89), without that alienation of the personality with which we are hereafter to become acquainted as insanity, while, on the other hand, we see what are called mental disorders, occurring sometimes with, sometimes without delirium. Delirium, therefore, is not identical with insanity in its more extended signification.

Now, if any one should call by the name of insanity that psychopathy which is combined with delirium, no objection could be made, but insanity would nevertheless not be mere delirium on that account.

Delirium, therefore, considered in, and by itself, is a symptom which indicates the transition of a purely somatic disease into a psychopathy, or, if the latter already exists, it is a symptom of it. It indicates that transition, because it makes manifest a disturbed mental function; we might therefore say that every delirium is psychopathic, but that every psychopathy is not delirium. They are related to each other, as a part is related to the whole. In an organism a part may,

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by gradually enlarging, take possession of the whole, and simulate a whole.

The elucidation of this question, which, however, after all only turns on words, will not be completed until we come to a knowledge of the psychopathies properly so called.

§ 91. There is no decided predisposition to delirium, unless we consider as such that germ, either inherited (§ 53, *b*), or implanted in the individual in the ways pointed out (§§ 49-54), which facilitates a general preponderance of the psychical spontaneity through the medium of psychical or somatic forces. This, however, has reference to all the degrees and forms of psycho-physical disorder as well as to this.

Of the occasional causes, however, the abuse of spirituous liquors deserves to be especially noticed, because it is the frequent cause of that disease which, accompanied by decided somatic conditions arising from the effect of spirituous liquors, has obtained a distinct place in special pathology by the name of the delirium of drunkards, *delirium potatorum cum tremoribus*. This form, however, can no more be distinguished and represented as an individual psychopathy than can home-sickness[1] (nostalgia, § 70). As the latter is only the psycho-physical effect of grief from a certain cause, so does the former only indicate delirium from a certain cause. But it would occasion an embarrassing prolixity in the science, if we were to adduce and describe every etiological relation as a particular species of disease, as has happened, for instance, with the hypochondriasis of the learned, the *syphilis imaginaria*, or even with the Court disease, *mal de Cour des dames*, in Weikard, and the like.

The course of delirium has already been stated (§ 88, 4), its termination, after frequent repetition, in insanity, confirms also the place which we here assign to this phenomenon.

The teleological view deserves to be mentioned here, according to which, delirium is often to be considered critical; that is, in so far as mental action is prevented by it, as manifested in incoherent talking, from exhausting the powers by exciting spontaneous motions, at a time when those powers are necessary

[1] True insanity occurs (according to Ideler's observation, vol. i, p. 173) far more rarely after the *delirium potatorum*, than after indulgence in spirituous liquors not carried to the extent of intoxication. The proper cause of the breaking out of the *delirium potatorum* is, on the contrary, for the most part, a mental emotion.

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to vital action. (See Ideler, ii, 390.) Every attempt to explain those critical phenomena, which nature unquestionably presents to us, is teleological, and therefore, though not admissible into the main substance of our narrative, deserves our warmest acknowledgment, as furnishing matter for useful reflection.

§ 92. The course of our inquiry, already prescribed (§ 79), leads us now to the diseased *states* of the individual psycho-physical functions, which we shall consider in the ascending line, beginning with the lowest, the cœnæsthesis (§ 15).

The cœnæsthesis becomes diseased accordingly—

1st, When it is affected too strongly;

2d, or too weakly;

3d, or erroneously, in the manner;

4th, or differently in different parts;

5th, or in a manner composed of all these relations in those special forms of disease, *a*, the hypochondriasis of men, and *b*, the hysteria of women.[1]

§ 93. An exalted cœnæsthesis attracts the attention of the patient (§ 25) too much to his own corporeal condition, causes him often distinctly to feel internal sensations, which would be otherwise obscurely felt, or wholly imperceptible, and to pronounce divinatory opinions (§ 84) respecting his disease. Hartmann's judicious warning should be well borne in mind: *Non raro ægrum ab hoc sensu, et medicum ab ægro falli, cum æger ex sensu communi hausisse hinc inde adfirmat, quod imaginatio et præcepta etiam opinio illi suggessit.*[2] In this state moderate impressions cause excessive sensations, and those impressions are felt which are otherwise imperceptible. This occurs spontaneously in various ways in all the spheres of the cœnæsthesis, though more frequently as an accompaniment of the most diverse diseases. Pain, itching, anxiety, restlessness, increased sensibility to heat and cold, or a sensation of weakness, the physical significance of which is taught in general pathology,[3] and the psychical in the chapter on etiology and semeiology (§§ 62-78), are the individual symptoms of it.

[1] This view, everywhere carried through by Hartmann by means of logical categories, is always very useful, because it furnishes a generalising clue. What nature indeterminately specialises may be therefore specially added, till the advance of science shall render, in this instance also, a definite deduction possible.

[2] Pathology, p. 261.

[3] Töltenyi, p. 433.

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Rheumatism often excites pain suddenly without any perceptible organic alteration; the pain frequently vanishes as suddenly without any visible change. Pain comes on in a part, while the cause, which is acting upon it, remains the same as before it came on. Some time always elapses before a wound gives increased pain, though this sensation should be greatest at first and decrease with its duration. An elevated cœnæsthesis seems therefore to pre-exist under all these circumstances.[1] Increase of the cœnæsthesis appears also to be the condition sometimes occurring in disorders when the patient fancies that some parts are stronger, thicker, longer, &c., than they really are. If this happen to the organs of sense, the functions of the sense are interrupted.

Nasse's patient,[2] who felt as if his tongue had become thicker, was less sensible than formerly to the taste of pungent articles. During a feverish attack, I once had a strange sensation of movement, which perhaps was referable to this head. I held a book, which I was reading as I lay in bed, with perfect ease in my hand, yet felt as if my fingers were swollen, and as if I was obliged to use considerable exertion. Something similar occurs in cramp in the hand while writing. If these sensations increase to delusion, they belong to the third category, that of the phantasms (§ 95).

The cause of this diseased condition is a generally increased nervous action, an uninterrupted conduction from the vegetative to the cerebral system of nerves (§ 11), and everything that can give occasion to it (§ 82). It takes place, however, in members destitute of nerves; for instance, in bones, in stretched fibrous tissues, in the stumps of teeth, &c. (§ 7).

§ 94. A depressed cœnæsthesis represents to the mind the state of its body more obscurely than a normal state does. Strong impressions are faintly felt, faint ones not at all. This condition is different according to the degree, to the nature of the structures chiefly affected, and to the combination with other allied conditions. For instance, a part of the body shall not excite the cœnæsthesis at all, but be felt only through the adjoining parts, on which it acts by pressure and weight as an extraneous body. The muscles have lost the sensation of weight, the œsophagus that of warmth, the bladder that of irritation of the urine.[3]

[1] Nasse, Zeitschrift, 1822, pt. 1, p. 48. [2] L. c. p. 49. [3] L. c. p. 47.

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The cause of this diseased condition is a generally imbecile action of the nerves—a total interruption of conduction from the vegetative to the cerebral nervous system (§ 11), and everything which can give occasion to this, such as hereditary imbecility (§ 53), sopor (§§ 57, 76), cold, pressure on the nerves, their severance, &c.[1]

§ 95. An altered cœnæsthesis falsely represents to the mind corporeal conditions different from those which really exist. The patient feels hot in a cold room, or *vice versâ*, feels himself strong when he is lying powerless, fancies that his body is cut in halves, &c. These morbid ideal images, which we will call, with Brach,[2] phantasms of the cœnæsthesis, play an important part with reference to the mind. An accurate knowledge of them secures us from error in the study of psychopathies, and explains many cases of what are called fixed ideas. A man, for instance, fancies that a whole ocean of water cannot quench his thirst. He may acquire such a conception through the medium of false premises and conclusions; for instance, from the dryness of his body, which will not diminish though he has taken quantities of fluids, so that he, as it were, fancies thirst without feeling it. He may also acquire the sensation of thirst in consequence of a perverted action of the nerves of the œsophagus; in the first case, there is a so-called fixed idea, in the second, a phantasm of the cœnæsthesis.[3]

But however useful, on the one hand, this distinction of the fixed idea from the *Phantasma Cœnæstheseos* is, since the patient cannot be considered as "disordered in mind," while he himself does not look on his sensation as truth (objective), and the treatment of the two cases must be different (in the one more psychical, in the other more physical), it is, on the other hand, to be well observed that here, as in the states of transition before treated of (§§ 83, 87, 91), nature draws less marked boundary-lines than science; for in the human personality every mental process is also corporeal and *vice versâ*, (§ 3), and experience teaches that phantasms of the cœnæsthesis, when they attain a high degree, and meet with a feebly reacting spontaneity, frequently terminate in insanity. The mind translates, as it were, the sensation of bodily conditions into

[1] L. c. p. 45. [2] L. c. p. 117. [3] L. c. pp. 117, 118.

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its own language, symbolising the type of them by moral relations. Thus Stahl in his own way has already explained this process.

The examples of such phantasms are too numerous and too various individually to admit of arrangement. When a limb, as we express it, has "gone to sleep," we do not feel it in a higher or lower degree, but altered. When a round *hemorrhoidal tumour* occasions a pricking sensation like a pointed body, this is an illusion of the cœnæsthesis. When pain is felt in quite a different organic region from that in which the cause is situated, this is often an altered cœnæsthesis, which unfortunately as easily misleads the medical man as the patient. To this head, too, we may refer the feeling of pain in the situation of amputated limbs (§ 10), a phenomenon which Nasse justly observes[1] does not always occur, but only when the cœnæsthesis is disturbed by the influence of the weather, &c.

The cause of this alteration of the cœnæsthesis is very problematical. The intellectual Hartmann, whose precision and caution are incomparable, and whose most casual remarks have often a profound meaning, expresses himself in the following manner:[2] *sensibilitas, exaltata, depressa* (one, therefore, as well as the other), *inæqualiter per systema nervosum, distributa* (what positive idea does this suggest?) *morbo quocumque* (how wide a range!) *alienata* (that is the very point respecting which we ask HOW) *harum perceptionum fallacium*—and now he adds very wisely—*rationem reddat, oportet.* This *oportet* spares all further discussion.

§ 96. A locally deranged cœnæsthesis may be especially distinguished by the most important foci of the vegetative system, in which it manifests itself (§ 13). In them, too, the lowest egotistical impulses of the body are rooted (§ 46), so that these morbid states manifest themselves for the most part as impulses.

The focus of generation is also the focus of many abnormal feelings, which sow the seeds of diseases, and which again, like the phantasms of the cœnæsthesis (§ 95), represent psychopathic states of transition. Such are the satyriasis in men, and the nymphomania in women.

[1] L. c. p. 52.

[2] Pathology, p. 265.

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§ 97. *Satyriasis*, in the most extensive meaning of the word, is an excitement of the sexual impulse, proceeding from the disturbed cœnæsthesis of the focus of generation. It is no more a special mental disorder, properly so-called, than home-sickness (§ 70), or *delirium potatorum*, but a symptomatic state, which occurs in psychical as well as somatic diseases, and often changes in the same patient (especially in hypochondriasis) into its opposite—an aversion to sexual enjoyment; but as a state of transition, if it attains a high degree, and meets with a feebly reacting spontaneity, it may pass, like the phantasms of the cœnæsthesis in general (§ 95), into (terminate in) insanity.

These excitements act psychically on the fancy, where they are reflected, often deeply concealed under the most extravagant, or even supernatural images; somatically, they act at the expense of the brain, for seminal emissions lead to fits of the nightmare and of epilepsy. They excite the strongest caprices (§ 39), idiosyncrasies, appetites, and ecstatic paroxysms, which have this peculiarity, that the patients with smiling countenances speedily return to order.[1]

Among the causes of this condition are an interrupted development of the vitality and secreting functions of the genitals, increased irritability of them, and their repeated excitement by fancy, or by external causes. The assertion that a state of inflammation may cause it, which, on the contrary, often effects the reverse, is declared by Nasse to be unfounded.[2] The case may be the same here as in secretions, which a symphoretic condition increases, and an inflammatory impedes: all would depend, therefore, on the degree of congestion. How far (as Gall alleges) the cerebellum is concerned is not determined by any observations that have hitherto been made.[3]

§ 98. Nymphomania is, as it were, the counterpart in the female sex of the same disturbance of the cœnæsthesis. It too, is, as such, not a psychopathy (§ 97); it is a symptom of divers bodily and mental disorders, and a state of transition to the latter (ibid.), among which, as *furor uterinus*, it represents a variety of mania (§ 144). With the metamorphoses of female sexual life, the most various disturbances of psychical

[1] Reil. Rhaps. p. 262. [2] L. c. p. 58. [3] Ibid. p. 57.

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and physical individuality manifest themselves, which, in conformity with the peculiar nature of the female constitution (§ 51), are much more violent in their effects, and more striking, than sexual excitement in the male. When these disturbances exceed the normal degree (§ 67), the several forms of a disorder appear, which does not, however, pass into mania, until it attains the highest degree, and should not, till then, be called nymphomania. These forms are so manifold that it is impossible to define them with precision. To this must be added, that in this state of transition the sense of modesty, which is not extinguished, does not, as is the case with men, always allow the disorder to be recognised by its proper criterion (§ 97), namely, a manifestation of the excited sexual instinct; nay, that this cause itself is often hidden from the consciousness of the innocent sufferer herself. Whenever, therefore, there appear in the female sex at the above-mentioned epochs (§ 67) psycho-physical anomalies often contradicting each other, and which are not otherwise to be accounted for, we must think of this condition. Psychical and physical action are sometimes overstrained in it, sometimes relaxed, according to the personal constitution of the individual, and to external circumstances. One of the best general descriptions of Nymphomania is that of Ibn Sina: "This disorder borders on melancholy; it betrays itself by eyes deeply sunk in their sockets, by a continual motion of the eyelids, accompanied by a certain laugh. The breathing is often interrupted, often, as it were, checked, and often again accelerated. Sometimes the patient is cheerful, and smiles; sometimes she is sorrowful, and weeps, especially when the images of her desire are awakened in her. Her whole body wastes away, except the eyes, which, indeed, appear sunken, but swollen by want of sleep and weeping. All the affections of the mind are irregular; the pulse is unequal, and suddenly changes at the sight, or even at the bare mention of the desired object. Often all the images rapidly vanish when the desire is gratified."[1] This last circumstance, which occurs in the same manner in home-sickness, points out both conditions as transitions, since in actual dis-

[1] See Zimmermann, v. d. Erfahrung, p. 679. A very minute poetical description of this state of the mind is given by Goethe, through Mephistopheles, who describes Margaret's passion.—Faust, p. 174.

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cases a removal of the cause can only give a momentum to the cure—that is, cannot, as in the former case, at once effect it. In the minds of well-disposed young females, unconscious of the cause, this state often assumes the disguise of ideal feeling (§ 41), with which it is so easily connected by the fancy (§ 36). Under this head we are to place the numerous stories of the visions of young women which are enumerated in Zimmermann's work on 'Medical Experience,'[1] and elsewhere. Such girls fall, while awake, into a state resembling magnetic *clairvoyance*[2] (§ 84, 3), as I have myself had an opportunity of observing.

The causes are the same here (*modificatis modificandis*) as in the male sex (§ 97); only the above-mentioned cyclar epochs (§ 67) and the more delicate constitution (§ 51) must be taken into account. This exaltation of the cœnæsthesis is found in the generative focus, which is mostly connected with a characteristic restlessness, and therefore, for the most part, in older virgins, young widows, and, by repeated psychical affluxes of innervation (§ 30), in women who lead a life of imagination, write poetry, read nothing but novels, and the like. But we must not here forget the merely somatic determinations of the cœnæsthesis. Thus Hufeland relates[3] that he saw a very respectable woman, 70 years of age, who suffered from this malady, the sole cause of which was shown by dissection to be a scirrhous degeneration near the ovaries. I do not attempt to decide whether bones, hair, and similar structures, often found in the ovaries of such patients after constant turgescence of the genitals, are to be placed to this account of the awakened yet ungratified procreative impulse.

§ 99. When the phrenic focus of the cœnæsthesis is diseased (§§ 96, 13) muscular action is relaxed, and weakness, fainting, heaviness of the head, anguish, sighing, oppression in the præcordial region ensue; psychically, want of attention and of firmness in thinking and deciding. The mind feels as if enveloped in a mist.[4]

When the solar plexus (§ 13, *c*) is the chief seat of disease, the humour of the patient (§ 39) appears particularly unde-

[1] Buch, iv, K. 12, p. 701.
[2] Enchirid, p. 281.
[3] Mauchart, Repertor. Numb. 1791, p. 75.
[4] Reil, l. c. p. 264.

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cided. He is desponding and low-spirited, dwells on trifles, especially with regard to his own state of health, is wavering in his emotions and resolutions, timorous, gloomy, and disposed to strange fancies.[1]

The causes of this disorder may be those above stated (§§ 93, 95), when, through individual disposition, or by external circumstances, they are determined especially to the corresponding focus of the cœnæsthesis.

§ 100. Let us conceive all the hitherto described (§§ 93-99) different, nay, contradictory conditions, as existing in combination in one individual, and we shall obtain in our minds an idea of the well known, much-talked of, common, and yet inexhaustible form of disease, which, in men, is called hypochondriasis, and in women, hysteria (§ 92).

Hypochondriasis, as a state of disease, whose description, owing to the mutability of the phenomena, whose reduction to one principle, and whose treatment, have always been the *vexa medicorum*, is in its essence nothing but a cœnæsthesis abnormally heightened in all directions. Hence all its peculiarities may be deduced. The cœnæsthesis, namely, as it represents a point of contact of the psychical and somatic spheres (§ 15), is either affected on the psychical side by strained attention (§ 25) to the ideal images reflecting on the state of the body —this affection, which is originally a purely psychical state (an imagination), is called as such, *hypochondriasis sine materie* (a fancied or cricket disease),[2] but gradually becomes a somatic affection (§ 30) by the constantly repeated centrifugal disturbances of the innervation—or the cœnæsthesis is originally

[1] Reil, l. c. p. 264.

[2] Kant (Anthrop. p. 150) derives this name from the attention which is excited through the disturbance caused by the nocturnal chirping of the house-cricket (*Haus grille*). I believe that the term *grillenfangen* has always been used to indicate, *per analogiam*, the employment of an idle imagination concentred on itself. Dubois, in his well-considered work on Hypochondriasis, assumes the first cause that we have assigned to its origin as the only one; in nature, however, there appears a circle between psychical and physical causes. In the psychical origin, however, that described by Dubois, viz. a threefold gradation of the transition to psychical disease, affords a good clue to the explanation of the phenomena. The first stage, is that of strained attention; the second, that of the neuroses produced by it (by means of innervation); the third, that of the disorganisations produced by it (by means of disturbance of the functions).

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somatically heightened in the nerves (§ 93), and thereby forcibly attracts the attention to itself; *hypochondria cum materie, intestinalis.* It is always *vaga* because the cœnæsthesis acts normally in all directions; hence the countless differences. If psychical excitement be the cause, the patient believes that he has all the disorders which he sees, or hears, or reads of; because he feels every part of the organism the moment that he innervates it, by constantly fixing his attention on it. If the somatic excitement be the earlier, then the organic spheres really suffer by centripetal innervation. We perceive, therefore, that Lichtenberg was not far wrong when he called hypochondriasis a microscope, through which we see and study the conditions of the body and mind, from which all men suffer, but which are not observed without this microscope. Be it understood, however, that we shall make no further mention here of a psychical direction of the attention which creates something out of nothing; that belongs to the subject of free thinking, and I have not failed to express the worst opinion of it in another place.[1] Hypochondriasis does not fall within our medical sphere until primarily or secondarily it has become a disease.

The most general phenomena of this morbid condition, with all exceptional changes, are somatically, hyperæsthesia (§ 93) of all, but especially of the vegetative, nerves (§ 11); pseudæsthesia of the same (§ 95), with the most various phantasms of the feelings (ibid.); a contradiction between the subjective complaints of the patient and the objective phenomena in the organs complained of;[2] the most decided idiosyncrasy (§ 53, *e*); great dependence on external influences (the atmosphere, light, &c.); the most marked reflex of the disorder on the organs of digestion causing constipation, and flatulency; psychically they are: subdued spontaneity, predominance of the fancy (§ 37), very striking egotism of self-feeling (§ 39), with variable whims (ibid.), and all the commotions of the mind resulting from them.

The hypochondriac presents a melancholy picture of the human mind under subjection to the body. The slave of

[1] See Diätetik der Seele, p. 97, &c.

[2] According to Canstatt (Spez. Pathol. iii, 394) "the red thread which unites the phenomena of hypochondria."

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his own caprices, now of the anxious fear of death, now of extravagant licence, he feels (pitiable advantage over the brute, whose feeling does not reach so far!) all his maladies doubly and trebly—compelled as he is to see himself the laughing-stock of his fellow-creatures, to whose weal or woe he is egotistically indifferent—and treated as a child or an idiot by his physician, who gives him crumbs of bread instead of pills. He who is perpetually seeking, yet never finds himself, before whom, as in a feverish dream, the sombre images of life rush confusedly by, from whose agony in his troubled sleep even real dreams do not relieve him, never can have any real enjoyment in life. Tormenting himself and others, he is unable to distinguish between delusion and truth even in his images, or to enable others to distinguish them, and his short intervals of extravagant mirth only enhance the feeling of despair which succeeds them. Were it to be wondered at if such a state should pass on to an entire disturbance of the relations between mind and body—to insanity?

Dubois characterises hypochondriasis as actual insanity (*monomanie hypochondriaque*), designates home-sickness as a form of it (§ 70) (*monomanie nostalgiaque*), assumes morbid imaginations as a ground of distinction for other forms of the kind (*monomanie hydrophobiaque*, &c. &c.), and thus brings under this head the fixed ideas proper, or monomanias respecting conditions of the body or of the identity (*cynanthropia, lycanthropia*, &c.) A mature consideration of all the given facts shows that here, as everywhere in the course of nature, transitions do indeed take place, but that hypochondriasis, as such, has not yet become insanity; that home-sickness, as a definite effect of a definite cause, is likewise capable of being decidedly distinguished from hypochondriasis, as are also the fixed ideas, in which it is as it were localised, and then ceases to be hypochondriasis, and begins to be insanity.

§ 101. The causes of hypochondriasis are those of the heightened cœnæsthesis (§ 93) in an intense degree, and not only in the above-mentioned (§§ 96-99), but in all directions; united with the idiosyncratic peculiarity (§ 53 *e*), which so variously modifies the phenomena, and adds moreover the *phantasmata cœnæstheseos* (§ 95). The cœnæsthesis is therefore here affected in its higher potentiality as self-feeling (§ 39), and hypochondriasis might be literally designated as selfish-

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ness. Whether we must assume a specific affection of the vegetative nervous system, by virtue of which the office of semi-conduction (§ 11) is, as it were, broken through, so that sensations from the abdominal sphere become perceptible, which otherwise are not at all, or but little so,[1] is still undecided. In that case the solar plexus must be regarded as acting, not independently, but as a conductor, because its functions are precisely those which are the most affected (§ 100). It is confirmed as well by theory as by experience, that other diseases in the vegetative sphere have a great share in producing hypochondriasis, whether by pressure on the nerves, or by organico-vegetative chemical alteration of them, or secondarily; since these nerves, originally destined for plastic purposes, and not for sensation, as they become more sensitive, become also less plastic (thus the hæmatosis suffers).

From this consideration of what is called the proximate cause, the essential part of the predisposition, as well as what are called the occasional causes of this complaint, are easily deduced.

The predisposition is especially peculiar to men (we shall have to treat in the sequel of the modification of this state in the female organism), after the epoch of puberty, and before that of advancing age; with preponderant abdominal constitution, soft, relaxed fibre,[2] melancholy temperament (§ 50), indolent habits (§ 52 *c*), and hereditary tendency (§ 52 *b*). If hypochondriasis, properly so-called (that is, where the phrenic affection predominates over the sexual), attack women, which sometimes happens, they are generally masculine, Amazonian women. The *spleen* of the English seems to indicate that there is also a national disposition (§ 52 *b*) to this disorder.

The predisposing causes are either psychical or somatic (§ 100). The causes which act psychically are, education (§ 53 *a*), selfish passions (§ 47), an unfortunate condition in life, or more frequently one so over-fortunate as to lead to satiety and *ennui*, reading, especially dabbling in medicine, and, in general, in all serious sciences, where it produces a smattering of knowledge, fruitless (because erroneously undertaken) efforts, and tormenting doubts, imitation,[3] and overstrained attention to the feelings

[1] Brach, l. c. 105. [2] Fr. Hoffmann, de M. Hypoch. § vi.

[3] "To live with an hypochondriac not only occasions ennui, but is attended with danger."—Romberg.

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referable to the cœnæsthesis. Those causes which act somatically are sexual and gastronomic excesses, abdominal plethora, and in general all chronic disorders of the bowels, and their causes.

The hypochondriasis, which so frequently remains after syphilitic contagion and the use of mercury, deserves particular attention (*post non propter*). It is founded upon the dread of a still latent poison. and occurs so frequently, that Weikard noted it as a *species—syphil. imaginaria;* and later writers,[1] perhaps on that account, have placed mercurialism among the causes of insanity.

§ 102. The course of hypochondriasis is as characteristically capricious as its form (§ 100); it remits, nay, intermits, according to a type, which it is difficult to make out. At the beginning the intervals are longer, and gradually becoming shorter and shorter, at length cease entirely, when the malady generally becomes permanent. Many hypochondriacs feel better in summer than in winter, and it is a more common circumstance which may be daily observed, that they feel less uneasy in the evening than in the morning. I have never yet seen crises which had removed hypochondriasis as such, though hemorrhoidal flux, cutaneous eruptions, &c. are cited as effecting its removal. This state is, however, combined with many independent diseases, especially with gout and affections of the heart. It is affirmed that it frequently excludes them, and in particular acute, febrile, exanthematous diseases.

The immunity from many epidemics and contagions ascribed to hypochondriacs, may be attributed to the concentration of their attention on themselves, and their consequently diminished receptivity for the external world.

The result issues either, in rare cases and very slowly, in recovery, or, which is more usual, in no recovery at all; that is, in the permanency of the condition till the end of life, or in subsequent disorders, and among these the so-called psychoses are by far the most frequent, which justifies the place which we have here assigned to hypochondriasis next to the preceding states of transition (§§ 80, 84 88, 97, 98).

§ 103. Hysteria, the sister condition, whatever nice dis-

[1] Marc, Geist. Kr. i, 103.

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tinctions may be made between them, is only the same disturbance of the cœnæsthesis, as modified in the female sex (§ 98). For all the psychical as well as organic differences which it presents, and which, it is true, are considerable enough, appear to be chiefly founded on the psycho-organic difference between the two sexes (§ 51). We must therefore recapitulate in this sense the preceding paragraphs, and, to spare repetition, only point out the difference.

The hyper-cœnæsthesis (§ 100), which is here too the foundation, exists in a higher degree, in consequence of the greater delicacy of the nervous system in the female sex (§ 51), on which account the stronger innervation more easily becomes motor (§§ 30, 81); so that morbid movements (convulsions) prevail here along with the morbid sensations predominant in men. The chief reflex action (§ 100) is here directed less to the digestive than to the sexual system, which performs the most important part in woman. Here more frequently than in hypochondriasis (though it is not wanting even there), whether it be primitive or consecutive, that hyperæsthesis of the spinal marrow co-operates, which, under the name of spinal irritation (neuralgia spinalis), is sometimes more local, sometimes more general. This circumstance likewise corresponds with the predominating motor form of the phenomena, since uterine diseases especially cause spasms and convulsions. On the psychical side likewise, together with a generally weaker spontaneity, a melancholy disposition is more preponderant and more decided. Hence the constant inclination to weep in hysterical patients.

All the other symptoms which are more particularly considered in special pathology[1] as distinct local disorders, and are rightly so considered in order to obtain a more accurate knowledge of them, such as pains in the back, breast, head, bowels, &c., are owing in all their several branches only to the above-mentioned greater preponderance of nervous action, accordingly as the spinal nerves, the *vagus*, or the *phrenicus*, &c., are more sympathetically affected by the uterine nervous system. The most remarkable are, *hyperaphia*, that is, such an extreme and general sensibility that even the slightest touch gives pain; the

[1] Canstatt, l. c. p. 112, &c.

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globus hystericus, that is, the feeling as of a ball rising from the stomach into the throat; the *clavus hystericus*, that is, the feeling as if a nail were driven into a certain spot on the head; *anathymiasis*, that is, swellings of larger or smaller portions of the body, which appear transiently, and again disappear. Here likewise, with all other forms of oscillatory (clonic) and continued (tonic) convulsions and cramps, whose name is legion, the pathological laugh (§ 30) makes its appearance. All these phenomena are more properly to be treated of in the special pathology; here they are only to be pointed out, in order to explain the essence of this psycho-physical relation as being a hyper-cœnæsthesis through an augmentation of the individual innervations.

§ 104. The causes of hysteria are in general the same as those of hypochondriasis (§ 101), only that in this respect also, instead of the digestive system, the generative has the principal share.

The disposition is chiefly met with in females at the period of development, or at the climacteric epoch; but for the most part, in such as have remained unmarried, and in whom both the want of exercise in those sexual functions intended by nature for use, and disappointed desire or hope, or at least the feeling of having failed in their earthly destination, are to be taken into account. When men are attacked by genuine hysterical fits (*globus hyst.* &c.), which certainly does occur, they are, for the most part, effeminate men. Whether there be also any national predisposition here, as, for instance, of the Italian women (J. Frank), I do not know by experience. I only know that the condition is, at all events, not wanting in frequency among German women. All the other occasional causes or momenta agree with those which predispose to hypochondriasis (§ 101).

It is the same with exciting causes (§ 101). Those who have seriously contemplated the female education of our times (undoubtedly the *partie honteuse* of the moderns), will find it, in this etiological respect, much more influential than that of the other sex. It combines everything that can heighten sensibility, weaken spontaneity, give a preponderance to the sexual sphere, and sanction the feelings and impulses that relate to it. This is not the place to discuss these positions, which are well worthy of examination. To those who are acquainted with the state

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of society they are self-evident. On the somatic side, disordered states of the sexual system are here particularly to be kept in view, such as result from irregular menstruation, impotent husbands and frequent childbed confinements. The excessive use of coffee and tea undoubtedly deserves also especial mention.

§ 105. In the progress of hysteria, as in all the more intense neuroses, the intermissions are more decidedly marked than in hypochondriasis, and the exacerbations become real paroxysms. The most fearful fits are often at once suddenly converted into extravagant mirth. Here, too, the patients suffer less in the evening than in the morning (§ 102). The emotions (§ 30), especially weeping, are considered as crises, but they can only be received as such with reference to the individual fit.

The disorder itself passes, after progressively lengthening intervals, either into recovery, or (after the climacteric age), into its own milder yet more substantial imitation, or into consecutive diseases, among which are the states of transition which so often accompany it; namely, nymphomania (§ 98), somnambulism (§ 80), idio-magnetism (§ 84), and violent neuroses, such as epilepsy, catalepsy, paralysis, &c. (§ 102); psychoses are, here again, the most frequent of all, which confirms the identity of the conditions of which we have spoken (§ 102).

§ 106. The course already pointed out leads us now to morbid states of the senses (§§ 16-20), in so far as they are psycho-physical. They consist either in—

1st, Heightened;

2d, Diminished;

3d, Or altered perception, either in manner; or

4th, Relatively.

The category of individual senses disturbed in their relations to each other, is never pathological.

Pure hyperæsthesis (1) and anæsthesis (2) of the senses wholly coincide with general hyperæsthesis (§ 93) and anæsthesis (§ 94), as well in their essence as in their causes, and we have accordingly only to examine the two latter categories (3, 4) of the alterations of the senses, which correspond with the phantasms of the cœnæsthesis (§ 95). They are either (3) abnormal in manner; that is, the senses represent indeed to the

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consciousness the objects really existing, but differently from what they are—illusions; or (4), in their relation, that is, the senses convey erroneous relations, they represent to the consciousness as an object, what is only a subjective process,—hallucinations.

It was a favorite position of Kant: "The senses do not deceive us at all, it is only the judgment which deceives us."[1] Inasmuch as the senses do not judge at all, this position is a tautology; in respect to illusions it is true, because we may here convince ourselves of the nature of the objects, at least afterwards; in respect to hallucinations, it is incorrect, because the wisest and most circumspect cannot be master of his altered organs. At this stage the deceptions of the senses, for the most part, cooperate psychically, and form again the line of transition to the psychopathies. It is therefore useful in this, and every other respect, strictly to adhere to the difference between illusion and hallucination.

§ 107. Illusions of the sight are often owing (§ 106) merely to inexperienced judgment; for instance, when children catch at the moon, as if it were close at hand; when persons born blind commit similar mistakes, after undergoing an operation; when a stick, immersed in water, appears to be broken; when the shadow of a tree is, for a moment, taken for a man; when the banks of a river seem to fly past a steam-boat; when a burning coal swung round in a circle looks like a ring of fire, &c. These illusions frequently proceed from the state of the eye; for instance, when the icteric, and the akyanobleps[2] see respectively everything yellow, or[3] totally devoid of colour; when dazzling objects, for instance the sun, remain on an irritable retina for a long time (Boyle mentions a case of ten years' continuance);[4] when invalids on awaking, or falling asleep, see everything as through a red veil. Aeronauts at the highest elevation see the moon of a blood-red colour; typhus patients see objects with coloured edges; those suffering from cataract, see a red glimmer; while to persons weeping, objects appear double, and to hysterical patients (of which Esquirol mentions a case) inverted, &c.

[1] Anthr. p. 35, &c.
[2] See Goethe's Farbenl. vol. i, p. 62.
[3] See Med. Jahrb. xix.
[4] Ibid. p. 64.

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Illusions of the hearing likewise proceed, in part, from the judgment; for instance, when a timid person mistakes the rustling of the leaves in a forest for the voices of robbers; when unpractised persons confound the relations of sound; when, in the silence of night, a sound appears to be nearer than it is, &c. In part they proceed from a disordered state of the organs; for instance, when the falling of a book appears to nervous patients like the report of a musket; when the drawing of a tooth produces a similar sensation in the ear, &c. They are more frequent than the former, and have a more psychical character. According to Haslam and others, insane patients become deaf more frequently than blind, and the deaf are more liable to insanity than the blind.

Illusions of the smell, of psychical origin, seldom occur; instances of such as are of physical origin are often furnished by nervous patients, to whom an offensive smell appears a perfume, and a perfume offensive, &c.

Illusions of the taste resemble those of the kindred sense of smell; psychically they rarely occur, somatically they are frequent in nervous, gastric disorders, when acids have an alkaline flavour, and sweet things taste bitter, &c.

Among the illusions of the touch of a psychical nature may be reckoned the well-known experiment with a little ball or marble, which being moved between two fingers laid across each other, appears double, because the judgment ascribes the segments of the ball, felt in opposite directions, to two objects. The illusions of the touch arising from somatic causes are more frequent, and chiefly occur connected with the phantasms of the nearly allied (§ 16) cœnæsthesis (compare § 93). When the limbs fall asleep, as it is called, the touch is changed (§ 95), if not suspended; in consequence of wounds, with a probable injury of a nervous fibre, the touch is altered, together with the cœnæsthesis.[1]

§ 108. Hallucinations are no longer illusions of the judgment, but have become somatico-psychical abnormities,—transitions to psychoses (§ 106), as the course of such conditions often confirms by experience. They frequently affect indivi-

[1] Instances may be found in Pring, View of the Relations of the Nerv. Syst. p. 121; and Gruithuisen, Beitr. zur Physiogn. p. 74.

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dual, often several, or even all the senses, when this transition most easily takes place.

Hallucinations of the sight are: perceptions of light in profound darkness; visions of flames, (such as Pascal's flaming abyss close by his writing-table); the sparks, luminous spectres, terrific phantoms, flies, wasps, &c. imagined by persons suffering from worms, and by hypochondriacs; visions; deuteroscopy. Goethe[1] relates that, during a ride on horseback, he saw, as in a waking dream, himself riding to meet himself in a light gray dress. This fact, as well as Cellini's vision in prison,[2] Swedenborg's spirits, &c. belongs to the class of visions.

Deuteroscopy (second sight) is the hallucination by virtue of which an event occurring simultaneously or somewhat later is observed amidst the business of daily life. A friend, for instance, who is absent on a journey, is seen to fall from his horse, &c. This kind of apparition is said to be endemic in many parts of Ireland, in the islands of the north coast of England, &c. It reminds us of the symptoms of the third degree of idio-magnetism (§ 84), is perhaps frequently akin to it, and probably rests, if it should be confirmed (of which, however, I cannot find any well-authenticated instance), on the magnetic "Rapport," which we shall mention in the sequel. It is also affirmed that persons gifted with second sight are greatly attracted by shining surfaces, such as looking-glasses, polished metal buttons, &c., and that one man saw his friends beyond sea in the bright brass knob of a door.[3] Whether the phenomenon, which I believe I have myself experienced several times, of fancying we see a person who is not present, but immediately after makes his appearance, belongs to this place, and is an hallucination of the sight, or is connected with the double perception mentioned under dreaming (§ 58), I do not know.[4]

The following are hallucinations of the hearing: humming or ringing in the ear, the sound of voices; persons so affected

[1] Vol. xxvi, p. 83.

[2] Vol. xxxiv, chap. 13.

[3] Rosenkranz, Psych. p. 131.

[4] The psychical relation of the optic hyperæsthesis is remarkable; no other affection of the nerves of sense so seducingly compels us to recognise an objectiveness of phantasms; none so easily leads to the alienation of self-consciousness.—Romb. N. Kr. 113.

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hear a rustling and a roaring, as if of forests, storms, waterfalls, knocking, tolling of bells, &c.; they fancy that they are called by name, or addressed by strange voices. It is uncertain whether the harmonies and melodies which, in rare cases, sick and dying persons hear (§ 61), are hallucinations of the hearing proceeding more from an unrestrained fancy, or from the state of the organs.

Hallucinations of the smell occur more rarely than those of the two preceding senses; yet hysterical patients, in particular, often smell objects which are not present, such as sulphur, musk, violets, &c. I was acquainted with a lady who was often tormented by a charnel smell that seemed to follow her everywhere, for which there was no organic cause. Hallucinations of the taste wholly resemble those of the smell.

Hallucinations of the touch, in a strict sense, are not known to me. Many phantasms of the cœnæsthesis (§ 95) are generally adduced as such; for instance, sensations of pain, itching, tingling, pricking, on the skin, &c., without any object to occasion them, in persons suffering from hypochondriasis (§ 100), liver complaints, and gout. The imaginary mouse- and rat-catching of patients suffering from *delirium cum tremoribus* (§§ 88, 91) may perhaps be most properly placed here.

§ 109. The causes of the illusions and hallucinations of the senses entirely coincide with those of the pseudo-cœnæsthesis and its phantasms (§ 95). In illusions, however, we have chiefly to consider the external occasion and the psychical individuality; in hallucinations, the organic condition and the somatic personality. The illusion is often in the object, and is frequently produced by emotions, heated fancy, passion, &c. The hallucination has always a subjective ground; either the receptive organ suffers, or the leading nerve, or the reacting cerebral centre, chiefly from pressure of blood, cramp, unknown organo-chemical processes in the substance of the nerves, &c.

The course and termination of these states of the mind, which are only symptomatic, issue, after longer or shorter duration, either in health, from undeceiving the patient, or, if this does not happen, in a fixed idea—in insanity; by which these conditions are also marked as transitory. The hallucinations of hearing and sight, on account of the psychical

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dignity of their respective organs, are especially of a most fatal import. We shall enlarge on this subject when we treat of Psychopathies, to which the hallucinations are related, partly as complications, partly as causes.[1]

§ 110. The genetic course, which we have adopted in the development of the psycho-physical energies, leads us next from the senses to *attention* (§ 25), which, though free in itself, as the first manifestation of spontaneity, yet appears variously trammelled by its physical condition, and consequently affected by disease. It is therefore self-evident, and I repeat it only to ensure consistency in the performance of our task, that that attention, whether overstrained, weakened, or ill-directed, which has its foundation in our mode of thought or our sentiments, in a word, spontaneous attention, does not concern us pathologically. We have to do with it only as fettered with its corporeal conditions. These appear to be diseased in three different ways: 1st, by exaltation; 2d, by depression; 3d, in their direction. The other categories (according to the kind and the individual parts) are not presented for consideration in a simple psychical activity.

1st. One would hardly think that attention could ever be increased to a fault,[2] and yet it is so; for, independently of the morbidly heightened attention to his own state in the hypochondriac (§ 100), which, as Crichton[3] well observes, should rather be called an attention impeded (as respects other objects) on the part of the cœnæsthesis, there is a certain general incapability of abstracting one's self from the object in which the attention is absorbed. This state may be called "absorption." With this peculiarity is connected what I would call "an excited attention" to the object, a state with which I believe I am acquainted by self-observation; and which, because it is dependent on organisation, so that we cannot become masters of it, should perhaps be placed here. Something similar occurs in cramp of the fingers from writing.

2d. The attention is more often organically weakened; a person has a general incapability of paying attention; a certain dullness and indolence is connected with this state.

3d. The attention which has taken a morbid direction is

[1] Out of 100 mentally affected patients at least 80 have hallucinations.—Esquirol, i, 199.

[2] Crichton, Geisteszerrüttung. Leipz. 1810, p. 132. [3] Ibid.

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incapable of fixing itself decidedly on one object, it flies off from one to another. This is called distraction; or when it is transitory (with a great number of obscure ideas which completely exclude all distinct ideas), absence of mind. It is often hereditary, and decreases with years. Patients of this description are distracted by every noise; the barking of dogs, conversation in another room, the shutting of a door, &c., even to the extent of occasioning vertigo and headache. This state has an essential affinity with the first, on account of the rapid change of ideal images (§ 60), which is likewise peculiar to it.

§ 111. The causes of morbid attention are partly psychical, and partly physical. The proximate cause is always a type which has become permanent in the central organ of the nerves (§ 23).

Heightened attention is founded on a state of irritation in this organ, which may be psychically excited and maintained by oft repeated, and therefore habitual, over-intentness.

Weakened attention arises psychically from neglected exercise, or as a secondary effect (§ 59) of the above-mentioned overstrained intentness. Somatically, from innate or acquired torpidity of the nervous system, after typhus, losses of the juices, &c., or in consequence of organic processes or products which impede the functions of the brain. The chronic weakness which arises from rhachitis or scrofula, is less frequently attended by such consequences, than that, occasioned by straitened circumstances, bad air, &c.[1]

Distraction, when it is not hereditary (§ 110, 3), arises psychically from negligent habits in fixing the attention during education and self-culture; physically, from hyperæsthesis of the nervous system (§ 93). Hence it often accompanies hysteria (§ 103) and many neuroses. It is often brought on by disorders of the stomach, chlorosis, and hydrophobia.[2]

§ 112. The course of these states of mind corresponds with their causes, and is always either transitory or permanent in accordance with them. The termination in actual psychopathy is to be apprehended only in distraction, and in a high degree of torpidity of the attention (especially when inherited). These therefore are likewise states of transition (§ 109, &c.)

[1] Crichton, Geisteszerrüttung, 136. [2] L. c. 134.

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§ 113. After having recognised spontaneity in perception, as attention (§ 25), we meet with it again in voluntary motion (§ 29). Its diseased states also have a psychical reflex action, and are therefore to be considered here.

1. An abnormally heightened mobility not unfrequently occurs as a forerunner of spasms; for instance, the hand would normally lay hold of something gently, the foot would tread softly; but because both are over-excited, the former seizes with violence, the latter stamps on the ground.[1]

2. A diminished or suspended mobility is called paralysis; it often takes place only between the psychical influence and the paralytic structure, while other influences, for instance, the electrical and the galvanic, are still effective. An immobility depending on psychical causes would be such as arises from neglected exercise of the moveable structures; for instance, the toes, the skin of the head, the muscles of the ear, &c.

3. Cramp and convulsion are examples of a mobility altered in manner and direction. Here the muscles, without being paralysed, do not obey the will of the mind. They move in other directions, in another manner, according to organic laws.

It is evident that all these states may be topical and general, without leading to further results.

But the phenomenon belonging to the third kind deserves particular attention, namely, that some patients involuntarily move in a wrong direction; for instance, with the firm purpose of going to the right, at the third step they turn to the left, &c.[2] Similar phenomena are, stammering, and the above-mentioned cramp in the fingers from writing (§ 110), &c.

§ 114. The causes of morbidly increased, diminished, or altered mobility presuppose the same or an analogous organic metamorphosis in the motor nerves (§ 29), as takes place in the sensitive nerves in increased, diminished, or altered sensation (§§ 93-95). The same dispositions and causes must therefore act here, and the difference lies only in the individual who is more mobile than sensitive. We had an example in hypochondriasis and hysteria (§§ 100-103).

The course and the issue of these conditions, as they are

[1] Nasse, Zeitschrift, 1822, p. 44.

[2] See Reil u. Hoffb. Beitr. Bd. ii, p. 53.

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only symptomatic, turn on the affections upon which they are founded. Thus the transition from violent convulsions, epilepsy, &c., to mental disorders is well known, in which, however, the states of agitation or struggles are to be considered only as an accompaniment and indication of the more recondite morbid processes.

§ 115. The psycho-physical function next discussed (§§ 33-35), was the memory.

1. An unusually heightened memory (hypermnesia) is not, indeed, in itself, to be called morbid, but it accompanies morbid states. Mauchart[1] speaks of a girl who, when very young, had the smallpox most severely, by which she lost her sight, but acquired an extraordinary memory: she repeated perfectly, on her return home, a sermon which she had heard during a journey. It is well known that the scrofulous, and frequently the rhachitic diathesis in childhood is accompanied by this phenomenon.

2. A morbidly weakened memory (dysmnesia) occurs too frequently to require proofs of its existence. In the highest degree it becomes total loss of memory (amnesia); it generally fails slowly with the failure of the bodily powers, often, when the powers are exhausted, as for instance, after typhous diseases (v. Thucydides) more rapidly, and in rare cases, after overexertion, suddenly. Examples of the latter description may be found cited in Crichton.[2]

3. An altered memory manifests itself by the perverted *manner* of remembering,—a rare case, which, however, sometimes occurs. A man, 70 years of age, was suddenly seized with lock-jaw and formication over the surface of the body. This was succeeded by vertigo, and a strange alteration in his language. He spoke with ease and fluency, but often made use of odd words which nobody understood. He appeared to have coined new words in the place of others which he had forgotten. Occasionally he mixed numbers instead of words in his conversation:[3] here the memory seems to be altered in its mode.

[1] Psychol. Magaz. bd. vii. Pechlin relates a similar instance of a boy suffering from helminthiasis. Beneke, p. 248.

[2] L. c. p. 209, &c.

[3] Gessner's Discoveries in Medicine in the most recent times. Beneke also relates a similar case. Beitr. zur Seelenkrankheit, p. 237. Leipz. 1824.

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Certain phantasms (§§ 95, 108) of the memory are to be referred to this head; for instance, when a person feels as if a situation in which he actually finds himself had already existed at some former time, precisely as at present, which some persons, from a poetising error, have taken for a sign of a former existence (the Platonic reminiscence). If we ever were in a former state of existence, we can hardly be supposed to have met together at a tea-party in a drawing-room in frock-coats, lace dresses, kid-gloves, &c. Here, then, we have to deal with phantasms of the memory, the product of a transitory altered recollection.

4. A relatively diseased memory is that which is metaphorically called "partially" diseased, or lost. For it is self-evident from a sound psychology, that memory as a psycho-physical function has no parts (§ 33). To this head belong the often quoted examples of a forgetfulness of individual portions of acquired knowledge, notions, &c., nay, of a person's own name, though the memory is otherwise good. This phenomenon, which appears to be confirmed by facts, is nevertheless very remarkable, and is parallel to the involuntary morbid movement in a wrong direction (§ 113).

The kind of diseased memory mentioned by Crichton,[1] where enfeebled convalescents from the gout, with a consciousness that they were in error, constantly used wrong words or letters instead of the right ones, and were vexed that they asked for a table instead of a chair, appears to me not to belong to this head, but to the diseases of motion, as the muscles of the organs of speech refused to perform their proper office. Certainly, however, the remembrance, as it were, of these muscles was disordered, as they confounded one motion with another.

§ 116. The causes of diseased memory are psychical or physical. The proximate cause, as it is called, is always a more or less permanent type (not a metamorphosis) that has existed in the central organ of the nerves (§ 111).

When memory is heightened from morbid causes, it is probably founded on a heightened state of excitability of that central organ, combined with delicacy of structure, as it certainly occurs in the diathesis mentioned (§ 115, 1).

Weakened memory presupposes, psychically, defect of education and practice, as well as want of interest and therefore of attention,

[1] L. c. p. 214.

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(§ 111), or overstrained exertions. It presupposes physically, cerebral metamorphoses from pressure, displacement, paralysis, congestions, metamorphoses from age, loss of vitality from excessive indulgence, certain empoisonments, disorders of the digestive organs, nervous disorders, &c. The same causes, acting in a higher degree, and especially on a sudden, so as to paralyse, produce total or partial amnesy. A soldier, who was trepanned with loss of cerebral substance, suddenly forgot the numbers 5 and 7, and was not able, till long afterwards, to learn them again like a child. A partial pressure on the brain, in a moment deprived a patient of the idea of drinking out of a glass;[1] a fever obliterated from the memory of a learned man the letter F.[2]

Altered, and in that respect diseased, memory is a problematical anomaly, for an explanation of which, we must wait for the aid of an improved physiology of the nerves. Meantime, we must be content with accepting that of the combinations that occur in the pseudo-cœnæsthesis (§ 95).

How far all the above-mentioned psychical affections may occur with or without a general affection of the mental energy, depends on the degree and the manner in which they are connected, either in general, or in a given individual, with the other psychical functions, e. g. memory with fancy, attention with thought, &c. &c.

§ 117. The course of these conditions, in cases of altered memory, is in general transitory; in weakened memory more tedious, according to the cause and the treatment. The latter often terminates in amnesy (loss of memory), the former frequently in disorder of the mind, to which, in a higher degree, it forms a point of transition (§ 112), &c.

§ 118. The psycho-physical action developing itself after memory was (§ 36) fancy; and here (§ 38) we are on the verge of the transition from the physical to the intellectual world, which we have especially to consider, in the further treatment of our subject.[3]

[1] Klencke, l. c. p. 73. [2] Beneke, Seelenkr. 236.

[3] If the actions of the imagination are very lively, they pass into actual excitement of the organs of sense and motion; the images called forth internally, appear now to be external, they can no longer be distinguished from the objects—the man becomes mad.—Hartmann, G. d. M. S. 181.

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A morbidly excited fancy is that which represents its images with such vividness that they are confounded with the ideal images presented by the external senses. It lives, like the poetical genius (§ 36) and the dreamer (§ 58), in both of whom it is especially active, in a world of its own, apart from the actual world, and thereby displaces the relations of personality in its owner. It excites stronger sympathies and antipathies (§ 36); clouds the spontaneity of thought, as well as the receptive power of perception, so that the dark intermediate region connecting man with nature becomes in it specially predominant over the brighter region above and below it; a demoniacal spirit seems to master the man; his condition is a waking dream, and we here see the above-mentioned phenomena of all states of transition as manifold variations of one species: dreaming (§ 58), intoxication (§ 59), vertigo (§ 60), magnetism (§ 84), nay, delirium (§ 88), and hyperæsthesia (§ 93), &c. which find their focus in an exalted fancy, as in a concave mirror.

A morbidly depressed fancy, generally connected with amnesy (§ 115, 2), furnishes either obscure images, or none at all; and its possessor has more resemblance to a sleeper, respecting whom we may be uncertain whether he is not also dreaming.

An altered fancy represents phantasms in the strictest sense of the term, which often, but by no means always, accompany exalted fancy. There are also phantasms of a fancy far from exalted, indeed, I should rather say, beclouded. When they are neither to be deduced from the cœnæsthesis (§ 95) nor from the senses (§ 108), but merely proceed from an ill-directed fancy, they belong to this category. To this head we are to refer the morbid imaginations of uneducated men, which we shall enumerate in the sequel.

It is self-evident that in all these, and in other cases, a morbid relation of the fancy to the other psychical and physical functions may take place, and does not afford a different result, except as regards the treatment of these disorders. A normal fancy, for instance, with obtuse senses and dull intellect, may become, relatively, exalted. Here it will be more necessary to stimulate the other functions than to depress those of the fancy.

§ 119. The causes of diseased fancy are, in all essential

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when in disease it sees only vice, and in the cure only retribution; for the disease, as such, is already a problem which cannot be removed by the annihilation of one of its factors.

The mixed theory, as it is called, is in the right in never forgetting to have regard to these two factors. But it is in the wrong when it considers, sometimes the one, sometimes the other, as acting etiologically or pathologically; for instance, when it assumes in one concrete case a passion, in another a fever, as the cause of a permanent mental disorder. No permanent mental disorder is a necessary consequence of passion in perfect bodily health, nor of fever in a perfectly healthy state of the mind. This theory then is erroneous, when it considers as well the body as the mind as subjects of psychopathies, whereas these lie only in the relations of both to each other, therefore neither in the body nor in the mind.

Thus, then, after the insight we have gained, we find our former assertion § 72 confirmed, that since the question of principle can neither be positively affirmed nor denied, we must protest against the question itself, for:

This question has reference to the *seat* of the psychopathies, which, in fact, have no seat; they are combined conditions which appear in the disturbance of those functions by which the mind is manifested, that is, in the concrete person of.

Properly, however, the whole dispute and all the objections affect only *the ideal* of these theories, and, strictly speaking, none of their advocates; for an unprejudiced inquirer in our department will soon perceive that each of them is guided, in his researches, by the genius of medical psychology, and that the physical element is as much indebted to a Heinroth as the psychical to a Friedreich, and both to an Esquirol and Ideler.

Our own mode of representation, which is calculated for the physician, would remain, even if some more or less, than Hegelian philosophy should totally deny mind or body; for it adheres to undeniable phenomena, to actions, which it again treats by means of actions, leaving the *substances* to the metaphysician, or to the understanding, before which even the genuine metaphysician lays down his arms.

§ 124. The same principles which have guided us thus far (§§ 121-123) will show us that simple and useful way, which

conforms to nature in the much-discussed and oft-attempted division of the psychopathies.

Every division in approximative doctrines (the sciences alone, viz. philosophy and mathematics, have a system) can and must aim at being nothing beyond an aid to a more easy survey of the given matter—a means to promote the object of instruction. The organisation of the human understanding is peculiarly remarkable in this respect; that within limited boundaries it offers an almost infinite framework, wherein to combine and arrange the given objects in a different manner, in every thinking individual, while in the sequel the same laws of thought are always applied; every one believes his own arrangement to be conformable with nature; every one in the sequel forms his own system from science and experience, and cannot conceive why it is not adopted by all the world; every one is right in his own way. For it is only in logic and mathematics that the form of thought is also its essence, and that, to all human understanding, twice two are invariably four. In natural science, on the other hand, the series of essentials accommodates itself to a thousand forms of combination, *all of which are good.* This observation is necessary; first, to learners, who are confused, because one teacher blames the system of another, while the objects alone are the essential parts of each; secondly, to us, that we may not be accused of want of scientific knowledge, when we disdain to cut up with the shears of partial speculation what nature presents to us in manifold ramifications and involutions.

We have to do (§ 121) with combined series of phenomena, actually given, which are to be brought into vivid, comprehensible groups, the fewer and the more comprehensive the better, without ever combining what appears separate in fact. Science furnishes many a resting-point on which to found, in the natural families of these diseases, certain contrasts and definite relations, but not enough to deduce them with strict causality from the general to the particular. The history of our doctrine confirms this remark. Many ingenious, acute, profound attempts have been made to classify the diseases of personality;[1]

[1] They may be found enumerated and critically examined in Töltenyi's 'Kritik.' vol. iv, Friedreich's 'Litterargesch.' &c. &c.

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the views of many contemporaries, ingeniously prophesies, we should one day have a general pathology, then will special pathology easily modify its boundaries accordingly. The essential point is, above all, clearly to comprehend Nature, and not precipitately to confine her to a system.

2. Our definition says, "diseased in many directions;" and thereby the psychopathies are distinguished from the states of transition hitherto mentioned, which always represent the disease of the psycho-physical relation, as in one or in few directions. If it were asked, "how many directions are required in order that a state of transition become a psychopathy?" the impossibility of answering this question would confirm the correctness of the term "transitions." We follow practice and ordinary language, and, free from all systematic prejudice, call those very complex conditions by the name of psychopathies which all physicians designate by that term. It could not be properly called "diseased in all directions," for that would be death, in which alone the relation of the mind to the body is wholly dissolved.

3. Our definition says, "the empirical personality," not "the ethical;" which, though it has been already touched upon (§ 120), we find it here necessary especially to notice on account of its peculiar importance. For it will appear that the abstract personality (which the metaphysician must affirm *a priori*) does not become diseased, but that, as Jean Paul figuratively says,[1] even the insanity of the mind has an unconquered lucid spot in the nerves, as is proved by the sensible dreams, and the sensible moments of (many) insane persons at the hour of death; it will also appear that without ethical personality no cure of mental diseases by psychical means, nay, no psychical influence would be possible.

After all that has been said, I must wholly coincide with the view of Professor Töltenyi,[2] who does not place the essence of psychopathies in any individual organ or function, but limits it to "an altered conception;" in like manner I agree with the able Tschallener,[3] who does not call the diseases of the feeling and the will psychopathies, till they have alienated the

[1] Selina, ii, 47.

[2] Vers. ein. Krit. &c., Bd. iii.

[3] Beschreibung der Irrenanstalt in Hall, 1842.

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consciousness (the thought of personality); but, as I cannot too often repeat, we are not to understand in this place *abstract* personality (the metaphysico-ethical, § 3), the stability or permanency of which is proved by the intermissions and curability of insanity.

§ 123. Here, as we have promised (History, p. 70), we may take a retrospect of what are called the somatic, psychical, and mixed theories, and endeavour to understand their relations from the point of view which we have attained.

The somatic theory is in the right when it will not recognise any psychopathy without a corporeal substratum, for such a one would be error or sin, not disease. It is in the wrong when it sees in any one organic metamorphosis the whole essence or proximate cause, as it is called, of mental disorders, for these are very (§ 122) complex results, and we find by experience every kind of organic metamorphosis occurring, sometimes *with*, sometimes *without*, now with *one*, now with *another*, psychopathy. It is likewise in the wrong when it allows that the occasional cause may be psychical, but determines that the proximate cause can be only physical, for the occasional cause may be likewise physical, and the proximate cause must always be likewise psychical, because otherwise only a neurosis, but never a psychosis, would be produced.

Every psychosis is, at the same time, a neurosis; because, without the intervention of nervous action, no change of the psychical action becomes manifest, but every neurosis is not a psychosis, of which convulsions and pain afford sufficient examples. Agreeably to this notion is the popular view that a madman is not called mad because his brain is over-excited, but because he judges and acts absurdly.

The psychical theory is in the right in not recognising pure neuroses as psychopathies, for the above-mentioned reasons; it is in the wrong when it maintains only the psychical view,[1]

[1] Sin or passion, no matter which! in both cases we are on the same (ethical) ground. When Heinroth says "the organic phenomena in insanity are as much mere external signs of an internal psychical condition as blushing," the comparison is incorrect in many particulars. *a*. There are states of the mind which are merely indications of states of the body; for instance, the weeping of hysterical patients. *b*. Blushing itself, as an injection of the vessels, is a state of the body. *c*. The organic alienations of insanity are not so transient as blushing.

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their roots in it, from which *idiosyncrasy* (§ 53, *e*), as the point of individuality, proceeds. It is fancy that creates for every one in his dreams (§ 58) "that pleasing mania,"[1] his own world. In this world corporeal sensation becomes a property of the mind, thought becomes feeling (§ 36), man an individual (ibid.)[2]

Everything, therefore, which helps to form, to determine, and to restrict the personality of a man (§ 56), is to be considered only as a cause of the psychopathies, and the change taking place in the midst of his (empirical, not metaphysical, § 3) personality itself, is to be considered as psychopathy. That the states of transition already indicate this metamorphosis, is apparent from the oblivion of personality in vertigo, &c., and from its being exchanged for that of another personality in idiomagnetism (§ 84).

§ 121. After having followed our clue through all the states of transition (§§ 76-91) into the domain of pathology, and then through all the manifestations of psychical life, from the lowest to the highest sphere attainable by the physician (§§ 92-120), we have reached those psycho-physical conditions, which, being founded in reality, represent the collective proportion between psychical and somatic life, as disturbed and disarranged.

The course that we have hitherto pursued in these lectures spares our stating many details, with regard to the determination of the meaning and limits of the principles, to those who have well comprehended them, and are capable of duly following up the consequences, and excuses us from answering or refuting the numerous questions and partial assertions which are brought forward respecting them. We shall endeavour here, as hitherto, to hold fast the psychical and somatic sides of the phenomenon, on the one hand, and their union in the individual on the other. Though we have less to do throughout with names than with the things themselves, so that we shall not dispute the usual designations, but rather employ them as is customary—for it is not requisite that we use the most appropriate words, but that we think and under-

[1] Goethe, Egmont, v Act.

[2] "Madness is individuality carried to the utmost extreme" (Ideler, i, 619); but in fancy—this stimulant of individuality—the inspirations of genius have their *root*, and it is only in this respect that the otherwise absurd saying, *nullum ingenium sine mixtura dementiæ*, has a meaning.

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§ 113. After having recognised spontaneity in perception, as attention (§ 25), we meet with it again in voluntary motion (§ 29). Its diseased states also have a psychical reflex action, and are therefore to be considered here.

1. An abnormally heightened mobility not unfrequently occurs as a forerunner of spasms; for instance, the hand would normally lay hold of something gently, the foot would tread softly; but because both are over-excited, the former seizes with violence, the latter stamps on the ground.[1]

2. A diminished or suspended mobility is called paralysis; it often takes place only between the psychical influence and the paralytic structure, while other influences, for instance, the electrical and the galvanic, are still effective. An immobility depending on psychical causes would be such as arises from neglected exercise of the moveable structures; for instance, the toes, the skin of the head, the muscles of the ear, &c.

3. Cramp and convulsion are examples of a mobility altered in manner and direction. Here the muscles, without being paralysed, do not obey the will of the mind. They move in other directions, in another manner, according to organic laws.

It is evident that all these states may be topical and general, without leading to further results.

But the phenomenon belonging to the third kind deserves particular attention, namely, that some patients involuntarily move in a wrong direction; for instance, with the firm purpose of going to the right, at the third step they turn to the left, &c.[2] Similar phenomena are, stammering, and the above-mentioned cramp in the fingers from writing (§ 110), &c.

§ 114. The causes of morbidly increased, diminished, or altered mobility presuppose the same or an analogous organic metamorphosis in the motor nerves (§ 29), as takes place in the sensitive nerves in increased, diminished, or altered sensation (§§ 93-95). The same dispositions and causes must therefore act here, and the difference lies only in the individual who is more mobile than sensitive. We had an example in hypochondriasis and hysteria (§§ 100-103).

The course and the issue of these conditions, as they are

[1] Nasse, Zeitschrift, 1822, p. 44.

[2] See Reil u. Hoffb. Beitr. Bd. ii, p. 53.

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only symptomatic, turn on the affections upon which they are founded. Thus the transition from violent convulsions, epilepsy, &c., to mental disorders is well known, in which, however, the states of agitation or struggles are to be considered only as an accompaniment and indication of the more recondite morbid processes.

§ 115. The psycho-physical function next discussed (§§ 33-35), was the memory.

1. An unusually heightened memory (hypermnesia) is not, indeed, in itself, to be called morbid, but it accompanies morbid states. Mauchart[1] speaks of a girl who, when very young, had the smallpox most severely, by which she lost her sight, but acquired an extraordinary memory: she repeated perfectly, on her return home, a sermon which she had heard during a journey. It is well known that the scrofulous, and frequently the rhachitic diathesis in childhood is accompanied by this phenomenon.

2. A morbidly weakened memory (dysmnesia) occurs too frequently to require proofs of its existence. In the highest degree it becomes total loss of memory (amnesia); it generally fails slowly with the failure of the bodily powers, often, when the powers are exhausted, as for instance, after typhous diseases (v. Thucydides) more rapidly, and in rare cases, after overexertion, suddenly. Examples of the latter description may be found cited in Crichton.[2]

3. An altered memory manifests itself by the perverted *manner* of remembering,—a rare case, which, however, sometimes occurs. A man, 70 years of age, was suddenly seized with lock-jaw and formication over the surface of the body. This was succeeded by vertigo, and a strange alteration in his language. He spoke with ease and fluency, but often made use of odd words which nobody understood. He appeared to have coined new words in the place of others which he had forgotten. Occasionally he mixed numbers instead of words in his conversation:[3] here the memory seems to be altered in its mode.

[1] Psychol. Magaz. bd. vii. Pechlin relates a similar instance of a boy suffering from helminthiasis. Beneke, p. 248.

[2] L. c. p. 209, &c.

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I cannot, however, refrain from again classifying these classifications for you, at least

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the views of many contemporaries, ingeniously prophesies, we should one day have a general pathology, then will special pathology easily modify its boundaries accordingly. The essential point is, above all, clearly to comprehend Nature, and not precipitately to confine her to a system.

2. Our definition says, "diseased in many directions;" and thereby the psychopathies are distinguished from the states of transition hitherto mentioned, which always represent the disease of the psycho-physical relation, as in one or in few directions. If it were asked, "how many directions are required in order that a state of transition become a psychopathy?" the impossibility of answering this question would confirm the correctness of the term "transitions." We follow practice and ordinary language, and, free from all systematic prejudice, call those very complex conditions by the name of psychopathies which all physicians designate by that term. It could not be properly called "diseased in all directions," for that would be death, in which alone the relation of the mind to the body is wholly dissolved.

3. Our definition says, "the empirical personality," not "the ethical;" which, though it has been already touched upon (§ 120), we find it here necessary especially to notice on account of its peculiar importance. For it will appear that the abstract personality (which the metaphysician must affirm *a priori*) does not become diseased, but that, as Jean Paul figuratively says,[1] even the insanity of the mind has an unconquered lucid spot in the nerves, as is proved by the sensible dreams, and the sensible moments of (many) insane persons at the hour of death; it will also appear that without ethical personality no cure of mental diseases by psychical means, nay, no psychical influence would be possible.

After all that has been said, I must wholly coincide with the view of Professor Töltenyi,[2] who does not place the essence of psychopathies in any individual organ or function, but limits it to "an altered conception;" in like manner I agree with the able Tschallener,[3] who does not call the diseases of the feeling and the will psychopathies, till they have alienated the

[1] Selina, ii, 47.

[2] Vers. ein. Krit. &c., Bd. iii.

[3] Beschriebung der Irrenanstalt in Hall, 1812.

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consciousness (the thought of personality); but, as I cannot too often repeat, we are not to understand in this place *abstract* personality (the metaphysico-ethical, § 3), the stability or permanency of which is proved by the intermissions and curability of insanity.

§ 123. Here, as we have promised (History, p. 70), we may take a retrospect of what are called the somatic, psychical, and mixed theories, and endeavour to understand their relations from the point of view which we have attained.

The somatic theory is in the right when it will not recognise any psychopathy without a corporeal substratum, for such a one would be error or sin, not disease. It is in the wrong when it sees in any one organic metamorphosis the whole essence or proximate cause, as it is called, of mental disorders, for these are very (§ 122) complex results, and we find by experience every kind of organic metamorphosis occurring, sometimes *with*, sometimes *without*, now with *one*, now with *another*, psychopathy. It is likewise in the wrong when it allows that the occasional cause may be psychical, but determines that the proximate cause can be only physical, for the occasional cause may be likewise physical, and the proximate cause must always be likewise psychical, because otherwise only a neurosis, but never a psychosis, would be produced.

Every psychosis is, at the same time, a neurosis; because, without the intervention of nervous action, no change of the psychical action becomes manifest, but every neurosis is not a psychosis, of which convulsions and pain afford sufficient examples. Agreeably to this notion is the popular view that a madman is not called mad because his brain is over-excited, but because he judges and acts absurdly.

The psychical theory is in the right in not recognising pure neuroses as psychopathies, for the above-mentioned reasons; it is in the wrong when it maintains only the psychical view,[1]

[1] Sin or passion, no matter which! in both cases we are on the same (ethical) ground. When Heinroth says "the organic phenomena in insanity are as much mere external signs of an internal psychical condition as blushing," the comparison is incorrect in many particulars. *a*. There are states of the mind which are merely indications of states of the body; for instance, the weeping of hysterical patients. *b*. Blushing itself, as an injection of the vessels, is a state of the body. *c*. The organic alienations of insanity are not so transient as blushing.

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their roots in it, from which *idiosyncrasy* (§ 53, *e*), as the point of individuality, proceeds. It is fancy that creates for every one in his dreams (§ 58) "that pleasing mania,"[1] his own world. In this world corporeal sensation becomes a property of the mind, thought becomes feeling (§ 36), man an individual (ibid.)[2]

Everything, therefore, which helps to form, to determine, and to restrict the personality of a man (§ 56), is to be considered only as a cause of the psychopathies, and the change taking place in the midst of his (empirical, not metaphysical, § 3) personality itself, is to be considered as psychopathy. That the states of transition already indicate this metamorphosis, is apparent from the oblivion of personality in vertigo, &c., and from its being exchanged for that of another personality in idiomagnetism (§ 84).

§ 121. After having followed our clue through all the states of transition (§§ 76-91) into the domain of pathology, and then through all the manifestations of psychical life, from the lowest to the highest sphere attainable by the physician (§§ 92-120), we have reached those psycho-physical conditions, which, being founded in reality, represent the collective proportion between psychical and somatic life, as disturbed and disarranged.

The course that we have hitherto pursued in these lectures spares our stating many details, with regard to the determination of the meaning and limits of the principles, to those who have well comprehended them, and are capable of duly following up the consequences, and excuses us from answering or refuting the numerous questions and partial assertions which are brought forward respecting them. We shall endeavour here, as hitherto, to hold fast the psychical and somatic sides of the phenomenon, on the one hand, and their union in the individual on the other. Though we have less to do throughout with names than with the things themselves, so that we shall not dispute the usual designations, but rather employ them as is customary—for it is not requisite that we use the most appropriate words, but that we think and under-

[1] Goethe, Egmont, v Act.

[2] "Madness is individuality carried to the utmost extreme" (Ideler, i, 619); but in fancy—this stimulant of individuality—the inspirations of genius have their root; and it is only in this respect that the otherwise absurd saying, *nullum ingenium sine mixtura dementiæ*, has a meaning.

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stand their correct import,—yet it seems to result from the preceding remarks, that as the psycho-physical totality of man manifests itself as his empirical personality (§§ 3, 53, 56), the expression used by Ritgen, "diseases of personality,"[1] is really the most appropriate.[2] Psychopathies, therefore, or diseases of personality (insanity in the more comprehensive sense), is the name we give to those compound conditions, in which the psycho-physical reciprocal relation is diseased in several directions, so that the empirical personality of the individual appears thereby to be disturbed—disordered.[3]

§ 122. A close consideration of this definition may serve us instead of further details.

1. Our definition says, "compound conditions." The mental disorders, as they are called, which occur in daily experience, are not, as will appear, either simple neuroses, or logical or moral infirmities, nor simple special diseases, deducible anatomically or physiologically from organic structure or function, therefore not to be described scientifically or systematically, but we find in them the individual processes and states of transition hitherto named, whose natural product they represent, variously combined with each other. They are, however, not only not simple diseases, but likewise not mere symptoms of other diseases,[4] otherwise we must look on all special pathology as a symptomatology, which justly states and considers as special diseases the series of phenomena given, in practice, defined and derived from one basis. The physician has in no case anything to do with the primitive and abstract organic processes, but always with concrete states. If science should continue to advance, and if, as Professor Töltenyi, contrary to

[1] Giessen, 1837.

[2] The most inappropriate is evidently "diseases of the mind," because it is wholly partial, and to be used only as a metaphor.

[3] In a higher degree of disorders, the power of reflection is wholly lost; "MANIA NOW BECOMES OUR EGO."—Gall. Phil. Medic. Unters. p. 191. Fully as I agree with the worthy Bird, who exclaims against the authority of poetical quotations in psychiatrics, yet the following passage from Lear may stand here, not as an oracle, but for its characteristic simplicity:

> "We are not ourselves
> When Nature, being oppress'd, commands the mind
> To suffer with the body."

[4] Combe, Jakobi.

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particulars, the same as those of diseased memory (§ 116). For fancy is the same psycho-physical action raised to a higher degree of spontaneity (§ 36). They will, therefore, differ from them only in their greater intensity on the psychical side. This is likewise confirmed by experience. Men who are eminently endowed on the physical side, and are partially educated psychically, are especially liable to the maladies of exalted and altered fancy; while those who, with similar organic conditions, are psychically deficient and neglected, are subject to those of a depressed fancy, which are the same as those of diseased memory (§ 116). Scrofulous boys (§ 115, 1), when they are engaged in studies or intellectual employments, which are not suited to their powers, are sooner predisposed to phantasms than those who are not thus taxed. Adults are subject to phantasms, if, with that state of the nerves which accompanies disorders of the memory (§ 116), violent agitation of the mind, emotions, or passions be combined.

We are here confirmed anew in the conviction that diseased states of the mind are only to be explained by supposing a transition from the healthy state. Every man is engaged when exercising his fancy, even in a state of health, in interweaving with his thoughts things which do not exist. This process follows the same laws as those of dreaming (§ 58), except that here no external world obscures the images. But when these waking dreams become habitual whims, and these whims become chimeras, confirmed insanity is not far off.

§ 120. From a careful consideration of all that has hitherto been stated, it appears that, when we attempt to follow the course and issue of a morbid action of the fancy, we immediately enter upon the confines of those conditions which we usually call, in a more restricted sense, mental derangement, psychoses, psychopathies, &c. The idea of confounding the internal with the external world (§ 118) is in itself the idea of a derangement of the relation of the mind to the body, and experience sufficiently confirms that a disordered fancy immediately precedes the commencement of insanity, or rather it is the only resting-place in psychical life for those anomalies in it which may belong to the province of the physician. The operations of body and mind meet in the fancy as in a *punctum saliens;* it is only through the fancy that they act

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and react on each other. Thought without an image cannot become diseased; nor can sensation without fancy become psychically diseased. *Below* fancy we find (§§ 8-32) affections of the nerves which remain purely corporeal disease so long as they do not encroach upon her domain; *above* fancy (§ 38) we find affections of thought, feeling, and will, which, though they may contradict the laws of the mind (as error and vice) are not diseased, in the strict sense of the word, so long as they do not imply any confounding of the internal and external world; but this they do only through the fancy (§ 118). So long as this confusion is not complete, that is, while no complete derangement of the psycho-physical relation takes place, those conditions are prominent, with which we have become acquainted (§§ 79-118) as states of transition.

Thus, then, beside the states of transition, the two series, on the corporeal and on the psychical sides, meet in one genetic whole. Sensation and perception, on the one hand, thought, feeling, and will, on the other, come together on the neutral ground of fancy; here, as it were, they intertwine and form, in the states of transition, those radical fibres, from which the lugubrious branches of mental diseases spring up.[1] The actions of the nerves, such as those of thought, feeling, and will, as well as what we call states of transition, are, therefore, to be considered partly in opposition to each other (§§ 62-78), partly, in respect to psychopathies, only as mere proximate or remote causes. Psychopathies represent their total effect, in which the individual elements are intimately blended with each other.

If we have sufficiently established this point, we may proceed, without fear of following a wrong direction, to what are called mental disorders.

Ordinary language designates a man who is living according to his fancy, that is, fantastically or eccentrically (§ 36), as a candidate for a lunatic asylum. Fancy is the proper expression of the manner in which the object is mirrored in a definite subject. The sympathies and antipathies of man (§ 36) have

[1] "Fancy, with its self-created world of desire and abhorrence, penetrates into the senses to expel their demonstrations, and thus to deprive the understanding of the alphabet of its ideas."—Ideler, i, 627. "What is the life of the maniac but a romance of himself."—Ibid.

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Stages of exacerbation and remission, with their varieties, may likewise be distinguished in psychopathies. In particular, the so-called precursory stage is for the most part clearly indicated, partly by a general, more or less striking, change in the personality of the individual (§ 53, *c.* 54, 121), and partly by the above-mentioned states of transition (§§ 79-188). Disturbed sleep, terrifying dreams, prolonged sleeplessness, confusion in the head, headache, sometimes alone, sometimes together with the above-mentioned states of transition ; that is with diminutions of the cœnæsthesis, and of the perceptions of the senses (illusions, hallucinations, &c.), in manifold alternations or combinations, characterise this stage. Where it is totally wanting, this is owing to the rapidity and violence with which causes of insanity act. The supposition of Guislain, and of that excellent observer and close thinker Zeller,[1] that every disorder of the mind is preceded by a stage of despondency, more or less decided, contains an *aperçu*, but needs a more accurate and restricted confirmation.

The type of the psychopathies is very rarely permanent, but more frequently remittent (*raptus*), without regularity, occasionally also with regularity, wherein it is indeed often difficult to distinguish decidedly the intervals (*lucida interv.*) from convalescence, nay, from the disease itself. The objection which has been offered, that a maniac, for example, while not labouring under the mania, which appears only by fits, is healthy, and that consequently no intermittent state can be admitted, is not accurate. For if he constantly have fits of the same kind at certain intervals, this recurrence is maintained by a morbid condition of his personality. It is exactly the same as in an intermittent fever. The ascertained recurrence, however, of a *furor transitorius* (§ 148), proves, in *fact*, what might have been concluded *a priori:* that the definition of psychopathies, formerly in use as "permanent mental disorders," by which it was thought to distinguish them from the states of transition, is by no means sufficient. The duration of a condition can never serve to distinguish its essence.

It is not usual for psychopathies to terminate in other diseases: a termination in health, occasionally, often through

[1] Damerow's Zeitschrift, 1, i.

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certain crises, is still rarer; a termination in death, through apoplexy, phthisis and dropsy, is more frequent; the great proneness to relapses is, however, peculiar to them, which Esquirol states to be in the proportion of 1 to 10. It is to be ascribed to the circumstance, that the psychopathies depend upon men's individual personality (§ 121), the susceptibilities of which are always the same, and the impulses of which invariably return. This peculiarity of the psychoses is even favoured by the general feeling of mankind; we have a certain apprehension of persons who have been mad, as if they might at any moment relapse into their malady.

The critical processes under which psychoses are frequently found to disappear are: 1. The return of suppressed excretions and secretions. 2. Of previously existing morbid deposits (psora, herpes, *achores*, &c.) or of pure neuroses (hemicrania, colic, &c.); for the excretions,[1] the skin and the bowels are the most common, the kidneys more rare, the Schneiderian membrane and the salivary glands the most uncommon channels. In a morbid state of the venous circulation, furuncles are often the only but decisive compensation.

The details of these relations belong to the phenomenology of the individual psychoses.

§ 128. Although the necroscopic particulars, as results of the course of the disease, will now have to be specially stated, yet a previous general view of the results of post-mortem examinations of mentally diseased patients will furnish us with a useful guide. Burdach[2] and Professor Lippich[3] have collected them with diligence and judgment, and we shall therefore only prefix to them some leading remarks.

An impartial consideration of the notion of a "psychopathy" has taught us (§ 123) that the individual organic metamorphoses are not the disease itself. In such complicated relations they cannot be considered either as the sole cause, or the seat, or the product of the psychoses. It is particularly necessary here that the *cum*, the *post*, and the *propter* should be carefully distinguished; for necroscopy in diseases of personality is only so far instructive as it points out to us in these

[1] Zeller, l. c. p. 55.

[2] Vom Bau und Leben des Gehirns, sec. 111, 78, &c.

[3] L. c. p. 29.

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In antiquity, what is called lycanthropy, appeared as an endemic. In Arcadia, a country abounding in forests, morasses, and pasture lands, the fixed delusion of being a wolf frequently arose among the shepherds, and was accompanied by conduct suitable to the character of that animal.[1] A similar disorder occurs among the aborigines of Brazil. After the Indian has wandered about for a time, pale, silent, reserved, with a confused, fixed stare, he suddenly breaks loose in the evening after sunset, runs raving though the village, howls, turns up the graves, and rushes into the woods. The attack terminates in exhaustion, or passes into fever.[2] The Scythians often suffered from the fixed delusion that they were women, of which we have already spoken.[3] The endemic occurrence of the spleen, of pellagra (so far as it is to be mentioned here as mania pellagria),[4] and of cretinism, is well known.

Contagion can, in a psychical sense, signify nothing but pathological sympathy (§ 36). That, in this sense, insane ideas are contagious, particularly among uneducated, and at the same time nervous, persons (with much sensitiveness and little spontaneity), is ascertained. The idea excited by sympathy is brought into action by the impulse of imitation (§ 46), and pervades the whole being. We find examples in panic terror, in the epilepsy of the orphan children at Haarlem, which Boerhaave cured by a threat, &c.[5]

This would be the place to speak of the geography of psychopathies;[6] but it is very difficult to ascertain anything positive on this subject, owing to the uncertainty of medical statistics in general, and the extremely dissimilar states of lunatic asylums in different countries in particular. Nay, we are led by the latter precisely to an inverse false conclusion, because the number of persons received, and therefore enumerated in their Reports, increases with their extension and im-

[1] Sprengel, Beit. z. Ges. d. M. i, 2.

[2] Das Naturell, die Krankheiten, das Arztthum, u. s. w. Braziliens, v. K. F. Ph. r. Martius. München, 1844.

[3] Hist. p. 25.

[4] Brière de Boismont, sur le Pell. Journ. compl. 1832.

[5] Zimmermann, von den Erfahr. p. 647.

[6] The most common is particularly well treated in Toltenyi's Pathol. Gen. p. 473.

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provement, whereas, for that very reason, it probably, on the whole, decreases. Except perhaps Turkey and Egypt, insanity is more rare in other quarters of the globe than in Europe; but, according to Brigham, it is more frequent in civilised America than in Europe; among savages,[1] it is almost as rare as among children. In Russia it is very frequent, particularly in the form of mania, whereas the Finnlanders are more subject to idiocy.[2] In France it increased very much after the Revolution, but since 1830 it has again decreased.[3] In Great Britain, the country where originality has been carried even to eccentricity, the number of lunatics in 1826 amounted to 8000;[4] in France to 3000;[5] in Holland to a proportionably greater number; in Prussia, the proportion is given as 1 : 666; in Norway, as 1 : 551. Italy gives a particularly favorable proportion. A difference is likewise to be observed in the occurrence of the several forms. In the south, mania is most common; in the north, melancholy; in the valleys, idiocy, &c.; in England, fixed delusion predominates; in France, fatuity; in the East, idiocy; Germany presents a more happy medium. But it must not be forgotten that the determining circumstances are here not properly geographical, i. e. founded on degrees of latitude, &c., but ethnographical; i. e. founded on the modes of life of the people.

The observation that national peculiarities are reflected in concrete cases of insanity, though certainly correct in itself (for even with a broken leg the genuine Frenchman will behave differently from the genuine Englishman), would lead to useless trifling if we were to pursue it further.

§ 127. The course of psychopathies, with respect to duration (§ 126), next comes under general consideration.

Psychoses, on the whole, belong more to chronic than to acute diseases. Attacks of acute mania are, for the most part, rather paroxysms of a psychopathic condition,[6] which previously existed independently of them.

[1] It is uncertain whether the extasies and visions to which they are subject are psychopathic.

[2] Leipziger Tagebl. 1842, 17 Dec. (d. Petersb. Irrh.)

[3] Constitut. 1838.

[4] Gesundheitszeitung, v. p. 62 (therefore as 1 : 900?).

[5] Therefore as 1 : 1000.

[6] Tract. d. Vesan. sec. Lippich. Prop. Breit et Wieser, 1842.

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recognised by practical observers, and they ought not to represent more, though we may, with Bird, reduce them at pleasure to fewer principal groups.

Thus, the four principal forms are not without a scientific foundation; we, however, by no means avail ourselves of them as a division, but, for the sake of a natural history of the disorders of personality, we employ them merely as a representation of the phenomena which in reality occur in combination. We patiently await the day which shall show us an infallible mode of deducing these concrete combinations from a no longer enigmatical pathology of the nerves, that is, a mode of dividing them on scientific principles.

§ 126. Before we proceed to this natural history of the psychoses, i. e. to their special pathology, we will consider them in their commonest relations, by sketching their general pathology in its principal outlines. These relations concern, as we well know, the circumstances of space and time with reference to diseases.[1]

With respect to space, diseases are—

1st. Either local or general. That the psychopathies, as compound conditions which take possession of the whole individual (§ 122), belong to the latter class needs no proof.

2d. Idiopathic or sympathetic. Psychopathies are, for the same reason, probably always sympathetic, because their existence can scarcely be imagined without the disturbance of some reciprocal action,[2] whether this be considered as psychical (disturbed relation of mental action), or psycho-physical (a disturbed relation of the psychical functions to the bodily organ), or physical (disturbed functions of the brain from abdominal disorder, &c.)

3d. Various in proportion to the subjectivity of the patient, according to the modifications already mentioned as constituting the personality (§ 53), and those to be mentioned in the sequel.

4th. According to the relations of human society (epidemic, endemic, contagious). The epidemic occurrence of psychopathies, whereof the love of imitation forms, as it were, the miasmatic vehicle (on which account they are very properly designated as "imitative epidemics"), appears to be beyond

[1] Töltenyi, Path. L. c. ii, 4. Hartm. Nosogr. [2] Hartmann, p. 294.

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doubt.[1] The most ancient examples are, indeed, rather uncertain. Herodotus (ix, 33) speaks of such an epidemic among the Argive women, which began with the daughters of Prœtus. They ran into the woods and murdered their own children, but were cured by Melampos, with *veratrum album*. Sprengel considered the disorder to be *lepra*;[2] Plutarch[3] relates a story of a monomania among the Milesian girls to hang themselves, which was cured psychically by a law, that the bodies of those who had thus destroyed themselves should be exposed naked. Whether the madness of the Abderites, after the representation of Andromache, may be referred to this head, since Lucian says "that it was combined with fever," I do not decide. The most remarkable epidemic of this kind, was probably the dancing mania in the middle ages,[4] so well described by Hecker, and which perhaps is related to the Tarentella (so called from a dance still in use in the country of Tarento).[5] Webster mentions an epidemic madness which prevailed in England in 1354.[6] Miliary fever (*kriebelkrankheit*), which often appeared as mania, and ended in idiocy, likewise occurred as an epidemic.[7] The public journals spoke, in 1841-42, of an *extasis religiosa*, which at that time was epidemical in Sweden; and lately of a similar epidemic among the Burates on the Lena, the description of which reminds us of the *convulsionnaires* of the middle ages.[8] Dr. Maffei describes[9] a similar epidemic, which received the name of "Pöschlianism," from a religious fixed delusion which originated with one Pöschl. It generally commenced with melancholy, was accompanied with fits of convulsions and raving, and, in one case, terminated in suicide. The question of referring to this head the simultaneous agitations in the minds of entire nations, when they are led away even to erroneous conceptions of the relations of reality itself, as was done by a late excellent clinical teacher, I leave to be determined by those who hope to allay these agitations by medical treatment.

[1] L'esprit est sujet aux maladies épidémiques tout comme le corps; il n'y a qu'à commencer sous de favorables auspices, et lorsque la matière est bien préparée.—M. Bayle, Dict. i, p. 12.

[2] Gesch. i, § 56, p. 118.

[3] De Virt. Mulier.

[4] Zimmermann, v. d. Erf. p. 647.

[5] Goethe, 38, 211.

[6] See above, p. 42.

[7] L. c. p. 51.

[8] Berlin Med. Central. Zeitung, 1844, No. 68.

[9] Medic. Jahrb. des Osterr. Staats. n. Folge, vi, 20.

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they are all good, but all unsatisfactory. Men despair of the possibility of completely carrying out these attempts, and yet they are always renewing them.* But if we consider them all with an unprejudiced eye, and at the same time observe the phenomena as they appear to us in life, we find that there, as well as here, they may be divided, or rather be reduced into four principal, distinguishable groups: these groups we call, in the most general terms, idiocy, fixed delusion, mania, and fatuity (folly).

It is evident that we have here to do only with the fundamental forms, and their principal varieties. (See page 8.) To point out and arrange individual varieties as they appear *in concreto* is the business of psychiatric clinique or practice.

§ 125. It is these fundamental forms which are principally distinguishable in nature, and into which those that are laid down, according to the most divers principles in our closets, always return, in the same way, as the pathology of bodily diseases,

in a general way for your historical information. The grounds of their divisions may form the basis of mine. These are in the main five:

1. According to the so-called faculties of the mind. Among these we may reckon those of Kant, Hartmann, Heinroth, Ritgen, Stark, &c. These faculties, or rather directions, of the one mind cannot, however, be empirically separated.

2. According to the provinces of the nervous system, or also of other organic systems predominantly affected. Among these may be reckoned those of Töltenyi, Grohmann, Buzzorini, Blumröder, Sinogowitz, &c.; but the predominance of these provinces and systems cannot be empirically shown in the individual forms.

3. According to temperaments. The divisions of Dietz and Windbüchler come under this head. A cause founded on predisposition does not, however, suffice for classification.

4. According to quantitative, gradual, opposing, or mixed proportions. Among these I reckon those of Eschenmayer, Fantonetti, Tschallener, Flemming, &c.; but the logical constraint causes unnatural separations and connexions among the natural groups.

5. According to the phenomena or symptoms. Under this head I reckon those of Pinel and of most French and English authors, of Reil, Linnich, Ideler, &c.; but it cannot be properly called a division, or we must, with Marc (Die Geisteskrankheiten in Beziehung zur Rechtspflege, Deutsch von Ideler; Berlin, 1843), call it a provisional division, till we know its internal foundation. To this classification we also attach ourselves, being convinced that such a preliminary, natural proceeding is at all events more profitable than premature abstractions, which, till we are more specially acquainted than we now are with the intricacies of the psychical and nervous functions, are sometimes only perplexing aids, or, what is still worse, fictions.

* Ueber Klassification der Seelenst. v. Flemming in der allg. Zeitschrift für Psychiatrie, i, 1. Berlin, 1844.

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though they may be provisionally classified under the most various forms, are, after all, fevers, inflammations, cachexies, and neuroses. Those psychological physicians have been blamed who derived their principle of division from the faculties of the mind, or, more properly speaking, from the manifestations of its activity. Unjustly, for every *momentum* may be assumed at pleasure as a ground of division, if it be only carried out consistently, and according to nature. Nature recognises no logical privilege; with her everything is equally important. Psychopathies were, therefore, divided into those with a predominant affection of the thinking principle—idiocy and fatuity; of feeling—melancholy; of will—mania; wherein the above-mentioned four forms are brought to light.

A ground of division was sought by medical inquirers in the principal parts of the organism. Idiocy and fatuity were referred to the head, mania to the cavity of the chest, and melancholy to the cavity of the abdomen (§ 38.)

They saw in the pathological conditions the extremes of the physiological,—of the temperaments, and deduced idiocy from the phlegmatic, folly from the sanguine, mania from the choleric, and melancholy from the melancholic; a view which is not without advantage, especially in prophylactics.

They called in to their aid the logical categories, and the result was—*a*, diminished mental energy, *idiocy*; *b*, heightened mental energy, *mania*; *c*, altered in the manner, *fatuity*; *d*, erroneous in the direction, *fixed* delusion or *melancholy*.

They considered the relation of consciousness to objectivity, and assumed—the want of it, *idiocy*; the assumption as real of a non-existing objectivity, in general, *fatuity*, in particular, *fixed delusion*; the senseless endeavour to give objectivity to the impossible, *mania*.

We see from all these divisions, that they either, were adapted to already given forms of experience well known to the framer of them, or, by the law of nature, which is innate in human thought, led of their own accord to those results of which a repetition is constantly taking place in experience.

It is evident from the above that these forms are different in quality, and are not, as Pritchard asserts, merely gradual differences of one and the same injury to the vitality of the sensorial nervous system. We see that they are individualities

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conditions everything that co-operates and is operated on organically. It is evident in this investigation that not only the brain, but all organic structures, and not only the structure, but also the chemical composition (*chemismus*) are to be taken into consideration. Science in its present state leaves the relation of the disturbance of the functions of the brain to that of its vegetation, and consequently also of its structure, too undetermined to enable us to theorise upon it,[1] and experience decides that there is no portion of the brain the abnormity of which has not sometimes been followed (accompanied?) by a disturbance of mental action, and again, none with the abnormity of which the mental action did not sometimes remain undisturbed.[2]

The dimensions of the head are generally diminished in idiocy; in the other forms of the psychoses they are enlarged. Greding[3] affirms that he has often observed in the cavity of the skull, the *processus clinoidei* longer and more pointed; other abnormal elevations have been often noticed at the base of the skull; the cranium was in most cases found to be very thick. Professor Kasloff, of Kiew, asserts that he has always found the *foramen lacerum posterius* contracted, nay, grown up, whence he concludes that the impeded return of venous blood is the cause of insanity. The pia mater, together with the *arachnoidea*, often has a thick lardaceous appearance, and is studded with a number of small, white, soft substances (lymphatic, at first granular, afterwards spongy exudations), and depressions. Sanguineous injection of them is frequent only when there is simultaneous hyperæmia of the substance of the brain; adhesions of the meninges to each other and to the cavity of the skull, especially in melancholy patients, is more common. Water is often found between the meninges, particularly in patients who have been raving mad. Polypi and ossifications are frequent. The statements regarding the weight of the brain are contradictory.[4] The substance of the brain often emits a disagree-

[1] Andral, Path. An. Deutsch, Pt. ii. Leipzig, 1830.

[2] Burdach, l. c. p. 644.

[3] Sämmtl. Medic. Schriften, 1 Theil. Greip. 1790. In our present poverty we must make use of Greding's statements; they are, however, frequently unsatisfactory on account of their vague designations of disease, and their mistakes respecting the causal relations.

[4] Lippich, l. c. p. 32.

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able odour; in idiotic and melancholy patients especially, it is abnormally soft (though, according to Parchappe, the contrary takes place), seldom hypertrophic; more frequently, especially in the convolutions, and here again chiefly in idiots (first in the gray, and subsequently also in the white substance) atrophic. The latter have fewer convolutions of the brain than healthy persons. Hyperæmia of the cortical layer, especially in furious patients, is however very constant.[1]

The lateral ventricles of the brain have been more frequently found diminished than enlarged. Hydatids in the *plexus choroides* are among the most common occurrences; in the cerebral substance and on the pineal gland they are less frequent. Sandy concretions, which have been met with in the latter, are known to be also found in healthy persons. What is called the pituitary gland is often found altered. The air which was frequently found by Chiarugi and others in the vessels of the brain, was probably not there during life. The cerebellum was in most cases in the same state as the cerebrum.

The chemical composition of the brain, according to Lassaigne's and Couerbe's analyses, showed a smaller proportion of water and salts, and a larger proportion of albumen and fat, but it is not stated whether idiocy or furious mania was coupled with these conditions: in the latter Couerbe found a larger, in the former a smaller, proportion of phosphorus than in the healthy brain. It had been already remarked by Cabanis that the brain of furious maniacs was very phosphorescent.[2]

The medulla oblongata and spinal marrow show, according to the few investigations which have been hitherto made, less participation in these conditions: so likewise the central terminations of the nerves of the senses; but they also have been too little inquired into. The corpora quadrigemina were found in some idiots to be very small and far apart; in a furious maniac very large. The optic nerves atrophic; the olfactory nerves under similar circumstances firm and fibrous. Atrophy of the nerves of the spinal marrow, which frequently occurs in

[1] "On the whole, a careful comparison of the results hitherto obtained by dissection teaches us that in the psychoses the substance of the brain is much more rarely altered than the vascular system."—Romberg.

[2] Lippich, l. c. p. 35.

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idiots, with simultaneous hypertrophy of the ganglionic system, is worthy of observation.

Adhesion of the pericardium to the heart and to the pleura, water in the pericardium, and ossification of that membrane, are not uncommon appearances in the bodies of insane persons. The size of the heart, especially in furious maniacs, has been more frequently found to be diminished than enlarged; the heart itself, particularly in melancholy patients, is often flabby and soft. Thickening and ossification of the valves are of frequent occurrence.

The blood appears, for the most part, thicker than in healthy persons, black, and disposed to polypous coagulation; but also very frequently thin and watery.

Tubercles in the lungs are well known to be very common in the bodies of insane persons.

Things of various kinds which have been improperly swallowed are found in the stomach. In some cases mentioned by Greding, the position of the stomach was abnormal, as well as that of the intestines. Wichmann declares contractions of the large intestines to be a diagnostic sign of insanity.

Affections of the liver are so common in the insane, that Cheyne assures us Lood found the liver diseased in four hundred bodies.

The spleen is likewise generally diseased, often enlarged to the weight of several pounds (in one instance thirty pounds).[1]

The gall-bladder has been often found adhering to the duodenum and the ileum.

These are the more general, more important, and more constant results of psychiatric necroscopy; they find their explanation in the preceding remarks. It is only to be regretted that these investigations are much too isolated, and that the observers, too often neglected to indicate the stages of the disease in which death ensued, the nature of the phenomena of the disease during life, or any particulars of the course of the disorder; for, without *filiation*, all these symptoms, which occur in so many other disorders besides the psychoses, have but little worth. Moreover it must not be forgotten that the intensity of the disturbance of the functions is by no means in direct proportion to the changes of structure in the organs;[2]

[1] Ritgen, l. c. p. 312.

[2] Andral, Pathol. Anat. vol. ii. p. 429.

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that all these changes have occurred singly without mental derangement, none with a definite mental derangement, and every mental derangement without any one of these changes, so that here, too, more accurate researches are necessary.[1] In like manner, the statement of the numerical proportions is by no means decisive, because it discloses no causal relations. What in one case is not combined, was, in ten cases, not *necessarily* combined; and it proves no essential connexion if I relate that, in a hundred cases of an epidemic typhus, some worm disease accompanied them, should a single case be found without them.

Thus we must not wonder, on the one hand, if Pinel, sen., Georget, and Esquirol, after dissecting two hundred bodies of lunatics, confess that they are not able to give any results; if Burdach, Müller, and Otto obtain none by scientific criticism; if those stated by Greding, Parchappe, Flourens, Bayle, Casouvieilh, Boucher, contradict each other;[2] yet this negative result should not, on the other hand, deter us from further persevering, diligent, and careful inquiries. We must not expect to find a single decided metamorphosis, but to become acquainted with the manifold relations of what we have found, to each other and to the mental derangements which they accompany.

§ 129. As we have spoken of the relations of space and time with reference to the psychoses in general (§§ 126-128), we must likewise, to avoid repetitions in single points, say something general on the pathogeny of these conditions. We may be the more concise here since a recapitulatory application

[1] Examples of the proportion of exudations to disturbances of the functions of the brain, may be found in Dr. Dietl, Zeitschrift der k. k. Gesellschaft der Aerzte. 1845, January.

[2] Verhandlungen der k. k. Ges. der Aerzte, z. W., 1, 1842, p. 167. The method of treating and making use of necroscopy is very well discussed in Bird's Pathol. und Therap. Psyc. Krankheiten, pp. 45, 68, &c. The most important points, which must never be forgotten in necroscopies of this kind, are a statement of the time which has elapsed between the death and the dissection, and of the method which was adopted in opening the cavity of the cranium. I need not add that attention must be paid not only to the general, but also to the most minute circumstances in the elementary parts. Thus Weber (Hildebrandt's Anatomy, i) found, in portions of one of the convolutions of the cerebrum of an aged lunatic, globules attached in rows to each other, but the sheath in which each row was otherwise contained was rent, and only remained in fragments, &c.

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of what has hitherto been adduced, furnishes a clue to every man who thinks for himself. In the personality of man and its conditions (§§ 49-55), especially in the predominance of fancy (§§ 36, 37) on the psychical side, and in the vital debility of the brain and the nerves (§§ 12-23) on the physical side (called by Canstatt "physical vulnerability"), lie the predisposing causes; in the reciprocal etiology between body and mind (§§ 62-72), and in external influences of every kind, the occasional causes; while in the states of transition themselves (§§ 79-118) lie the properly so-called proximate causes of the psychopathies. That there can be no absolutely predetermining, specific cause, as it is termed, of mental diseases; that it is, therefore, vain to look for such a cause, appears sufficiently evident from the very notion of these disorders as complex (§§ 122, 1). Complex effects can be founded only on complex causes. We must, therefore, consider that of the momenta to be immediately brought forward, none, considered in itself, can be deemed predetermining, but only the co-operation of several, and the disposition in concrete cases.[1]

Hereditary descent is unquestionably the most frequent predisposing cause, for it predetermines a decided type of personality as the basis of its diseases. More than half of all the cases that occur are occasioned or favored by it. Marriages in the same family contribute, therefore, to the propagation of this germ. It often takes place uninterruptedly from the father to the son, from the son to the grandson; often with an interruption from the grandfather to the grandson; often irregularly to the nephews, &c. The danger is less when the procreator does not become insane till after the procreation,[2] and, therefore, had previously only a predisposition. The tendency manifests itself on the psychical side, 1, by passiveness in thinking, in feeling, and in willing (Heinroth); on the physical side, 2, by predominant erethistic vital debility, the fundamental character of the present generation.[3] Such a

[1] Even this shows how untenable and useless are the numerical lists, common especially in England and France, of the causes of insanity. To the uninformed they appear interesting, but he who considers the difficulties of medical statistics in general, and who knows in particular what is necessary in the genesis of the psychopathies, will also know how to estimate such statements.

[2] Lippich, l. c. p. 38.

[3] Hechenberger's Grundr. z. ein. org. d. Seel. Heilk. p. 30. Vienna, 1841.

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state is peculiar to nervous individuals. We have here, however, especially to take into account certain constitutional diatheses on the corporeal side. They are, *a*, the scrofulous, and rachitic *habitus*, in which the above-mentioned state occurs; *b*, the apoplectic, which disposes to certain forms of insanity (especially mania), in consequence of the hyperæmia of the brain; *c*, the venous (otherwise atrabiliary), which also disposes to certain forms, with a tinge of melancholy in consequence of the impeded ganglionic conduction. The disposition to the several forms, through the temperament, has already been mentioned (§ 125). With respect to the disposition depending on the sexes, the statements of medical statistics do not agree. No general law can here be laid down, and probably the intellectual and physical national character, the position of the female sex, and local circumstances, determine the results.[1] The communicability of these conditions is stronger in the female sex, in consequence of their more active spirit of imitation; and Zimmermann, therefore, designates contagious phantasms "female epidemics." The insane do not infect each other, because every one is too much taken up with his own delusion to be susceptible of that of another; nay, furious maniacs are said rather mutually to calm each other by their cries (?). Convalescents are likewise not infected (Jacobi), but those are so, on the contrary, who are remarkably afflicted with the above-mentioned tendency, especially in cases of long contact with insane persons, as, for example, attendants, &c. (§ 126). With respect to ages, the cycle from sexual evolution to sexual involution disposes the most to mental disorders; childhood the least; age but little, yet more than childhood; the epoch of puberty the most. Hereditary psychopathies develop themselves readily in children about the same time that they appeared in the parents. Though cases of the development of psychopathies before the years of puberty are rare, yet several are quoted by credible observers.[3] Dr. John Stolz, at Hall, has lately communicated such a case;[3] and I had an opportunity of observing a case of moria in a girl six years old. Ideler[4] gives cases of rare psychoses occurring even

[1] Ideler, vol. ii. p. 371. [2] Friedreich, Diagnostik d. Ps. Kr. p. 282.
[3] Medizin. Jahrb. d. Oe. St. 1844, März.
[4] L. c. vol. ii, p. 370. Esquirol cured in the Salpêtrière two women each 80 years old.

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after the epoch of involution, having had to treat women seventy years old for erotic madness. Nobody doubts that education (§ 53, *a*) furnishes a powerful momentum in the origination of this unhappy tendency. Haslam justly assigns to it[1] nearly the most important place of all predisposing causes: I say justly, because when judiciously and energetically directed, it can raise a barrier against the strongest, even the hereditary, tendency. Thus, by unbridling or judiciously restraining the fancy, it may either encourage or check this unhappy predisposition. We see, therefore, from this, also, how far we have to carry back our recollection of prominent circumstances in the investigation of psychopathic diseases. But if an over-refined education is to be considered as promoting this disposition, all seems to depend on the notion which is attached to this assertion. Education can never be carried too far, so long as it is consistent, and the higher it is carried, in this sense, the more protection will it afford on the psychical side against the invasion of insanity. History, indeed, records cases of partially educated scholars and fanatical poets, but it affords no instance of a wise man who had become an idiot.[2] Among employments (§ 52, *c*), those of the weaver, shoemaker, and worker in metals present both predisposing and occasional causes. If there are national tendencies (§ 52), the data which have been given (§ 126) on the geography of insanity are to be referred to this head.

§ 130. The occasional causes act psychically and physically: the psychical are—1st, neglected cultivation of the mind and idleness (which are quite as important pathogenetically, as employment is therapeutically); 2dly, partial cultivation of the mind in one direction, especially in that of the fancy; 3dly, emotions and passions. From all the preceding observations it results that these powers must act in concert with the above-mentioned psycho-physical disposition (physical occasional causes are, for the most part, added) to constitute disease as such. Scarcely any proof is needed to show how very difficult it must be for a mind oppressed by early, unduly harsh restraint, which has never attained to harmonious development, and is, therefore, susceptible only of depressing in-

[1] Observations, 2d edit. p. 236.

[2] A dulness and debility of the memory (Newton, Kant), produced by excessive exertion of the organs of thought, cannot be referred to this head.

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fluences and base impulses, to resist the effects of the emotions and passions; especially when, as is almost always the case, it is connected with a depressed condition of corporeal life (Pinel). A practical proof of the morbific power of the emotions and passions is found in the frequent occurrence of psychopathies in times when all the elements of social life are in a state of fermentation; in and after revolutions, when sudden changes of fortune, loss of property, worldly elevation and depression, fill the lunatic asylums, and (if Pariset be right) produce a thousand cases of mental disorder which, in the general turmoil, remain unknown and unmentioned. And herein lies the answer to the question, why the number of mental diseases has increased with civilisation? a question which is certainly proved to be a fact. It is not civilisation, but the increasing want which it brings in its train; partial education, passions, emotions, &c., all which set the mind in passive motion; the forced culture (§ 72) to which they lead; the over-indulgence, —these contain the reasons of this fact. Civilisation, as external education, is but a transition to culture as internal education; and in this first stage it produces evils for which it furnishes the remedy in the higher stages. It carries the poison and the antidote in the same hand. The industrial impulse of the present time, for instance, by the hazards to which it exposes the opulent classes, is one of the occasioning momenta, while, by the activity which it excites, and by doing away with isolation, it is one of those which is counteracting and salutary. If savages show such a happy exemption from insanity (§ 126), they are indebted for it, not merely to the want of civilisation, but probably also to the indomitable energy of their corporeal vitality. Of all passions, ambition in men and love in women (especially through jealousy) are the principal springs of insanity. Goethe says very judiciously,[1] "nothing brings us nearer to insanity than distinguishing ourselves above others; and nothing preserves the even tenor of the understanding so well as a general intercourse with many people." In Russia the class of officers in which the greatest eagerness for rank prevails, comprehends the greatest number of insane persons.[2] Love especially has a profound influence, through

[1] Wilhelm Meister, Book v, chap. xvi.

[2] D. Petersburg Irrenh. Leipzig, Tageb. 17 Dec. 1842.

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the emotions (§ 48) interwoven in its course. The fearful torments of jealousy, above all, cause innumerable victims. It is remarkable that ill-founded jealousy leads far more frequently to insanity than that which is well-founded, because the former creates its objects by fancy, and, in consequence of the internal struggle with itself, excites the more emotion.[1]

The most important occasional physical causes are—

1. The extremes of cold and heat, the former of which may cause obtuseness of intellect, the latter (insolation) furious mania.

2. Different states of the atmosphere, which, in towns seem favorable to melancholy; on the mountains, to excitement; and in the valleys, to idiocy.

3. Traumatic influences; not only immediately on the head and brain (among which we must reckon the pseudo-plasms, foreign bodies, &c., which act partly through alteration of the substance of the brain, partly through the excitement of reaction in the brain), but in any region of the nervous system. Nay, superficial injuries of the head often have the same effect, partly, it may be supposed, through the concussion of the brain generally connected with them, and partly on account of the cicatrices, the substance of which is known to possess great sensibility, as is proved by the *tetanus traumaticus*, arising from injury done to the cicatrix of an old bite, which is often followed by hydrophobia, &c. (Herzog, loc. cit.)[2]

4. Poisons, especially animal poisons, and, from the vegetable kingdom, narcotic poisons, which the ancients and witches of the middle ages made use of for love potions and fortune-telling drinks. (*Cicuta, Stramonium, Delphinium Staphysagria, Agaricus muscarius, Ranunculus sceleratus, Acidum hydrocyanicum, Virus hydrophobicum, Serpentum*, &c.) Among these

[1] Ideler, vol. ii, p. 533. Insanity occurs, however, much oftener in a state of celibacy than in marriage. According to Parent du Chatelet, it is very common in prostitutes.

[2] We must here note the circumstance that the same traumatic influences often cure mental disorders. This occurs—1, when a wound takes off the pressure from a cerebral mass; 2, when it removes some contained matter causing disease, for instance, pus in the cavity of the skull; 3, when the reaction of the brain is awakened or heightened by the wound; or, 4, when the abnormally heightened reaction is thereby moderated.—Vide Friedreich's Hist. Krit. Darst. p 162.

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must be classed spirituous liquors, from an indulgence in which, states of transition to insanity are gradually formed (§§ 59, 78, 88).

5. Purely somatic morbid processes, which, by causing abnormal irritation of the nerves,[1] may become, in predisposed individuals, occasional causes of psychical processes; for instance, itch (*Satyriasis psorica*, &c.), syphilis,[2] biliary and urinary calculi, liver complaints, diseases of the heart, but, above all, the gouty dyscrasis, which is so frequently succeeded by mental disorders, that a practical observer[3] was induced to establish a specific gouty fatuity and madness, from the influence of that disease on the brain, and a gouty melancholy and idiocy, from its influence upon the ganglionic system. Amenorrhœa accompanies almost all the psychoses in women. Whether it is always only a consequence, as Georget supposes, or likewise a cause, is not decided. Examples may be found in Klencke[4] of various forms of insanity,—fixed delusion, melancholy, and forms of transition, which occur *after* and *with* diseases of the vascular system, *arthritis* with malformation and ossification of the valves of the heart (when the brain appears to be in a normal state), softening of the heart, so-called pseudo-polypi, hemorrhages, cyanosis, chlorosis, &c.; to which every psychological physician could doubtless add many more. It would be easy here to lay down theoretical dogmas derived from the causal connexions between the blood and the nerves, but more conscientious, until further experience shall have thrown light upon the *post* and the *propter* of these cases, to consider these pathological antecedents rather as accompanying, than as causing, psychoses. That, independently of these causes, neuroses, as such, form the basis of psychopathies, and are often forms of transition to them, is proved by the circumstance that psychoses are often set down as neuroses, and also by (§ 123) the whole genetical review of what has been stated. Herein the antagonism between the trophical

[1] "Why is consciousness commonly not affected in tetanus, whereas it is for the most part suppressed or diminished in convulsions?"—Ideler, l. c. vol. ii, p. 399.

[2] It is self-evident that in a pure pathology it is not necessary here to take in metastases (transplantations), properly so called. Perhaps every metastasis is only a metaschematism.

[3] Vering, Heilart der Gicht. Vienna, 1832.

[4] L. c. p. 181, &c.

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and cerebral nervous systems certainly plays an important part; the suppressed function of the former, owing to abdominal diseases, may cause an abnormal excitement of the latter, and, on the other hand, an over-excited function of the ganglionic system, may abnormally depress that of the brain. Hence, likewise, the torpor of the abdominal organs in insanity with excitement of the brain.

6. Many observers maintain, while others deny,[1] that the moon and its phases have an exciting influence on the exacerbations and fits in psychical patients (§ 82).

It is to be understood here also, that these powers, coupled with the above-mentioned psycho-physical predisposition, and also for the most part with a psychical occasional cause (care, sorrow, violent mental emotion, &c.), must co-operate, in order to bring about disorders of the mind. The somatic powers are only occasioning impulses, as the above-mentioned psychical are. The mind, as is admirably expressed by Ideler,[2] can work up the same materials into opposite forms of insanity; so that the same misfortune may throw one man into a rage, a second into a profound melancholy, and a third into an illusion which makes him fancy that he has gained what he has in reality lost.

What, as it were, concentrates the above-mentioned internal as well as external powers into a diseased state of the nervous vitality, and thus affects the organs of the mind itself (§§ 12, 23, 29), becomes now, properly speaking, the proximate cause of psychopathies. This, therefore—if a chief proximate cause, must be selected from so many near and remote causes—certainly must be sought in the central organs of the nervous system. The proof of this lies in the whole of the foregoing statement, and will be found there by every one who has well considered it. In the present state of nervous pathology, however, it is easier to show upon paper, than in life, whether it is the cerebral, cerebello-spinal, or sympathetic alteration which is primary, or which predominates in the several forms. Thus much is certain, that every corporeal organ may be disordered in itself in every way, nay, may be destroyed, without inducing insanity, so long as the brain can offer opposition by its vital

[1] Lippich, l. c. p. 44.

[2] Vol. ii, p. 389.

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energy. If this be once implicated in the morbific process, we are then furnished with the proximate cause. It is by no means made out how the several pathologico-anatomical anomalies of the brain (§ 128) which have hitherto been discovered, contribute to this result. Accordingly, even the essays on diagnosis, valuable as they are (as for instance, die Kopfauscultation, Canstatt, Sp. Pathol. iii, 1, p. 2), give no solution on this point.[1] The most important momenta which co-operate here are, probably:—

1. Abnormal reciprocal action of the blood and nerves, as well with respect to quantity as to quality. Great loss of blood causes faintness, vertigo, &c. (§ 60); determination of blood to the organs of sense produces hallucinations, &c. (§ 108); and different crases of the blood cause a difference in the temper of the mind (§ 63), &c.

2. Abnormal association in the organs of sensation and motion. This association is either effected between normally separated organs, as where the ganglionic nerves are brought into abnormal connexion with the optic nerves, and hallucinations ensue (Hartmann); or the normal association between organs is suspended, and imbecility ensues. This momentum has its origin either in the cessation of a normal isolation of the nervous structure, or (owing to morbid products of vegetation?) in the calling forth of an abnormal isolation of it.

If these pathological processes are set up, neuroses are formed, that is, alterations of the cœnæsthesis (§§ 93-105), and of the senses (§§ 106-109), which are properly (see above) what may be called the proximate causes of mental diseases, because they pass into them.[2]

§ 131. After these preliminary general observations (§§ 121-

[1] Hence we see how capricious is the division of mental diseases, so often repeated after the Abbé Terrasson, into those where correct conclusions are drawn from false ideas, and those where false conclusions are drawn from correct ideas. The latter is a logical, not a pathological error; the former is hallucination, and does not become insanity till a complete derangement of the personality exists, when the conclusions also will be false—Mania.

[2] Hartmann (l. c. p. 356) here admonishes us not to forget the morbid excitement of the organs of speech, and reminds us of the danger of talking to one's self. This circumstance, however, appears to belong more to the phenomenology than to the pathology of mental disorders.

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129), we may proceed to the natural description of the forms of mental disorder as they really appear. It is not our business (§ 124) to define them; concrete natural objects can never be defined; the utmost we can do is to define their species, because, according to the general characters, these may be comprehended under one notion. Neither have we to concern ourselves about the number of distinctions and sub-distinctions made in Græco-Latin barbarisms of terminology, which designate every combination as a species, confusing the learner, however ingenious and acute he may be, and which, pen in hand, may be easily and gracefully varied *ad infinitum*. The point is to comprehend the phenomena in a manner true to nature, to collect them in consistent groups (*salva natura*, the fewer the better); and, as far as is possible, to communicate them by description:—a difficult task indeed, if, as a self-observer says,[1] even an Esquirol has but imperfectly succeeded in it.

The chief difficulty lies in the manifold diversity of these forms, which is as great as the number of human individuals. This may, indeed, be said of all human conditions in general, but of this in particular, most emphatically. In spirit (according to the pure laws of thought) all men are alike; with all $2 \times 2 = 4$; so also, in purely corporeal matters, a bone is fractured and healed in one person in the same way as in another, but precisely in the mediate region between both, with which we have here to do, lies the individuality of man (§ 36), which manifests itself most in the abnormal state, because the normal is the more general and equal. We see this in the versatility and caprice of nervous diseases, with which physicians, to their sorrow, are but too well acquainted. We see it also in the states of transition, in the individual world of every dreamer (§ 58), in the peculiarity of every somnambulist (§ 85), and in the countless modifications which the innumerable phenomena of hypochondriasis (§ 100) and of hysteria (§ 103) assume in different individuals. This principle of individualisation is carried still further, till in the disease of the personality (§ 121), that is, properly speaking, of the total expression of individuality, it attains its climax. It appears, from an understanding of this difficulty, that we describe the forms of

[1] Hechenberger, l. c. p. 30.

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psychopathies the more imperfectly the more we endeavour to attain perfection, i. e. the more we heap symptoms upon symptoms, separate groups from groups, and go into detail. The business of the teacher is, to keep as much as possible to general outlines, that of the learner to think as much as possible for himself; in practice to observe for himself, to individualise for himself.

Folly (insanity in the more restricted sense), *Moria auctorum, Vesania anomala,* Sagar; *Insanity,* according to Heinroth; *Démence,* according to Pinel and Esquirol; *Dementia, bewilderment,* according to Ideler; *Narr Irrsinn,* according to Töltenyi; *Vesania,* according to Ritgen; *Polymania,* according to Fantonetti; *Deuteranoia, Dementia, Wirrsinn,* according to Lippich; *Anöesia,* according to Flemming;[1] *Paranoia,* according to Weiss, —proceeds from delirium, as its highest degree (§ 89). It represents a waking dream, and is characterised by an abnormally lively mental activity, opposed in quality to the healthy state. The alteration is more obvious in the direction of perception than in that of feeling and will; although it branches out, only not decidedly, into the latter. Fancy rules without control. Hallucinations, especially of the hearing, are an almost pathognomonical sign (§ 109). This form may be in some measure considered as a prototype of the rest, which are, as it were, found pre-formed, and often involved in it. Reil[2] seems to me to have given the best description of this form, as it occurs in nature, without pretending to state its essence.[3] "Fools," he says, "have no ruling idea; they change with their conceptions, and combine, in all sorts of ways, follies with eccentric tricks. Besides their general craziness there is a remarkable weakness of all the powers of mind, especially of the judgment." To these observations of Reil I add, that the supposition of Esquirol and Ideler,[4] that folly and idiocy differ

[1] These various denominations are given only that the pupil may recognise nature in the writings, and the writings in nature, and determine his position. Of course I have mentioned only those denominations in which I clearly recognised, in the description, the image of the condition actually presented to me in life.

[2] Rhapsod. p. 396.

[3] "Perhaps," says he, "it is not so much any one kind, as a chaos of several specifically different conditions which I put together; but I give what I have found."

[4] L. c. vol. ii, p. 624. There is frequently a total dissolution of arranged conception without fixed ideas, and without mania (also without idiocy). It was formerly called

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only in quantity (in degree), does not seem to be wholly conformable with nature. Properly an exalted power of judgment appears in no form of insanity, a weakened power in every form, and the further description will probably make the difference in quality, of the two forms, sufficiently clear. "In their capacity of forming conceptions," continues Reil, "there prevails a succession of ideas too rapid for their powers (see § 60); strange conceptions crowd upon them, flash across their minds, and as rapidly vanish; they are isolated and without order, because they are not retained (§ 110), and cannot be brought by association (§ 130) into any connexion. Hence their usually great loquacity about things which have neither sense nor connexion. They speak in the same breath of sabres and toothpicks, children and hats, broken pitchers and dismasted ships. Hence their volatility, habitual absence of mind (§ 110, 3) inconsideracy, forgetfulness (§ 115, 2), incapacity for forming a judgment. Equally tumultuous and unconnected are their feelings and mental emotions. Joy, anger, and sorrow alternate with each other without any reason, and without producing any particular impression on the will; their ebullitions are momentary and like the anger of a wayward child, which may be reduced to obedience by a frown. The same is the case with their activity; they are mobile and bustling at all times,[1] but without energy, without object; amusing themselves with trifles, and playing pranks like children. Their actions, isolated like their ideas, are an automatic play of the muscles, in the most varied groups, which have no connexion either with each other or with their ideas. They are generally contented, good-humoured, cheerful, good-natured, do no mischief to themselves or others, and when they get into a passion, may be easily calmed by a slight threat." Pinel[2] also gives a lively description of the condition of fools: "He approaches me, looks at me, and overwhelms me with his loquacity. Immediately after, he treats another in the same manner. If he comes into a room he turns everything upside down; he displaces and

folly; in Rosenkranz it forms, under the head "delirium," a component part of mania. Exner, the Psychol. of the School of Hegel; Leipzig, 1842. "An instrument full of beautiful tones, but without harmony," according to Sinogowitz.

[1] "The unstable" of Sinogowitz.—L. c. p. 28.

[2] Abhandl. über Geisteszer. übers, p. 176. Vienna, 1801.

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shakes the chairs and tables, without seeming to have any particular motive. Scarcely have you taken your eye off him when you perceive him in a neighbouring promenade, and there as aimlessly busy as in the room; he chatters, throws stones, pulls up weeds, and walks up and down the same way over and over again. Another speaks alternately of his country seat, his horses, his garden, and his wig, without waiting for an answer, or giving the hearer time to follow his rhodomontade. He rambles about his grounds like an ignis fatuus, cries out, gabbles, torments his servants with trifling orders, his relations with absurdities, and the next moment no longer knows what he has said and done." After recovery, however, fools have by no means forgotten all that they did and suffered during their illness. For the most part, a perfect remembrance remains. Fools often pass urine in their beds, purposely spit about them, and are fond of taking snuff. It is worthy of remark that fools often coin perfectly new words, mutilate those in common use, forget them, employ them in a wrong sense, &c. &c. (§ 130, note). The exacerbation or attack is often combined with an exalted sensibility and activity of mind, which is analogous to idio-magnetism.[1] Fools are wont either to refuse to eat, and often endure hunger in an almost incredible manner (sometimes for sixty days), or else they greedily swallow unwholesome or indigestible things. Their skin is frequently covered with a cold, clammy, moist perspiration, which always emits a specific odour, and which many physicians consider the most decided pathognomonic indication of insanity. A general paralysis, which usually first affects the muscles employed in speech, then seizes the upper and lower extremities, and, finally, exhausts the entire motor and sensitive life, accompanies and often closes these melancholy scenes, which are only now and then interrupted by temporary irritations of the brain.[2]

The refusal of food by insane patients probably often arises from an hallucination of the taste, which makes everything appear to them to be bitter, disgusting, or poisonous, &c. The

[1] A foolish patient who was cured by Willis wrote verse with as much ease as prose during these attacks. "I then felt," he said subsequently, "so happy! my memory was clear and facile, and nothing fettered my mind; but at the same time I was crafty and sly, nay, malicious."

[2] Rodrigues, Rev. Médic., Avr. 1838.

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partaking of unusual substances as food is also frequently the result of morbid ideas. We have a remarkable instance of this kind in the case of Urban Faderl, a lunatic at Gratz. One of his morbid conceptions was, that the stomach must always be strengthened with iron. He was suddenly seized with a violent inflammation of the œsophagus, which nearly proved fatal. He recovered, however, and, as soon as he could speak, asserted that he had swallowed the blade of a knife, which was not credited. In November, 1829, he was again taken ill, and died on the third day. On opening the body there were found, seven oxidated lath nails, each two inches and a half long, thirty-three nails two inches long, some blunted by oxidation, some pointed and large, and forty-nine smaller iron nails and rivets, three pieces of wound-up iron wire, an iron screw an inch long, half a knitting-needle, two iron tobacco-pipe cleaners, a brass image of a saint, about the size of a penny, a brass hat buckle, part of the blade of a knife, two inches long, which was quite blunted on the edge and at the point by oxidation; and, lastly, a roll of lint about the size of a hazle-nut. The total number of articles amounted to 100, and weighed about twenty ounces. The stomach was very much drawn down, but not perforated. Judging from the state of oxidation, it was concluded that many of the above-named contents had been retained a couple of years in the stomach, and that probably many pieces of iron had passed through this man's body.[1]

§ 132. Of course this form is subject to manifold differences, according to modifications of the personality (§ 126, 3), to complications, &c. Hence varieties arise, which, in order that the characteristic peculiarities shall be at once understood, may be always designated by Roman and Greek types. The condition often seems to be in a certain sense partial; that is, fools understand many things, notice threats and promises, and often dissemble. By accurate comparison of the entire condition, however, moria may be easily distinguished in practice from fixed delusion, and must not be considered as a higher degree of the latter, a mistake which has occurred, having probably been occasioned by the circumstance that fixed delusion in some cases passes into folly, and through it into

[1] [For a somewhat similar case see Med. Chir. Tr., vol. xii, p. 52.—Editor.]

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idiocy. Sometimes the thread which connects the insane images may be in some measure discovered in cases of originally powerful spontaneity of the understanding, or where it is not so thoroughly deranged; in that case there is, as Polonius says, "method in the madness," and in the common acceptation of language we may then call it mad wit or craziness (*Wahnwitz*). Sometimes this methodical variety increases to a fantastical degree; this increase is called eccentricity (*Aberwitz*), a form from which the stupid are secure, "for a head," says Kant, "into which no wit finds entry, has no room for (Aberwitz) eccentricity." This state often borders on idiocy (imbecility), but the difference between the two is not to be mistaken. Folly, as Töltenyi very justly observes,[1] has a large circle of thought, a copiousness of ideas, but in the process of thought there are blanks and gaps, because the connexion between the ideas is wanting. Folly, when it moves in a defined circle, often borders on fixed delusion, and often, by the violence of its ebullitions, on mania. In nature, neither here nor anywhere else are there any fixed limits laid down; it is, therefore, the more useful to define them by means of scientific representations and notions.

§ 133. To this state, which is variously distributed by authors among the other more decided families of insanity a very small number of pathologico-anatomical investigations has distinct reference; so that it becomes difficult to separate the results, as far as they concern it in particular, from those which relate to other mental diseases. On the whole, it seems deducible from Parchappe's and Greding's investigations, that the weight of the brain was increased; hyperæmia of the membranes and substance of the brain was present in many cases, but in a less degree than in the other forms of insanity; so also softening and induration of the brain; atrophy of the cortical substance was never found, while, on the contrary, disappearance of the convolutions was frequent. Greding always speaks only of idiotic, melancholic, maniacal, and epileptically-maniacal patients, and leaves us in uncertainty under which of those categories we are to seek the cases belonging to the present head. Once[2] only he is more minute, and says, that the very large and powerful heart of an insane patient, entirely des-

[1] Versuch einer Kritik. vol. iv, p. 401.

[2] L. c. vol. ii, p. 169.

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titute of fat, was, together with the two auricles, deprived of its pericardium, corroded, and roughened by adherent membranous fibres (*cor villosum*); and further says,[1] that the spleen of one insane patient was of a very peculiar, as it were, double form, the upper part, covered by the adherent liver, appearing very long, curved, and divided from the rest of the spleen, as if by an incision. How little is to be concluded from all these data sufficiently appears from the preceding observations (§ 128).

§ 134. From the foregoing it will appear to the reflecting psycho-physiologist that what is called the "proximate cause" of this form of insanity, is to be sought in everything which, whether from a psychical or physical source, immediately breaks the *connexion* (*ἐγχείρησιν*) of the ideas. It is to be sought psychically in the laws of association (§ 34), physically by a change of the isolation, (§ 130, 2). The central terminations of the nerves, in some measure the organs of imagination (§ 32), appear to be in a state of hyper-æsthesis (§ 93), or pseud-æsthesis (§ 95), whether arising from the somatic side proximately through the blood, or from the psychical side proximately through the nervous action, so that the images of the subject and the object become interchanged. The cerebral sphere must, therefore, be considered as the organic focus of this form.

§ 135. We arrive at a sufficiently clear idea of the remote causes of this form, from the causes of its transition state (§ 91), and those of the psychoses *in genere* (§ 129). Frequently it shows itself to be hereditary, and then for the most part, without any other external or obvious cause that can be pointed out, appears at the same period of life at which the parents or grand-parents of the patient had been attacked by it. It frequently arises immediately from fixed delusion and mania. A vigorous spontaneity of the understanding, in what we should term a sensible man, generally goes through those intermediate states before it passes into this; a weak understanding, which has not so much reaction to oppose to the excited imagination, more easily falls, when it receives a shock, immediately into a state of folly. Hence we find the proportion of fools greater among the uneducated; of maniacs, among the educated classes of society.[2] Confirmed drunkards are often

[1] L. c. vol. ii, p. 212.

[2] Reil, l. c. p. 401.

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particularly subject to this form, where the vital energy of the brain is shaken by repeated attacks.[1] The menstrual anomalies almost always occurring in the female sex, may be classed among both the consequences and the causes of folly (§ 130).

§ 136. The form of moria is generally permanent with remissions and exacerbations, seldom periodical. Prochazka[2] attributes this to the circumstance that the disturbance is general; in fixed delusion, which presupposes a partial disturbance only, there may exist some lucid momenta amid the obscurity of the morbid mass of ideas; in folly, which is a totally abnormal state of all ideas, there can be no lucid momenta. This notion, in extreme cases, is quite correct; but nature makes transitions, and there exists (§ 132) a folly with lucid intervals, therefore, also, with lucid momenta. In particular, it is said, that shortly before death the senses sometimes return for a few instants, nay, even for hours: a phenomenon, which would be as remarkable as it seems to be rare. The return of health, however, is often indicated by a preceding period of remission. The course of it is, for the most part, chronic. The termination is frequently in idiocy.

§ 137. Fixed delusion, in its most extensive signification—*Mono-moria? Monomania,* Esquirol; *Empathema* (*ungovernable passion?*), Mason Good; partial fixed insanity, Blumröder; *Dysthymia* and *Anoesia adstricta*—Flemming (?); *Fixatio, Mononoia, Fixsinn,* Lippich; Hartmann and Reil use the more restricted denomination of *melancholy*—proceeds by means of fixation from the phantasms of the cœnæsthesis (§ 95), and therefore, likewise, from the transition state where they are most frequent, namely, hypochondriasis (§ 100), and from those of the senses, that is, from hallucinations (§ 108); on the psychical side from impulses increased to the highest degree, that is, from passions (§ 47). It begins with a caprice, and represents a sensation or an impulse, which has absorbed the entire personality of the man; it is characterised by the predominance of one idea, or of a series of ideas constantly recurring.

[1] It is said that in these later times, especially in Russia, a periodical drunkenness, mostly terminating in mental derangement, has been observed.—Gesundheitszeitung, vol. iv, p. 321.

[2] Emp. Psych. p. 237.

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Whether this idea or series of ideas be sorrowful or joyous, is not essential. As it is more frequently the former,[1] and has therefore from of old been called melancholy, Reil and Hartmann were induced to extend this too restricted term to the whole form.[2]

It is equally unessential what idea governs the patient, whether it concern body or mind; whether it be religious, political, or scientific, &c.; the disease consists in this: that some one idea is able to govern him, and therefore we can no more establish a genuine scientific division here, according to the object, than in the case of the impulses (§ 46). It is nevertheless instructive to consider these relations, which we shall proceed to do in detail. The idea may be as varied as there are different objects and subjects. It may have reference to the past, the present, or the future,[3] to phantoms of the brain, or to realities; it may be abhorred or cherished. The patient who is seized with fixed delusion no longer pays attention to the world beyond his own idea (§ 110); hence he is glad to flee society in order to indulge, in undisturbed solitude, the ungenial, irresistible impulse of his delusion. If this delusion, however, be a happy one, he makes all whom he meets participate in his joy. Every thought and desire of the patient revolve around this fixed delusion, which seizes upon, and, as it were, hurries them along with it. Beyond its influence he is often capable of acting sanely, and with acuteness and energy. Such patients are frequently capable of accounting for and defending their delusions with a rationality which confounds even the most sensible. If they fail in this, they know how to conceal it with adroitness, to evade or elude the questions with an ingenuity which

[1] Ideler observes (l. c. vol. ii, p. 215) that almost all mentally diseased patients who have recovered, and who were absorbed in the most splendid illusions, nevertheless confess that they never thoroughly enjoyed their imagined bliss.

[2] Aretæus says (de C. et S. Diut. i, 5), "*Melancholia est angor, in una cogitatione defixus atque inhærens, absque febre;*" and after him Boerhaave, "*Melancholia morbus, in quo æger delirat, eidem fere et uni semper cogitationi defixus.*"—Aph. 1089.

[3] Most frequently to the future, where the reality of the present and the remembrance of the past do not put in their protest.—See Ideler, l. c. vol. ii, p. 443.

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often embarrasses the forensic physician.[1] They betray, however, the fixed delusion when their mind is agitated, particularly in a pleasurable manner. As illusions and hallucinations (see above) may become the proximate causes of the fixed delusion, so does the fixed delusion often produce illusions from within; for instance, the patient fancies that he hears the voice of an imaginary pursuer behind him, he turns round and actually sees him; or he tastes poison in all the food that is offered to him, because he cherishes the (very frequent) fixed idea that he is poisoned, &c. If such patients be endowed with strong natural intelligence, if it be a series of ideas which governs them, and if this state, as is almost always the case, have been gradually formed and long continued, "there is method also in *their* madness" (Hamlet), that is, they form to themselves a complete, systematic, artificial work of reasoning insanity, which shows the psychical origin[2] of the mental disturbance, less than the certain fact, that it is merely the material furnished by the senses or the fancy, and not the pure action of mind which contains in itself the cause of the disorder (§§ 38, 120). In slight cases the ideas of the patient alternate, but in the highest degree of the disorder they cease to do so. The fixed idea has taken possession of his whole being. "The patient," says Bellini,[3] "no longer moves from the spot; if he is sitting he does not rise, and if he is lying he does not raise himself up, unless he is compelled to do so. He no longer shuns society; but he does not condescend to give an answer to any one, and acts as if he were deaf; he regards no advice, and remains wrapped up in his own thoughts." "The mind," adds Reil,[4] "suffers from a paralysis of the powers of conception."

All these phenomena are variously modified according to the previous education and position of the patient; according to his social condition and his organisation; and no form of

[1] This is a very remarkable circumstance, because the necessity of concealment ought to lead them to a contradiction of common sense, κοίνος λόγος; a circumstance which undoubtedly, in its proper place, may be taken advantage of for the purpose of cure.

[2] Ideler, vol. ii, p. 448.

[3] D. Morb. Capit. Chiarugi, p. 229.

[4] L. c. p. 319.

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insanity leaves to the reflecting psychopathic physician so extensive a sphere as this does, for the necessary completion of his own mental activity.

§ 138. The varieties are here especially numerous and important, and we shall now put together those of most frequent occurrence according to the objects of the fixed delusion (§ 137).

1. Fixed delusion, which refers to the patient's own body and personality (*Mania metamorphosis*, Reil?). It represents peculiarly the highest degree of hypochondriasis (§§ 100, 137); for this, by a fixation of the fancy, which, under all circumstances, predominates in it (§ 100), forms the transition to the vividly imagined malady. The patient fancies his real state enormously magnified, or dependent on a fictitious cause, whether really possible or impossible. Women easily imagine themselves to be pregnant, and even in men this fixed delusion has occurred.[1] The epidemic fixed delusion of the Scythians, that they were transformed into women, and that, occurring in antiquity and in the Brazils, of being changed into wolves (§ 126, 4), belong perhaps to this head; so likewise the cases in which patients imagine that they have toads, frogs, serpents, nay, even men on horseback in their insides; where they are fearful of passing urine lest they should overflow the town; where they fancy that they have noses of wax or glass, feet of straw, and the like. A woman would not bend her middle finger because she fancied that the world was supported on it.[2] Many patients imagine that they are transformed into an inanimate body, or wholly or in part into another man; or that they unite in themselves two individuals, one in health and the other diseased, and so forth. This variety of fixed delusion occurs frequently (though not this only) in the delirium of typhus, &c. The being possessed (*Dæmonomania*) belongs, according to symptoms which may be easily distinguished, sometimes to this variety, sometimes to that of religious fixed delusion (3).

2. Of the more psychical fixed ideas, those of ambition (§ 130) are the most frequent. With this is generally connected, as in the case of the illustrious J. J. Rousseau, the idea of being persecuted by all the world. The patient imagines that he is above his station, or undertakes absurdities to render

[1] Arnold, vom Wahnsinn und der Tollheit uberhaupt, vol i, p. 136, Leipzig, 1784.

[2] Tralhan, i, 16.

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himself notorious or celebrated. Such an insanity seems to have seized Herostratos when he set fire to the temple of Diana at Ephesus. We might allege, in his exculpation, the many paradoxes and conceits by which, especially German writers in our days, are labouring to obtain an equivocal reputation. De Haen cites many examples of such patients, who willingly submitted to the greatest torments in order to realise the fixed idea of their ambition. Fancied elevations of rank and person are still more frequent. All lunatic asylums are full of princes and princesses, kings, popes, seers, and even sons of God. The unfortunate poet Wetzel arranged his writings before him, and inscribed on the back of the binding, "*Opera Dei Wetzelii.*" The more fortunate Professor Titel[1] rejoiced as being a Roman emperor possessed of an immense dominion.

3. Next in frequency to this fixed delusion is the religious, the form of which is moreover often blended with it, for instance, when the patient considers himself a saint, exposed to martyrdom, &c. The religious fixed delusion manifests itself very variously; it appears as profound melancholy, when combined with contrition for past sins, real or imaginary; as joyous ecstacy, when it is accompanied by the illusory feeling of special sanctification and divine grace, heavenly visions, &c. &c. (*Extasis religiosa.*) Hence deceptions of the senses are, in no form of the disease, so frequent as in this.[2] Other forms of insanity often pass into this, especially where the patient combines at the same time with the feeling of his misery, that of not being able to help himself; when he imagines that he is a victim to the evil spirit, or expects for himself a special interference of divine Providence. The most perfect picture of this variety is the representation given by Prosper Alpinus of the melancholy anchorites, whom he saw in Egypt. "They looked black and filthy, and were dried and withered like mummies. Their brain seemed to be, as it were, consumed, as well by the heat of the sun, as by their scanty nourishment, and constant vigils; and their minds were unnaturally inflamed."

4. Next in frequency to these two varieties is the insanity of

[1] Wagn. Beitr. Bd. 1, 114.

[2] Ideler, l. c. ii, 433. "Upon this point," Ideler justly adds, "Zimmermann is the best informed author."—Erf. u. Einsamk.

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love (§ 130), *Erotomania* distinguished from *nymphomania* (§ 98), which, without being carried to the extent of a fixed delusion, presents, in the general excitement of the sexual cœnæsthesis, a state of transition towards it. It fastens upon some object whose past or present possession it imagines, of whose real or imaginary loss it is convinced. The bitterest drops in this cup of poison are infused by jealousy, that hatred in love, the invention of demons (§ 130). In the female sex, especially among gentle, and hence nervous individuals, this form is combined in a singular manner with the preceding; or rather the erotic delusion, unknown to the patient herself, often assumes the colour of the religious; among which may be classed the numerous examples of a mystically, exalted love, which are related by Zimmermann (l. c.) The transition into this mixed form is mostly occasioned by hysteria.[1]

5. The fixed delusion that life, either by compulsion or necessity, must be quitted, which, sometimes as fear of death (*Thanatophohia*), sometimes as weariness of life (spleen), apparently proceeds from directly opposite causes, yet often springs from one source,[2] is properly represented by melancholy (*lypemania parathymia*), in the more restricted acceptation of the word. Both these feelings, namely, weariness of life and fear of death, gradually lead to suicide (*quantum mortalia pectora cœcæ noctis habent!*). When this melancholy fear has reference, not to single, but to all the relations of existence, it is designated *panphobia* (universal dread), and is erroneously treated as mania. It is not like mania, active, but passiveness itself, and always continues a fixed delusion; for its unity (partiality) does not refer to the object but to the sensation, which is here only one, namely, fear. That turn of melancholy which is caused by home-sickness likewise often leads to suicide (§ 70). Melancholy has been distinguished as restless (*errabunda*) and dull (*attonita*), yet these are not distinct forms, but only individually varied manifestations of the same form. In dull melancholy the patient is as motionless as a statue, without desire or will, and silent or monosyllabic. An exclamation of pain or a penetrating roar, are sometimes the only sounds which can be

[1] Vide an example related by Professor Laschan, in the Mediz. Jahrb. des Oesterr. St. n. F. 1844, März.

[2] Sunt qui simul et mortem metuant et mortem sibi consciscant.—Galen.

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elicited from him.[1] For this reason Esquirol calls it tonic spasm of the mind. In restless melancholy the patient is contented nowhere—he flies, he knows not why or whither.

That suicide is frequently a peculiar form of psychopathy (and, indeed, of various forms), is self-evident on a closer examination. Sometimes it is merely caused by the impulse of imitation, as in the Spleen Club established in England, where two members annually had the right to put an end to their existence; or, as in the case of that beam which ran across one of the bye-streets in London, and offered such convenience for hanging, that some individuals daily suspended themselves from it, till it was at length removed by the police.[2] Effects of a similar nature are still more frequent among the female sex.

6. With regard to objects of knowledge which sometimes serve as matter for fixed delusion, I concur in the view taken by Ideler,[3] that this form may always be reduced to the others, especially to that which originates in ambition. So long, he remarks, as the desire for knowledge remains pure, and does not become the lever of other passionate interests, it is directed exclusively to truth, and never becomes a delusion. Never has any one who, from egotistical peculiarity in his views, is a freethinker, wished to transform the world according to his conceptions; on the contrary, his own reflections have invariably proved to him that speculation contradicts reality.[4] When any one has lost his reason on the subject of the quadrature of the circle, perpetual motion, &c. &c., it is not the search after truth which has deranged his understanding,—for, as Ideler justly observes—he had none to lose.

Fixed delusion, in the same way, selects other objects as its favorites, and then manifests itself in the form of morbid extravagance, morbid avarice, and a hundred varied modifications, the individual consideration of which does not offer any higher interest to science, because it would only represent an application of the same principles under various circum-

[1] Reil, l. c. p. 361, Die Stillsteher; Sinogowitz, p. 28.

[2] [The present enclosed state of the gallery at the top of the Monument on Fish-street-hill, and its cause, will occur to most English readers.—Editor.]

[3] L. c. vol. ii, p. 494.

[4] Haslam and Esquirol (l. c. pp. 494, 495) are, to the honour of the human understanding, of the same opinion.

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stances. Yet the diversity of the æsthetic delusion, which delights in distorted attitudes, and in the contemplation of what is ugly, is very remarkable. Of this we find examples in Prince Pallagonia, in Sicily,[1] and in that Sicilian of whom Brydone relates, that he passed his life in devising monsters, and squandered his fortune in having them artificially constructed. On the whole, however, collecting is, as a motive, one of the most common of those fixed perversions of intellect which lead the insane to extravagance or crime. Books, pictures, coins, feathers, stones, playbills, toothpicks, beetles, sticks, plants, nay, even dirt and rubbish; in fact, there is scarcely anything which has not been their object.[2] Collecting is, however, also a regular psychical operation, which may still manifest itself when all the others are in a state of discord. It may be stated, in a general way, that the appearance of certain fixed ideas is partly traceable to those who govern the age and give their impress to it. In this sense, that fool had some reason on his side, whom I myself heard exclaim, "The world is a large madhouse; a madhouse is the world in miniature." The madhouse mirrors the world at least in a distorted image.

§ 139. Pathological anatomy teaches us neither more nor less respecting fixed delusion than it does respecting folly (§ 133). Sometimes the same abnormal conditions are met with, and sometimes none at all. In that fixed delusion alone, which has reference to individual parts of the cœnæsthesis (*metamorphosis*, § 138, 1), as, during life, in the external, so, after death, in the internal structures, those organs may be found much affected which have been influenced by the delusion. Esquirol, often found the transverse colon so displaced in melancholy patients, that it caused pain and obstinate constipation. The heart of these patients is sometimes found flaccid, wasted, and so softened that it may be easily torn to pieces. In cases of insanity, marked by pride, Bayle (not entirely without foundation) presupposed *arachnitis*. Metamorphoses of the sexual organs must be regarded, in nymphomania as causes, in erotomania (§ 138), rather as effects of mental derangement. Here regard must be paid to the congestion and the erethism which lascivious conceptions, as long

[1] Goethe, vol. xxviii, p. 111.

[2] Die Sammler, Sigonowitz, l. c. p. 31.

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as they last, produce in the genitals.[1] Hyperæmia of the substance and of the membranes of the brain is frequently met with in the bodies of melancholy patients,[2] especially of the pia mater, with ecchymoses of the arachnoid.[3]

§ 140. The proximate cause of fixed delusion is to be sought in an activity of conception, which has, in a certain degree become organic; that is to say, in a fixed affection of the sensorium, (§ 23), whether arising (as will hereafter be mentioned) from a psychical or a physical source (§ 25), of such a nature, that it is impossible for attention to maintain its spontaneity. It is unnecessary, in this case, to suppose[4] a local, inflammatory, plastic, or however we may otherwise designate it, metamorphosis of a central nervous focus; we must never forget that we have only to deal with functional derangements (§ 123). Let us remember what was stated as the explanation of association by repetition (§ 35), and we shall be able partly to account for the phenomenon of fixed delusion, without, however, pretending (ibid.) to give to this explanation a higher value than to any other which endeavours, within the boundaries of the world of phenomena, to reconcile the mind with nature. From the detailed description given it appears, that the vegetative nervous sphere (through the *sympathicus*) must be considered as the organic focus from which, chiefly in consequence of anomalies of vegetative life, modified by hyper-æsthesis, the phenomena of this form proceed.

§ 141. Now these proximate causes are founded, on remote causes, either physical or psychical. The former produce especially *mania metamorphosis* and melancholy, (§ 138, 1, 5); the latter, those varieties of fixed delusion which often manifest themselves as augmented mental impulses (§ 138, 2, 3, often likewise 4). The former most frequently act through phantasms of the cœnæsthesis (§ 95) and hallu-

[1] Ideler, vol. ii, p. 547. [2] Greding, l. c. vol. i, p. 9.

[3] Parchappe, l. c.

[4] "For where is the particular locality for many states of the cœnæsthesis? Partial insanity can be caused only by partial disease."—Nasse's Zeitschrift, 1822, vol. i, p. 82. Yet such a momentum, when anything can be inferred from it, is not to be disregarded. We must then assume an interruption to a single nervous conduction sometimes without, sometimes within the central organ, (impermeability, as it were, in the brain or nerves.)

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cinations of the senses (§ 108), the latter through illusions of the fancy (phantasms in the more limited sense § 118), which are entertained with spontaneity. Those individuals are predisposed especially to melancholy and to religious madness who are debilitated, and particularly if debilitated by sexual excesses, and those parts supplied by the *nervus vagus* are in general the seat of their bodily sufferings. We have already (§ 95) indicated the somatic origin of fixed delusion. Nasse,[1] quite in accordance with our views, connects the explanation of this phenomenon of the diseased condition with that of health. "When we, who are in health," says Nasse, "yield to a delusion respecting our body, we have almost always occasion to recognise a corporeal disorder in the part to which the delusion relates. The eye in which we fancy we feel sand is inflamed; the ear in which we seem to have a buzzing, suffers from a catarrhal affection of its eustachian tube; the hand in which we feel something like the pricking of needles, has suffered pressure, &c.; and, on the other hand, in most of the illusory conceptions referable to the bodies of psychical patients we can generally point out bodily affections of the parts implicated in the illusion.

Drunkards attribute the burning which they usually feel in the stomach to empoisonment, because it generally becomes worse after meals. They affirm that they have taken poison.[2] The illusions produced in this manner from purely corporeal causes excite the impulses and passions corresponding with them,[3] and from phantasms and illusions, when they attain a high degree, are often repeated, and meet with a weakly reacting spontaneity (§ 95), there arise, according to circumstances, *mania metamorphosis, erotomania* (§ 138, 4), spleen or *thanatophobia* (ibid. 5). Psychically, fixed delusion arises from self-illusions, which, with unbridled fancy, weak spontaneity of the understanding, and delicate organisation, reverse the conditions necessary to pure personality (namely, a power of distinguishing the subject from the object). Those unhappy persons who, on the one hand, are weakened by suffering, or, on the other, though gifted with a lively imagination, are fond of

[1] Zeitschrift, 1826, iii hft. p. 186.
[2] Ideler, vol. ii, p. 407.
[3] Ibid. vol. ii, p. 432.

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placing themselves in an opposite position, and indulge in quiet, waking dreams, which they conceal from others, are in danger of falling victims to their illusions.

The lunatic asylums abound in instances of persons reduced to poverty, who, while they indulged in prospects of wealth, to be realised by absurd projects, fell into the fixed delusion that they possessed the treasures of the Indies. Young women who love in secret, or without having their affection returned, often entertain the fixed delusion of being married to the object of their affection, a situation in which (in their own minds) they most willingly and frequently misplace themselves. Very many princesses and great ladies of the madhouses belong to this class. It is always the passionately-excited fancy (see above) that infatuates the understanding; it directs the attention with great vehemence to the object, invests it with an extraordinary degree of brilliancy and animation, heightens it still further by frequent repetition, and by the association of ever increasing accessories, and thus gradually substitutes a world of images in the place of the real world—Folly.[1] In this view, poetic frenzy,[2] when it is no longer guided by the understanding, but is animated by passion, and bears supreme sway in a delicate frame, borders on real insanity. It is disgusting and distorted productions of fancy which take especial possession of the minds of artists and poets. The painter Spinelli, who had represented the devil in a most frightful form, at length fancied that he saw him in reality. It is related of *Phiz?*, the designer of the caricatures in Boz's novels, that, in order to stimulate his invention, he was accustomed to make all kinds of hideous faces before a looking-glass, till at length, by dwelling on what was hideous, he detested himself to such a degree that he committed suicide. The English artist Blake, who often painted demoniacal forms, had frequent visions of them, and our E. T. A. Hoffmann, the gifted Coryphæus of a half-witted kind of poetry, also shared the same fate during his last illness. Müller, who executed the celebrated copper-plate of the Sixtine Madonna, had more lovely

[1] Maass, vrs. über die Leidenschaften, vol. i, p. 178.

[2] "Wie lieblich um meinen entfesselten Busen der holde Wahnsinn spielt!"—Wieland.

"The poet's eye in a fine frenzy rolling."—Shakspeare.

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fixed images. Towards the latter end of his life, he saw the Blessed Virgin, who thanked him for his affection, and invited him to follow her to heaven, to accomplish which purpose, he starved himself to death. The visions of Swedenborg, which became fixed delusions, and those of his older and more recent adherents, are well known.[1] At this point psychiatrics trench upon the domain of criticism in relation to the arts,—by pointing out the danger of an overwrought poesy, whose products, as Ideler justly remarks, remind us of the world in a madhouse, and, by justifying the exercise of a reflecting, guiding taste, which ecstatic, youthful poets ridicule as pedantry. "Man," says Reil,[2] "has a natural tendency to fixed delusion, for, in a state of health, he is not quite free from fixed ideas, which will not pass before the judgment-seat of sound reason. From habit, indolence, and weakness of the understanding, when opposed to fancy and feeling, he suffers them to stand as axioms, without reflecting how far they can be maintained." There is in these words, ethically and psychiatrically, an important intimation of the dangerous weakness of man, who finds it more easy to dream of the acquisition of an object than to obtain it by his own exertions.

§ 142. The type of this form of disease, is partly intermittent (and this more frequently than in the other forms, because in the momenta in which the morbid mass of conceptions is obscured a recognition of the patient's own position is possible) (§ 136); partly (when the fixed function of the mind associates with all the other functions, and has become, by habit, permanent) (§ 141), remittent, or continuous. The course is in most cases very chronic; the transition, for example (§ 137), from hypochondriasis, is very slow. The hypochondriac is tormented by fixed ideas of the state of his body, but he will and can shake them off, wishes to be relieved from them, changes his whims, believes to-day that he is suffering from disease of the liver, and to-morrow from concealed syphilis. This capacity of recognising the groundlessness of the fixed idea, insensibly disappears. From the clearest consciousness of the illusion, it passes through intervals of doubt to conviction, and thus hypochondriasis passes into insanity.[3]

[1] Ideler, vol. ii, p. 429. [2] L. c. p. 320. [3] Reil, l. c. 309.

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The same is the case with hallucinations. Jördens was unable for a whole year to get rid of the notion that he should have an apoplectic fit.[1] A clergyman could not divest himself of the idea of jumping down from the pulpit into the midst of the congregation. Nicolai and Pascal[2] struggled long against the illusions of their senses, till they were completely interwoven with their lives. Even in the fixed delusion, arising from psychical causes, there is always an interval of fluctuation and doubt between delusion and truth.[3] In its further course, the fixed delusion manifests the two stages which, since Pinel's time, have been recognised by most observers, viz. that of excitement (*irritatio*) and abatement (*remissio*), which are most evident in mania.[4] In the first stage, the patient, with a violent internal struggle, is obliged to give way to the absurd conviction, and not till it has prevailed does remission take place. Melancholy usually becomes worse in damp, cold weather. Even the completely-formed fixed delusion often passes into another fixed delusion, and not unfrequently into other psychopathic forms. The patient, for instance, who accuses himself of some crime or other, flies from the hangman, but, in the sequel, if he does not obtain peace of mind by his flight, he goes in search of him. A madman in the Bicêtre, fancied that people meant to poison him, and was melancholy for eighteen years. Suddenly the object of his delusion was changed; he fancied himself a great lord; at length even the co-regent of the world, and was now as happy as he had before been miserable.[5] The second case appears to be psychologically more difficult to understand than the first. Yet here we are to recollect that a function of the mind which is not yet wholly paralysed, acts according to the law of oscillation (as it were elastically), and from one extreme to which it has been driven tends to the other. We may observe this in a state of health in ourselves and others, when, for instance, after lengthened sorrow or affliction, we are more elated than usual at some pleasant circumstance, and *vice versâ*. The fixed delusion more rarely changes to furious mania, namely, when it is violently opposed, or when it is naturally very much excited. It oftener

[1] Moritz, Magaz. vol. i, p. 1, Heft. 85.
[2] Ideler, vol. ii, p. 393.
[3] Ibid. l. c. p. 436.
[4] Ibid. vol. ii, p. 450.
[5] Reil, l. c. p. 318; Méd. de la Lor. d'em. vol. ii, p. 9.

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changes to folly (§ 131), that is, when, by more frequent association (§ 140), the partial delusion has become general. Most frequently of all, it terminates in idiocy, either mediately, through the above-mentioned transition (§ 136), or immediately, through exhaustion of the partially-excited mental action.

With melancholy, in which dryness and a dirty colour of the skin, or an evaporation from it of a peculiarly disagreeable odour are common, dermatoses are very often combined. To this combination, which may be easily explained by the reciprocal action of a sluggish psychical, and an equally sluggish secretory action, the pellagra (*mania pellagria*) common in upper Italy seems to belong; a disorder which is reckoned partly among the cutaneous eruptions, partly among the psychoses. It has the former character in the early stage, the latter in the subsequent stages.[1]

§ 143. Madness (in the most extensive sense, *mania*, Auct., designated by all observers who represent it as a distinct form, under the same name) originates proximately in an abnormal motor exaltation (§ 113, 1). It manifests itself in a hurried, and in some measure, automatic action, with a consciousness more or less disturbed every moment; it is characterised by violent excitement. The alteration is shown more in the direction of the will than in that of the feeling and perception, though, during the fits, the latter are disturbed and hurried into general delirium. Mania always proceeds from deceptive ideas and sensations, which, owing to their violence and their relation to the motor system, excite a powerful reaction, and hurry the patient, often suddenly, to extravagant acts. The actions of maniacs are, therefore, at first always founded on a decided (ideal) motive, and it is only in the sequel that they become automatic, nay, convulsive. Hallucinations of the sight are especially frequent. This state is shown by the maniac in his look, attitude,

[1] See Brière de Boismont on *Pellagra;* Beraud's Repert. 1832, Dec. p. 271. With respect to the origin of fixed delusion *from*, or its combinations *with* hallucinations of the senses, it remains to be observed that these illusions appear especially in those senses which are most cultivated in the individual. Thus the musician revels in harmony, the painter in visions, the epicure in delicacies, &c. &c.; a remark which, in many cases, may give occasion to a successful etiological diagnosis. The hearing of voices (phantasma of the hearing) is often connected with erotomania (4) and melancholy (5).—Sinogowitz, l. c. p. 273.

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language, gesticulation, step, and often in a violent, uncontrollable motion of his muscles. Hence his gait is frequently distinguished by a constant and rapid pacing up and down in a given small space; during the performance of which exercise he affronts or attacks every one that comes in his way.[1] Like every insane person, he, too, dreams while awake (§ 131), but he acts in his dreams.[2] For the most part, but not always (for the mania which is combined with fury, is sometimes a higher degree, sometimes an individual form of the simple), he presents the image of an angry person, so that here the *ira furor brevis* (§ 130) is peculiarly applicable. His swelled face is flushed, his watery eyes, which are often much inflamed, roll wildly, his mouth foams, a tough mucus frequently issues from his lips, and the patient, screaming, roaring, and destroying everything that he can lay his hands upon, manifests the internal commotion of his mind (frenzy, rage, *Mania furibunda*, sens. strict.) These appearances are often wanting, and the single insane act, as the offspring of the moment, bursts forth from amidst the other actions of the individual, like an island suddenly rising from the bosom of the ocean, without being announced by any storm. During the paroxysm, which mostly continues for hours, nay, weeks, and even months together, and often without interruption either by day or night,[3] the maniac frequently appears insensible to painful impressions, to changes of temperature, &c. The specific odour already mentioned in *moria* (§ 131) is here more developed. Signs of congestion in the head (heat, redness, throbbing, tinnitus, &c.) are seldom wanting; the secretion of urine and perspiration is checked; the pulse is, for the most part, hard and spasmodic, and vegetative life tends, by increased warmth, to make up for the waste of power. Maniacs generally eat voraciously, nay, often in their ravenous hunger they devour the most disgusting things, even their own excrement, without suffering any particular injury. They are very fond of spirituous liquors. Sleeplessness is a constant phenomenon, which is always in exact proportion to the degree and the duration

[1] "Die Gangtreter" of Sinogowitz, l. c. p. 29, who very graphically compares this movement to that of a hyena confined in a cage.

[2] Hartmann, G. d. M. p. 346.

[3] Ideler, vol. ii, p. 579.

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of the disease, and, therefore, often continues for months together.[1] Ferriar says that he has observed, as a precursor of the paroxysm, a particular contraction of the skin on the forehead, which becomes of a leaden hue. In some cases the maniac assumes the appearance of repose; he can dissemble, and be cunning; but this constraint does not long continue, and he suddenly attacks the persons about him if they are not upon their guard;[2] in other cases he is aware of the approaching paroxysm, and like one suffering from hydrophobia, entreats and conjures those about him to get out of his way, or to bind him, that they may not suffer any harm. His manners are remarkably altered; the modest woman talks indecently; the gentle girl becomes a fury; the timid hypochondriac a raging madman;[3] while, on the other hand, often, but not always, some unexpected circumstance inspires the maniac with sudden fear in the midst of his most violent ravings. These changes of character usually announce, in an especial manner, the threatened paroxysm, which is, for the most part, preceded by other indications. The patient becomes suddenly quiet and reserved (quiet mania), or sleepless and excited, spits much about him, and makes hasty movements. In the lowest degree he commits foolish, but harmless actions; in the highest, he murders any one that comes within his reach, without knowing what he is doing. In this outbreak his rage becomes allayed, and the paroxysm is succeeded by exhaustion and depression. When out of the paroxysm the patient often finds himself oppressed, and expects the fit with secret joy, because he then feels in himself as if "released and unfettered." The sensitive function is, however, in an inverse proportion to the motor, so that maniacs who suffer in the higher degree appear to have hardly any sense of pain, cold, &c. Vegetative life is at length exhausted by repeated attacks, and atrophy is the concluding scene of every violent and chronic case of mania.

[1] Vidi maniacum, omnia corporis integumenta lacerasse, et nudum stramini incubuisse, in loco lapidibus strato, dum asperrima sæviebat hyems, per plures septimanas; quandoque per octo dies omni cibo abstinuisse, dein oblata quævis ingurgitasse avidissime; imo et fœdissimo spectaculo proprias fæces alvinas devorasse; licet optimi cibi suppeterent. Per plures septimanas noctes et dies pervigil horrendis clamoribus totam replebat viciniam, et tamen per plures annos supervixit, sedato quidem furore sed fatuus et omnium rerum immemor.—V. Swieten, Com. iii, p. 521.

[2] Reil, l. c. p. 373. [3] Ibid. p. 374.

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§ 144. It appears, from the description of this form, that the much-talked of monomania (?), *Mania sine delirio* (*Manie instinctive sans délire*) may certainly be indicated as a variety, according to its manifestation, but that it essentially belongs to the same kind. The patient follows a perverted impulse; whether he manifests this by absurd words or actions is not essential.[1] Hoffbauer has justly observed, that at the moment of the act the perception is also disturbed.[2] Reil[3] calls this variety, introduced by Pinel, the simplest mania, in its purest form, without any extraneous addition. The paroxysm generally begins with all kinds of corporeal phenomena; a pressure exists at the pit of the stomach, shuddering through the whole body (often commencing at the spine), the tongue is loaded, there is a sensation of burning heat in the bowels, great thirst, and constipation. The heat rises upwards to the chest, neck, and head; this last aches; there is a singing and buzzing in the ears; the look becomes anxious; the patient says "that the heat rises before his eyes;" he often warns those about him, and even entreats to be prevented from doing mischief; the countenance becomes flushed; the arteries of the neck and temples throb violently; at length the excitement extends to the brain, and at this moment arises the blind irresistible impulse to murder, commit suicide, theft, arson, or some other outrageous act—just as epilepsy ensues when its preliminary *aura* has reached the brain. These somatic symptoms are, however, often wanting. The disease is permanent, though mostly periodical. The fits return at different times; sometimes sooner, sometimes later. Pinel saw intervals of repose of eighteen months' duration, alternating with fits which continued six months, and this type was so permanent, that it lasted till death. One of these patients was well throughout the whole year to within fifteen days, when this blind fury urged him to his own destruction. They were all distinguished by a melancholy character, and an extraordinary propensity to anger.[4] This faithful description (with which, in reference

[1] Ritgen, l. c. p. 383. The delirium of fever is sometimes accompanied by incoherent talk, sometimes by irrational movements (carphologia, &c.), and sometimes by both.

[2] Untersuchungen über die Krankheiten der Seele, vol. i, p. 255.

[3] L. c. p. 387.

[4] Reil, l. c. p. 389, where other instances may be found.

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only to the *aura* rising to the brain, Reil has mixed up some notions of his own) confirms us in the fact that we have here to do with a variety of the fundamental form—mania; of the special causes of which we shall speak in the sequel. Its essential character is mainly that of mania, a perverse behaviour, which, as Esquirol[1] justly observes, is never wholly automatic, but is always excited by a conception, whether psychical or referring to physical life. This conception may have several objects, and according to them are formed the subdivisions and individuals of this variety; such as propensity to steal, *furor uterinus*, propensity to infanticide, &c. At the period of the development of puberty, when, in general, psychopathies are most frequently remarked (§ 129), an irresistible impulse to incendiarism (pyromania) occurs; which some have endeavoured to account for, very unsatisfactorily, by affirming the existence of an insatiable desire for light, caused by predominant venous repletion. During the time of pregnancy, the longings, as they are called (*Picæ*), frequently attain, in predisposed individuals (§ 129), such an excess that they advance to this variety of mania. The instance quoted by Reil,[2] of a woman who, during pregnancy, had such a longing for the flesh of her husband that she murdered him, and salted part of his flesh to enjoy it the longer, is perhaps the strongest of its kind on record. Many examples are, in like manner, known of the irresistible propensity to steal.[3] As most cases of this, in some measure, partial mania (as the fixed delusion is partial in relation to folly), have reference to murder or suicide, they used to be set down, under the appellation of "murder-monomania," as a special kind of mental disorder; and herein lies the origin of the great confusion which has arisen upon this question. Murder, arising from mania, may have very diverse causes, and must, according to them, be referred back to the several forms of mental disease. It may arise from a fixed delusion, without mania, and then it belongs to that form (§ 137). The fixed delusion may be *ambitious* (§ 138, 2): the murderer has killed his supposed oppressor or persecutor; it may be *religious* (§ 138, 3): he has offered a victim to God;

[1] L. c. p. 414. [2] L. c. p. 394.

[3] Comp. Pr. Pet. Wagner über Zurechnung der Verschwendung, Verhandlung der Ges. der Aerzte in Wien, iii, s. 76.

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it may be *erotic* (§ 138, 4): he has destroyed a rival. A propensity to murder and suicide has even been known to arise from love of imitation, as in the case of the Milesian virgins (§ 126, 4) and the soldiers of Napoleon's guard.[1] Suicide has often been seen to result from fear of death (here again we may exclaim, *quantum mortalia pectora cœcæ noctis habent!*), or from the imaginary evils of life; and here it belongs to the variety "melancholy," of the form "fixed delusion" (§ 138, 5). It is only when the murder or suicide appears, under the manner above described, as a paroxysm of mania, that it belongs to the present head, and in this form it is certainly the most remote, if I may be allowed the expression, from the psychical pole, without, however, being, on that account (see above), automatic. We should, therefore, instead of a *Mania sine delirio*, rather establish a *delirium in agendo* (*actionum*).

The other specified varieties of mania, the *mania gravidarum, puerperarum*, which are moreover often a *moria, melancholia*, &c. (and therefore even on that account are no special forms, and are equally far from representing a real puerperal disease[2]), have reference to the causes which co-operate in constituting mania, and are therefore to be mentioned when we speak of them (§ 147).

§ 145. Pathological anatomy shows, with reference to mania, several results coincident with those observed in regard to the hitherto enumerated forms of the psychoses. The above-mentioned prolongations of the clinoid processes were met with in maniacs called by Greding[3] "furious," and this in 34 cases out of 100. Injection of the meninges, with simultaneous hyperæmia of the substance of the brain, was likewise more frequent in this form than in the others. The majority of those in whom water was found between the meninges were maniacs. Lymphatic exudations, at first granular, then spongy (§ 128), were, for the most part, also found in them. Greding ascribes abnormal softening of the brain to mania in particular.[4]

[1] Bourel. Das Gerichtl. Urth. der Arzte ü. Psych. Zustände. Deutsch, Köln, 1830.

[2] Comp. Th. Helm, Monogr. der Puerperalkrankheiten. Zurich, 1840.

[3] L. c. vol. i, p. 9.

[4] L. c. Boerhaave considered that, *anatomica sectione constitisse, horum cerebrum siccum, durum, friabile, in suo cortice flavum, vasa autem turgentia, varicosa, atro tenaci cruore distenta fuisse.*—Aphor. 1121.

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Parchappe[1] states hyperæmia and softening of the cortical substance, with ecchymoses of the *tunica arachnoides* (§§ 54-100), to be phenomena (§§ 80-100) peculiar to the bodies of insane patients, and especially frequent in cases of mania. The quantity of phosphorus, according to Couerbe,[2] is greater in the brain of maniacs than in that of persons in health (ranging from 0,030 to 0,045); Cabanis had already observed in it a lively phosphorescence (§ 128). It is worthy of remark (ibid.) that Greding, at least, more frequently found the volume of the heart of maniacs diminished than increased. He likewise affirms[3] that he found polypi of the heart more frequently in patients afflicted with melancholy madness. He thinks that the thick blood, peculiar to these cases, may first produce them, and considers it to be the proximate cause of raving. In three epileptic maniacs the anterior commissure of the brain was wanting.[4]

Here, too, the rule already given must be observed; namely, to be cautious in our conclusions on the *causal* connexion, because the most various disorganisations of the brain may be just as often the effect of the symphoretic state kept up by the mania, as the cause of it, and through it of the mania.

§ 146. The so-called proximate cause of mania is to be sought in an alteration of the motor system, the nature of which is yet to be determined through the anticipated progress of nervous pathology, because its essence (§ 144) is characterised as perverse behaviour owing to abnormal motion. The more the brain itself is thereby affected, the more will the ideas be at the same time confused. It has been considered as purely a disorder of the will; but the will is, on the one hand, only a continuation of the same mental activity (§ 38), which manifests itself in perception and feeling; just as the spinal, is the continuation of the cerebral system, and therefore cannot be diseased independently of its own beginning; and on the other hand (§ 143), the statement of the phenomena shows that mania always proceeds from a motive, whether this be a morbid idea or a morbid sensation. Undoubtedly, however, the mental activity is principally affected in the direction of the will. The ideas give rise to

[1] L. c.
[2] Comp. Lippich. l. c. p. 35.
[3] L. c. vol. ii, p. 176.
[4] Ritgen, l. c. p. 189.

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pure mania, the sensations to the so-called mania without delirium. On the physical side we have here (more than in melancholy) to assume, in the first stages, the condition supposed by Griesinger to be cerebral irritation (in contradistinction to spinal irritation)[1], but the cerebello-spinal sphere is to be considered as the principal organic focus of this form.

§ 147. The immediately impelling ideas and sensations (§ 146) are excited indirectly either in a physical or a psychical manner. The following persons are especially predisposed to mania: men of an active temperament (§ 49), men[2] (§ 51) in the prime of life[3] (§ 53), men of sedentary habits and exciting mental occupations (§ 52, *c*), pregnant women, women in childbed, and persons who suffer from habitual determination of blood to the head and exciting passions, especially the passion for drinking (§ 47). The occasional causes on the psychical side are, in general, violent emotions, such as sudden and excessive joy;[4] bursts of passion, especially of anger, love, and jealousy; immoderate lucubration with overstrained mental exertion. On the physical side, the forces act either idiopathically on the central organ, or sympathetically through conduction (§ 11); they are, great heat, a *coup de soleil* (*insolatio*); mephitic air (Zimmermann says that most of the persons confined in the black hole at Calcutta became raving mad, before they died of suffocation); abuse of spirituous liquors; stupefying poisons (*hyoscyamus, stramomium, belladonna, cicuta*), the poison of hydrophobia; morbid growths of the brain; alterations in the structure of it, or of parts in its vicinity; morbid products that have been transferred to it; the condition of remote structures reacting upon it; of the organs of respiration, circulation, digestion; of the sexual organs; of the external skin (importance of impetiginous affections). Mania frequently proceeds secondarily from other states of disease, partly somatic (puerperal disorders, epilepsy, encephalopathies), and partly psychical, originating frequently from fixed delusion when it meets with

[1] Comp. Wunderlich's Archiv.

[2] The attacks are, however, often more intense in women.

[3] Dr. Schubert states a case of mania in a child of 2½ years old, in the Med. Centralzeitung, 1837, No. 35.

[4] This, however, is denied by Ideler (vol. ii, p. 557).

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violent opposition (§ 142). Chiarugi[1] affirms that wine mixed with common salt causes madness, and that even a moderate use of this will produce it in a short time. Reil[2] justly observes, that these causes have, on the whole, more relation to the body than to the mind. By pressure on the large arteries of the neck an attack of mania may be for a short time kept off and mitigated, whereas pressure on the jugular veins is capable of producing such an attack.[3] The more clearly periodicity manifests itself in mania, the more preponderant are the physical causes.

But the so-called monomania (§ 144) is especially of physical origin. An obscure feeling, which is rooted in the deepest recesses of vegetative life, causes, by innervation (§ 30, *b*), an impetus to half voluntary motions. So long as these phantasms of the cœnæsthesis disturb only the spheres of sensation and conception, they belong to hypochondriasis (§ 100), and may produce fixed delusions (141); when they infringe on the motor sphere, they cause mania even in its most exquisite form—murderous monomania. The vivid affection of the cœnæsthesis so seizes the mind that it absorbs its whole attention, and thus suspends its spontaneity with respect to the exercise of thought, in producing the momentum of action. These bursts of destructiveness are partly the effects of the reaction of the mind to relieve itself from an intolerable feeling, partly the effects of an increase in the vital process going on in the motor organs themselves.[4] These considerations allow us safely to anticipate the much discussed forensic question of responsibility during such fits. We see, on the one hand, how certain it is that the individuals in question are not free agents at the moment of the attack (which may appear without any premonitory signs); and, on the other hand, how difficult it may be in concrete cases to determine the nature of an action, the impulse to perform which is a feeling (therefore something subjective). The principle is decided, but the application difficult. That these obscure impulses exist, that they are the cause of the attacks, is manifest from the facts. In some cases there is a peculiar thirst for blood (as Friedreich considers it), for which reason the patient

[1] L. c. p. 353. [2] L. c. p. 380.

[3] Ritgen, l. c. p. 292. Sydenham, in the years 1661 to 1664, observed mania as a sequela of the intermittent fever which prevailed at that time.

[4] Hartmann, l. c. p. 349.

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generally chooses cutting instruments.[1] In others, a carnivorous desire (which can hardly be ascribed to extravagant love,[2] as in the case above mentioned, § 144). Here again it is very useful to seek, by attentive self-observation, and the contemplation of nature, the transition to such anomalies, the latter being certainly no lyrical leap in the epic march of life. Who has not had, at some moment of his life, a sensation, rapidly passing off perhaps, as if he must precipitate himself from some eminence upon which he is standing? Have not poets founded on this sensation their romances of enticing water-witches, syrens, &c.? Is giddiness from elevated position anything save the rapid flight of ideas[3] (§ 60) produced by the struggle with such feelings? Thus are all the threads of physical and psychical life reciprocally interwoven. Ideler has a very pertinent psychological remark on this subject. "There is," says he, "a contradiction which is deeply seated in human nature, namely, that when the impulses of the mind are powerfully excited, the idea of a party combating its interests easily forces itself upon the individual, the mind being in general fond of contrasting ideas, in order to become more clearly conscious of its position. In men of ardent natures this play of thought may, from an idea that they are themselves the authors of an action which they detest, rise to passionate indignation, and excite the deception that, in contradiction to their sentiments, they have actually felt the impulse to commit it, whereupon they necessarily fall into extreme consternation, nay, into actual torment." The doctrine of monomania for murder, rendered popular in France by trials in the courts of assize, has itself urged on many to commit unholy deeds; inasmuch as they have believed themselves to be affected by the disease, and unable to find repose until they should perpetrate a murder. A physician destroyed a lady to whom he was attached, because Gall had told him, by way of admonition, that the organ of murder was strongly developed in him. (Ibid. i, 620.)

[1] Brach, l. c. p. 136. [2] Ibid. l. c. p. 135.

[3] In this form, as an impulse and hope to get rid of an internal distress by a desperate action, Platner has already recognised monomania, and has mentioned it as *Amentia occulta: Amentia occulta est nisus et conatus animi oppressi ad actionem violentam, hanc actionem secreto appetentis et molientis, tanquam suæ oppressionis levamen et liberationem.*

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§ 148. The course of mania is either acute or chronic; the former more frequently, when it appears under the form of frenzy. In the chronic course it has a remittent, or more frequently intermittent, type (generally with exacerbations during summer, but likewise the contrary), because the organisation cannot long endure without interruption such violent exertions; it resembles an earthquake which occurs in shocks;[1] only we must not always here assume "cessation" as synonymous with "improvement." Mania is often interchangeable with other forms, as moria, melancholy, &c. (Marc mentions a case of a septennial type!) But in the acute course also, especially in the so-called monomania, the stages of irritation and remission (§ 142) may be clearly distinguished, partly on account of the struggle which follows the impulse (§§ 142-147), partly because, according to a physiological law (§ 48), the will always acts on the organs in an oscillating manner. The duration, in acute cases, is on an average from eight to fourteen days, in chronic cases from four to six weeks, often as many months, or even longer (§ 143). Ideler saw a case of mania which lasted more than thirty years,[2] Marc, the above-mentioned septennial periodicity, Sinogowitz,[3] a return at the commencement of the full moon. A fit of mania, may occur quite isolated, and it then represents an ephemera. This ephemeral occurrence, which however, is not confined to mania alone, but takes place, though more rarely, with every species of insanity, is confirmed by innumerable examples. Thus the celebrated Dr. Fothergill, otherwise a very sober-minded man, was all at once seized with the mania of walking naked through the streets of Edinburgh, and preaching repentance. A young man, in perfect health, awoke suddenly one night in a fit of raving madness, ill-treated his wife, attempted to leap out of the window, and struck at whatever came in his way. An emetic put an end to this scene in an hour; since which he has been in a perfect state of health, never having had a recurrence of the attack. Other examples of a similar nature might be adduced.[4] This kind of mania frequently occurs in consequence of an epileptic fit; the attacks often appear

[1] Reil, l. c. p. 375.
[2] L. c. vol. i, p. 692.
[3] L. c. p. 345.
[4] Comp. Vering's Psych. Heilk. ii, 2, s. 258.

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a-typical rather than regular, mostly after internal or external excitement (§ 147), often with, more rarely without (at least without objective and perceptible) precursory symptoms (§ 143). This form is frequently complicated with folly (§ 131), or melancholy (§ 137); and in such cases, in the interval of the paroxysms, these latter states of mental disorder remain instead of the normal condition. The individual paroxysms and the sum of them all, increase and diminish.[1] Likewise, according to the violence of the altered conduct, different degrees of mania may be estimated at pleasure. In the mildest degree the patient only gesticulates; while in a higher degree he vociferates and strikes; and in the highest, destroys and kills. The fits of mania, usually after an interval of relaxation or a critical sleep, terminate either in health through treatment (when, however, they constantly threaten relapse); in death by suicide or apoplexy; often in folly; or most frequently (like all psychopathies, after long duration and violent raving, which exhaust the powers) through the medium of melancholy, in idiocy; in ungovernable will (*hyperbulia*), or in loss of will (*abulia*).

With mania, epilepsy, as a nervous affection of the motor system (§ 143), is most frequently combined, and this combination furnishes the melancholy prognosis of almost decided incurability. Respecting its connexion with articular gout, with complaints of the heart, and with cutaneous diseases, for example, the itch, &c., very little is yet decided. At all events, the *post ergo propter* has been too often allowed to prevail. We must here mention further a peculiar sanguineous tumour in the ear, improperly called *erysipelas auris*, hitherto observed only in those who labour under chronic mania, respecting the connexion of which with that disease nothing whatever has yet been ascertained.[2]

§ 149. Idiocy (in the most extensive signification—***Fatuitas***, Auct.; *Stupiditas*, Sauvages; *Amentia*, Vogel; *Moria c. amnesia*, Swediaur; *Anoia et Apathia*, Ploucquet; *Absence of Idea and of Will*, Heinroth; *Imbécilité, Idiotisme*, Esquirol; *Fatuity*, Mason Good; *Weakness of the personality*, Ritgen; *Stultitia*, Eschenmayer; *Idianoia, brute instinct*, Lippich; *Infirmitas*,

[1] Reil, l. c. p. 375.

[2] Comp. Cossy, Wochenschr. z. d. M. Jahrb. 1843, i, 321.

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Μείωσις, Flemming,) proceeds, as a psychopathy, proximately from *anæsthesia* (§ 94), weakness of attention (§ 110, 2), *amnesia* (§ 115, 2), and want of images (§ 118, 2). It represents, in some measure, an approximation of the human character to that of animals, and is characterised by an incapacity of judging, or even, in its higher degree, of contemplating. The alteration is more prominent in the direction of thought than in that of feeling and will, though, in the higher degrees, both feeling and will are also wanting (*Abulia*, Heinroth). The numerous distinctions which have been made in this definition refer only to different causes and degrees, and the same totality of phenomena is always the result.[1]

The lowest degree, which Hartmann calls stupidity, is characterised by an incapacity of comprehending, judging, and concluding, even in affairs of what is called common sense, which is not founded on neglected education (for this does not come within the province of medicine, § 120), but on the above-mentioned organic conditions. An individual thus affected expresses his thoughtless opinions with the greatest confidence, and with that pertinacity which is usual with circumscribed understandings. He does not give the necessary attention to anything, observes nothing, and always remains in a state of childhood. He smiles and laughs where there is nothing to laugh at, and his countenance always wears a silly expression. The small size of his skull indicates an imperfect development of the cerebral organs, and his senses in consequence act feebly. The vegetation of the body flourishes; vital warmth is diminished; the patient is generally greedy; his belly is his head and his world. Brilliant light, glaring colours, and loud noise are necessary to afford him some mental excitement; yet his attention can be so far fixed as to give him a semblance of intelligence.

The higher degree, idiocy *sensu strictiori (fatuitas)*, shows total incapacity for mental activity. The idiot stares at objects without recognising them; he has no will (*abulia*), only a want, and this is frequently but obscurely suggested to him by his dull cœnæsthesis. The organ of locality is alone (*glebæ ad-*

[1] On the other hand, it is manifest that embarrassment and idiocy are not (as in Ideler, ii, 624) differences in degree, but in species; as the former confuses the thoughts (qualitatively), the latter diminishes—limits them (quantitatively).

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scriptus) instinctive in him; he finds his way like a dog, and often shows a sympathy with matter which reminds us of somnambulism and rhabdomancy. He stares vacantly before him, and the most striking impressions are unobserved by him. The entrance of a stranger makes no change in his unmeaning countenance. An empty ebullition, an aimless busy manner is the only indication that he gives of life; he forgets what he has asked, and therefore does not understand the answer. In general he speaks little; mutters to himself or utters broken sounds. His attitude is lifeless; his expression dull; his mouth open; his back bent; his skin dry, dirty, insensible; his arms and legs hang loosely; everything indicates that no mental life animates the inert lump of clay. The want of nourishment and the stronger excitements alone have any power over him. Idiots show a greedy desire for snuff, indulge in brutish sensuality and self-pollution, and swallow whatever falls in their way. An idiot female, mentioned by Ideler,[1] was choked by a large piece of bread which she was devouring; its withdrawal showed that the whole pharynx was full of chewed bread. Here we may, indeed, speak of man as a brutalised being. The last trace of the intellectually moral man, says Ideler,[2] has vanished from such a being, and it is refined philosophy alone which, recognising in the idea of the unlimited capacity of human development the fact that, even under the most favorable circumstances, only an infinitely small portion of it ever becomes manifest, and that consequently it never affords the real standard of the mind, suffers not itself to be misled, by this melancholy spectacle, into the error that the divine spark in the ashes of life is for ever extinguished.

Lastly: the third and highest degree of idiocy is *cretinism*. Though this is certainly essentially the same as idiocy, yet it offers so many differences, besides that of degree, that we must take it into special consideration as a variety.[3]

§ 150. Cretinism, as a higher degree, and at the same

[1] L. c. vol. ii, p. 632.

[2] L. c. p. 630. Ecce homo, qui se fuisse nescit!—Sinogowitz, 229.

[3] On the other hand, the *fatuitas infantilis* cited by some, and also the *fatuitas senilis*, are pathological only when they do not correspond with circumstances of the individual; but when they do, they wholly coincide with the idiocy which we have described.

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time a variety of *idiocy*, we may, with Professor Von Bischoff, designate in the most general terms, as a degeneracy and retardation of all the functions of body and mind. That this is its proper place in our doctrine, appears partly from this definition, partly from particulars that remain to be stated. The following appearances are those which, together with the general characteristics of idiocy already described, sometimes singly, sometimes occurring together, or more or less combined with each other, give it its peculiar character.[1]

1. The *goitre* as accompanying and preceding the malady, wherever it is endemic. 2. *Stunted growth of the body*, that is, dwarfish, coarse, square, ugly conformation. 3. *Leucæthiopia*, that is, not only as applied to the nature of the iris, which is usually understood by this name, but the defective sight in general, with paleness of the membranes and weakness of the nerves. 4. A *deaf* and *dumb* state, which is not acquired through disease, but is congenital, or has arisen from retarded development in early youth. All the other phenomena which are mentioned by observers are those of idiotism in general. Yet, on the whole, there are two principal forms of this idiotism to be distinguished: *a*, one with coarse, lymphatic habit, and torpor of the nervous system; *b*, one with delicate habit, and erethism of the nervous system;[2] the former is rather that of endemic cretinism, the latter appears more sporadic. We see from these particulars that, in cretinism, there are grounds for stating it (as many German writers have done) to be an advanced degree of rachitis and scrofula, and that it has been equally obvious to consider it (as most French writers have done) a subordinate form of idiocy. It certainly belongs, according to our notions, to diseases of personality, because in it all the psycho-physical relations (§ 121) are disturbed, nay, in the end, appear to be almost abolished. The excellent Doctor

[1] Comp. Maffei and Rösch, Untersuchung über den Kretinismus, Erlang. 1844; Diss. s. l. Crétin. p. Berchtold-Beaupré, Frib. 1843. These phenomena are accounted by Troxler (Der Kretinismus, &c., in d. Mem. d. Schweitz. Gess. f. N. 830) as forms of cretinism, but are combined in various proportions.

[2] This diathesis seems, at first sight, not to be applicable here, because such children, for the most part, comprehend easily, and have a good memory; but they want the steadiness and the power of retention, without which no spontaneous action of the intellect is available.

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Guggenbühl[1] seems likewise to recognise this analogy of its principle with that of the psychopathies, being guided by the well-established phenomenon, that Cretins are subject to fits of raving (§ 143). It must not, however, therefore be affirmed that cretinism represents a subordinate form of idiotism; it rather indicates the highest degree of it, with simultaneous bodily degeneracy, and the peculiarities consequent on its endemic character. We must therefore (see above) here find a place for it.

The phenomena of cretinism necessarily result, when we add those of the higher degree of idiocy (§ 149) to those that have been just enumerated. But to furnish a lively picture of the disease (§ 131), I cannot refrain from translating the graphic description given of it by Berchtold-Beaupré.[2]

"Who," asks he, "is this melancholy creature which bears the human form in its lowest and most repulsive expression? I see a head of unusual form and size; a squat and bloated figure, with a stupid look, with blear, hollow, and heavy eyes; with thick projecting eyelids and a flat nose. His face is of a leaden hue (*blafard*);[3] his skin is dirty, flabby, covered with tetters, and his thick tongue hangs down over his moist, livid lips. His mouth, always open and full of saliva, shows teeth which are going to decay. His chest is narrow, his back curved, his breath asthmatic. I see, indeed, arms and legs; but the limbs are short, misshapen, lean, stiff, without power, and without utility. The knees are thick, and inclined inwards, the feet flat. The large head droops listlessly upon the breast; the belly resembles a bag, and its integuments are so loose, that they cannot retain the intestines in its cavity; this loathsome idiotic being *hears not, speaks not*,[4] and only now and then utters a hoarse, wild, inarticulate sound. Notwithstanding his greediness, he is scarcely able to support life. One passion alone seems sometimes to rouse him from his usual insensibility; this is the sexual instinct in its rudest brutality. At first sight

[1] L. Abendberg, &c. 1 rapport, comp. D. G. trad. p. Berchtold-Beaupré. Frib. 1844, seite 30.

[2] L. c. p. 2. [3] Ibid. p. 18.

[4] The two characteristics here printed in *italics* are, according to Maffei, the constant, pathognomonic signs of cretinism.—Untersuchung über d. Cr. Erlang. ii, 1844.

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we should be inclined to take this wretched being for a gigantic polypus, something in imitation of a man, for it scarcely moves, it creeps with the painful heaviness of the sloth; and yet it is the monarch of the earth, but dethroned and degraded—it is a Cretin."

These unhappy "Pariahs of Nature,"[1] called in Carinthia Tockern, Tosten; in Styria, Trotteln; in Austria, Talken; in the Tyrol, Totteln; in Salzburg, Fexen; in Wurtemburg, Lallen, etc., are unfortunately spread over the whole surface of the globe, from the Pyrenees to the wall of China, from the Alps to Madagascar, not equally distributed however, but particularly in narrow valleys and defiles of great mountain ranges, so that the perfectly characterised malady may be considered as endemic in them.[2] Schönlein points out the shady side of the valleys, Rösch, and others, the damp localities, as cretin districts.

§ 151. Pathological anatomy affords, with respect to idiocy, a greater coincidence in the results than is found in any of the other forms of psychopathies. The dimensions of the head are usually narrower here than in the other forms, or in a state of health.[3] All the signs which have been mentioned (§§ 138, 139, 145) of previously existing hyperæmia of the membranes and in the substance of the brain are wanting; but the cerebral membranes have been found, in many cases, especially where epilepsy has simultaneously existed, thicker and firmer than in health. Accumulations of serum in the brain have often been met with. The consistence of the brain was found by Greding, in the majority of cases, to be harder. The convolutions were frequently found to be atrophied, and their number diminished. Malacarne counted the lamellæ of the cerebellum, and found in a healthy person 780, in an idiot 320 (according to Tiedemann, the number progressively decreases to that found in the rodentia). In one idiot, the pineal, in another the pituitary gland was wanting.

[1] L. c. p. 3.

[2] L. c. p. 3; for instance, in the Tatra mountains of Poland. Comp. Rocznik-wydziatu lekarskiego, &c., iv, 227; Cracow, 1841.

[3] Elliotson found the brain of an idiot about a fifth smaller than the normal size.—Richerand, Elém. de la Physiol. Camper's facial angle is acute.—Berchtold-B., l. c. p. 9. The cerebellum, in consequence of a defective evolution, is imperfectly formed; and has not the flattened form from above downwards, being more perpendicular and upright; the occipital foramen is very wide behind, as in the lower animals.—Schönlein.

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Deficiency of the commissures and of their appendices was often observed.[1] The proportion of phosphorus in the brain of idiots, according to Couerbe is, contrary to that in mania (§ 145), less than in a healthy state (0,010). The greater development of the sympathetic nerve and its ganglia is remarkable in idiots. Their blood is usually thick. After preceding excesses, a dryness of the nervous medullary matter is often found, especially in men. Ideler found also, in a prostitute, in whom there existed, in addition to idiocy, complete paraplegia, the spinal marrow shrunk; the *cauda equina* of which showed a neurilema without any medulla.[2]

With respect to cretinism, we have the same general results, but differing here and there in particulars. Notwithstanding the frequent atrophy of the brain, hypertrophy[3] has also been met with. Effusion of water, schirrous formations, fungus, and hydatids have been found in the cavity of the cranium. The cortical and medullary substances, contrary to Greding's observation (see above), have appeared softened,[4] the former often exceeding the normal quantity.[5] The *sinus falciformis* has been found quite void of blood, the cerebellum softer than the cerebrum, the convolutions of the latter and the lamellæ of the former diminished in number. Nothing abnormal has appeared on examination with the microscope, but the thickness of the blood (contrary to the above-quoted assertion) is less than in the normal state.[6] The lungs are often small, flaccid, full of tubercles, adherent to the pleura, the bronchial glands indurated, those of the mesentery the same, the heart atrophic, the cavity of the chest and abdomen filled with serous exudations.[7]

If these statements are to lead to any results, they must be multiplied, extended, defined, confirmed, and compared, and the maxims laid down (§ 128) must not be lost sight of. The contradictions existing between pure, or even congenital idiocy and cretinism, which induced Schönlein to establish a sporadic (*campestris*), as well as an endemic cretinism, (the differences of which may be found compared in Canstatt's Special Pathology,)[8]

[1] Lippich, l. c. p. 35.
[2] L. c. vol. i, p. 761.
[3] Ritgen, l. c. p. 311,
[4] Berchtold-Beaupré, l. c. p. 7, note.
[5] Mally, Diss. d. Crétinism. Vind. 1830.
[6] Lippich, l. c. p. 36.
[7] Berchtold-Beaupré, l. c. p. 9.
[8] Vol. iii, 1, p. 105.

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will be partly reconciled by further investigation, and partly explained by the somatic complications (scrofula, rachitis, &c.) existing in the latter, which we mention here, *en passant*, the psycho-physical relation being the object of our inquiry.

§ 152. It appears, from a comparison of the above-mentioned representation with the principles of our science, that the so-called proximate cause of idiocy can, stated generally, be no other than a psycho-physically impeded or depressed vital process; a direct or indirect asthenia of the vital functions. In the lowest degree (§ 149) there exists only such an impediment as weakens memory and imagination, and makes it difficult to fix the attention; the higher degree (ibid.) is founded on either a defective development or a deficient reproduction (progressive formation) of the cerebral organisation.

In cretinism, to the highest degree of idiocy of a peculiar character (§ 150), other conditions are also added, which injure collective organic life, and with it, therefore, every application of the mental faculties. J. Knolz[1] places the essence of cretinism in predominant activity of the ganglionic, and imperfect development of the cerebral system, and certainly finds therein an explanation, not only of the phenomena observed during life, but also that of the remarkably developed sympathetic nerve in the dead body. It would, therefore, be in conformity with this notion to regard the whole nervous system as the organic focus of this form, yet so that its cerebro-spinal sphere is subordinate to the vegetative.

§ 153. The remote causes of idiocy in general act, so far as it is not congenital (for example, in children begotten by a person in a state of inebriety), either directly or indirectly in depressing (§ 152) the powers of the brain.

The following causes act directly: want of light and air; cold and damp; loss of juices; anæmia; general cachexy; encephalomalacia; effusions; paralyses; excrescences; hydatids; tubercles; vascular dilatations which compress the brain; narrow conformation of the cranium; concussions; wounds &c.[2]

Those that act indirectly are: every over-excitement of cere-

[1] Med. Jahrb. des Osterr. St. n. F. i, 1; und Verhandl. d. Ges. d. A. in Wien, ii, s. 115.

[2] An apoplectic habit—thick head and short neck, must likewise give ground to apprehend idiocy.—Esquir. im. Dict. d. Sc. M. 298.

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bral and nervous action; furious delirium; epilepsy; aimless and excessive exertion of the mind; an irregular course of life; violent passions and emotions; spirituous liquors and narcotic poisons. The functions of the brain are temporarily lowered by inferior degrees of such excitements, and even by extreme muscular motion. All the other forms of insanity pass, for this reason, into idiocy (§§ 136, 142, 148). "Almost a fourth part of the inmates of lunatic asylums," says Reil,[1] "are idiots who were formerly insane, and still bear about them a tincture of their previous disease. The too great tension destroys, first, the irritability, then the organisation. To this may be added, the often erroneous and superfluous treatment which wholly destroys the natural powers, through which a crisis might still have been effected."

The direct powers, among those above stated, co-operate likewise in cretinism, and others are also associated with them. The foundation of this melancholy phenomenon has been sought partially in the most various momenta. Education, coition, onanism, the quality of the water, of the air, &c., have been charged with producing it. The careful investigations of the most recent times, to which Guggenbühl's philanthropic exertions in particular have given rise, have taught us that it is especially in the circumstances of climate that all the above-mentioned forces combine. We may thence, therefore, with Maffei (l. c.), designate cretinism, in the more restricted sense of the word, as an endemic degeneracy (psychically, as idiocy; physically, as deformity); for those forces are local, and the occurrence of cretinism (§ 150) is coincident with them. Rösch[2] describes the sequence of their effects very genetically. "By a preternatural moisture of the atmosphere, and a frequent change of temperature, the perspiration is checked; the digestion, the respiration, and the preparation of the blood suffer in consequence. A lymphatic and venous condition ensues; lastly, the whole nervous vitality, and with it the psychical, is less perfectly developed. This accounts for the bodily and mental torpidity which in general distinguishes the inhabitants of valleys from those of mountains and highlands. As these influences not only affect the children from their youth, but

[1] L. c. p. 430. [2] L. c.

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constantly operate on the parents, they at once awaken a tendency, and are likewise calculated to establish it. The more opulent and better educated classes know how to protect themselves against it, while at the same time those conditions of degeneracy do not exist in them which lie in poverty, ignorance, &c.; hence cretinism is much more frequently met with under these latter circumstances." The disease is not properly hereditary, for parents who are cretins beget healthy children,[1] and *vice versâ*. The strangest exemptions are found in one and the same family,[2] yet this circumstance of course does not exclude the occurrence of congenital cretinism. Infant cretins are seen who are incapable even of taking the mother's breast.

So much for the general psycho-physical relations. The special etiology of goitre, &c. does not belong to this place, as we have here only to do with psycho-physical conditions (§ 151). We may, however, observe, by the way, that the relation of the thyroid gland to the mental organs deserves every attention.[3] Counsellor Prieger describes a case of insanity consequent upon an ossification of the thyroid gland and the arachnoid.[4]

§ 154. The course of idiocy is transitory or continued. The former arises after concussions of the brain, violent passions, frenzies, severe neuroses, &c. It alternates with lethargy. If death ensue, it is by apoplexy. It is remarkable that in these cases lucid intervals suddenly occur.[5] In continued idiocy there is often a sudden transition to health. Any organic revolution, as, for instance, the development of puberty, &c., may waken the powers of the mind from their slumber. Willis[6] relates that an idiot, after a severe brain fever, acquired so much genius that he astonished everybody who had previously known him. Remissions occur, for the most part, in the open air and in daylight. Many patients have relapses, mostly in the hot season; others, after months or even years of idiocy, become maniacal and then recover.[7] In general, fits of mania are more frequently intercurrent in idiocy than in cretinism (§ 150). Idiocy is likewise often complicated with

[1] Berchtold-Beaupré, p. 10.
[2] Rösch, l. c. p. 150.
[3] Read, on this subject, Hamburger's work on Pulmonary Consumption; Dresden, 1843.
[4] Vereinzeitung, 1839.
[5] Reil, l. c. p. 426, and Fieberlehre, iv, 370.
[6] Chiarugi, l. c. p. 438.
[7] Pinel, l. c. p. 42; Reil, l. c. p. 428.

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hemiplegia, partial paralysis, and epilepsy. Patients seldom attain old age when the malady is congenital. "They die," says Reil, "before the age of thirty, and when they are epileptic or paralytic, before the age of twenty-five."[1] The transition to the higher degree of idiocy (§ 149) is generally slow, whether through the lower degree or through other forms of mental disease (§ 153). The transition of these into idiocy is usually indicated by increasing corpulency and by the regularity of the bodily functions, previously disturbed by the violent paroxysms. Life, which was previously in danger, recovers, and is prolonged. Corporeal life, however, having its mainspring fixed in psychical life, must at length become paralysed with it. The apparently vigorous habit soon assumes, therefore, the character of marasmus, and the decline is rapid. "Yet," continues Ideler,[2] from whom I borrow these statements, "we also meet, as exceptions in madhouses, with individuals whose tough vital energies are uncommonly durable. They resemble the inferior organisations, in which life is with difficulty developed, and is with as much difficulty destroyed; and prove that we are not yet able to determine to what extent inexhaustible nature enforces the law of self-preservation."

Cretinism, where it is not congenital, develops itself, according to Guggenbühl's observations,[3] about the time of the first dentition, a little earlier or later. Signs of weakness are the precursors. The child becomes unable to walk or to hold itself upright, his head unsupported falls on one side, the expression of his countenance grows stupid, his voice shrill, and all the functions are gradually paralysed, till at length he becomes completely affected by the disease. The duration, unless speedy and decisive help be afforded, is for life—naturally without remission or intermission. The complications of this degeneration with almost all kinds of purely corporeal disease are numerous. Rösch[4] has observed a combination with satyriasis. Maffei[5] has remarked that rhachitis and scrofula exclude cretinism, and *vice versâ*, and attributes it, not to a hostile, but, with greater probability, as more in conformity with nature, to a vicarious action. Von Vering supposes a similar exclusion with respect to the gout.[6]

[1] L. c. p. 429.
[2] L. c. vol. ii, p. 636.
[3] L. Abendberg, p. 31.
[4] L. c. p. 153.
[5] Ibid. vol. ii.
[6] Hielart der Gicht. Wien, 1832.

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§ 155. Before we proceed to the therapeutic chapter we have yet a word to say on the prognosis of psychopathies in general, that we may not attempt impossibilities in treatment, and miss our object by trying to go beyond it. It will not be difficult for a reflective mind, after the special statements already made in §§ 131 to 134, to carry out in detail the principles to be here laid down, and I shall avoid repetitions by only recapitulating, at § 157, a few particulars worthy of note.

The first and most general question to be solved here—whether mental disorders in general are curable either by nature or by art, (a question which in former times was answered in the negative, and frequently is, at least, asked still,) may now happily be answered from experience in the affirmative. With respect, in the first place, to the sanative powers of nature, it cannot be denied that mental disorders of a lighter kind often gradually disappear of themselves when external circumstances are favorable, and the causes which gave rise to them have ceased; that, in other cases, when (either by psychical reaction, or by physical improvement) the regular relations of mind and body are restored, they grow well from within outwards; that they frequently pass, by means of metaschematisms, into other forms, or into other (bodily) diseases (§ 154), that they are often checked by metastases, which relieve the brain and the nerves, and may be considered as appointed crises (§ 127); nay, that in their very essence, in the conflict between the mental and corporeal forces of the personality, according to Töltenyi's view[1] (which contains an indisputable truth, and deserves to be further investigated), we cannot fail to recognise something critical. With respect, in the second place, to cure by art, a dispassionate and equitable examination shows that, as a matter of fact, especially since the more humane tendency of mental treatment, lunatic institutions furnish a more favorable result. Esquirol states the proportion of the cured to the incurable as 1 : 3; Friedreich as 2 : 5; Hufeland as 1 : 5; or, at the most, 1 : 4.

The question, then, whether mental diseases are curable is decided; but with respect to the alleged (and all other) proportions, and to the criteria and decisions respecting curability or incurability, in concrete cases, there are great difficulties. In the diseases

[1] Vers. einer Krit. iii.

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under our review, freedom (§ 56), that incalculable anomalous power, which is constantly passing its undefined limits, acts so important a part, the notion of perfect cure is so fluctuating, the statements are everywhere so little to be depended on, the co-operation of a thousand collateral circumstances is so essential, that we can by no means depend on the accuracy of statistical calculations.

These momenta, which can with difficulty be estimated, again occur in the further question respecting the criteria of curability. Here, therefore, as in most human affairs, we must cautiously suspend our judgment, and with Langermann often leave it to a higher power to decide whether a fettered mind be laden with the curse never again to awaken in this mortal life.

§ 156. The following are leading points for prognosis in general:

1st. Personality in all its relations (§§ 49-53). It affords the following indications: the psychosis is the more difficult of cure the more it approaches its corresponding temperament (§ 125), and *vice versâ*. It is in general more frequently curable in the female sex than in the male.[1] It might well be supposed that the derivative processes of menstruation and pregnancy would contribute to produce it;[2] but the female organism is also especially receptive, and (§ 51) consequently the more susceptible of sanatory influences. When employments and modes of life are concerned in causing mental diseases, the prognosis depends on the possibility of their being changed. Previous education is of great importance in the prognosis; for if a man have been accustomed to self-command, he has in himself the most important vehicle, and the *conditio sine qua non* of every cure of a psychical nature. "The moral character affords the most accurate indication of the essential relations of mental activity."[3] The more deeply rooted in an individual is the habit of obeying the emotions and impulses (§§ 43, 46) without spontaneity, the more difficult will be the cure, when those emotions and influences produce mental diseases as their fruits. Where the necessary mental culture is wanting, the patient will never be brought to take part himself in the measures adopted, and voluntarily to make himself their

[1] Ideler (though guardedly) affirms the contrary.—L. c. vol. ii, p. 722. I do not decide, and only give the vote of the majority.

[2] Lippich, l. c. p. 11.

[3] Ideler, vol. ii, p. 705.

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object, which in some cases is necessary to the cure. With respect to periods of life, the prognosis is most favorable in youth, becomes more doubtful at every additional epoch of advancing years, and in old age is for the most part hopeless. It was observed of old by Hippocrates, that those were scarcely curable who became insane after their fortieth year. Esquirol places the greatest degree of curability between the twentieth and thirtieth year, Haslam between the tenth and twentieth. But the circumstance of the greatest importance with respect to personal conditions is that of hereditary tendency. Most observers, especially Oegg,[1] affirm that they have scarcely ever seen hereditary insanity cured.

2d. The causes of psychoses. If they be still removable, there is more, if they be not, there is less hope of a cure. In general, the preponderance of physical causes gives more hope than that of psychical, except where the physical causes have already produced effects which have generated a metamorphosis of the organic structure, such as can never be repaired. The psychical causes at times involve an unfavorable prognosis in those cases in which the actual psychopathy is a transition from a state of permanent melancholy, which very often, or (according to Zeller)[2] almost always occurs. Of the psychical occasional causes, there is none which influences the prognosis so unfavorably as a sudden change of fortune.

3d. The course and duration of psychoses. The intermittent course gives a more favorable prognosis than the permanently remittent.[3] First attacks afford a better prognosis than where they are repeated; psychoses which are rapidly developed, a better prognosis than those which increase slowly. In general the hope of cure is in an inverse ratio to the duration of the malady, and Ovid's maxim *principiis obsta* is peculiarly applicable here; yet there is no absolute limit in the matter, and were the State to adopt the notion of many psychiatric physicians, that those patients who are not cured within one year are incurable, it would, as Ideler justly observes, be guilty of a gross violation of the duty of guardianship which it assumes, through

[1] See Lippich, l. c p. 11.

[2] Allg. Zeitschrift für Psychiatric, von Damerow, &c., 1, part 1.

[3] Amelung and Sinogowitz (die Geistesstörungen, Berl. 1843) assert the contrary. I state the result of my own experience.

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its medical organs,[1] over those unfortunate beings. Esquirol adduces instances of persons cured who had been insane from one to seven years. Damerow likewises states, that out of one hundred inveterate cases of mental disorder sixteen had been cured. Ideler speaks of cures effected where the disease had continued for ten years or more.[2]

4th. The complication with other diseases. The more psychoses are complicated, the more difficult are they of cure. Epilepsy and paralysis are most unfavorable complications; the former especially so, when the psychosis follows it, less so when it precedes it. Deeply-rooted cachexies likewise afford an unfavorable prognosis. Yet Reil has stated that the mind may, even in an incurably shattered body, recover the true position which it had lost.

5th. Lastly, we know that even external circumstances, in so far as they facilitate or impede the execution of a complete plan of cure, contribute to render the prognosis more or less favorable. Here we have to mention a principle which is now pretty generally acknowledged, and is to be proved in the sequel, that lunatics can scarcely ever hope for cure at home, but only in well-organised and well-conducted institutions. This is the chief reason why lunatics of the lower classes are in general more curable than those of the higher. The former are commonly sent early to an asylum by the police, because they disturb the public peace. They are, besides, less susceptible of many impressions which impede cure.[3]

§ 157. The following are leading points with reference to the several forms of psychoses.

The form of folly is difficult of cure. Its prognosis is especially unfavorable when hallucinations of several senses occur at the same time; if it follow only once, after a fit of furious madness, it may be considered favorable, as being an indication of salutary subsidence; if it continue to return at intervals, or if it follow other forms, the case is hopeless.[4]

Fixed delusion always affords an unfavorable prognosis, particularly the melancholy. The cheerful is considered more hopeful; the religious is particularly difficult of cure, because

[1] L. c. vol. ii, p. 730.
[2] L. c. vol. ii, p. 702.
[3] Bericht über die Petersb. Anst. v. Herzog. Verm. Abh. ein. Ges. pr. A. z. P. 1842.
[4] Ideler, l. c. vol, ii, p. 729.

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it depreciates every curative motive by the indefinite nature of its object; but experience has shown that it is not incurable, as has been sometimes affirmed. The ambitious is likewise difficult of cure, because the patient is not easily subdued. Yet neither is this incurable; but the union of both, which frequently occurs, is very unpropitious.

Of all the forms, mania, particularly if transitory, affords the best prognosis. Haslam reckoned sixty-two cures out of a hundred maniacs, and twenty-seven out of a hundred cases of melancholy. It leaves behind it also, if well treated, the fewest unfavorable consequences. Ideler has well observed,[1] that one concomitant reason for this circumstance is to be sought in the greater energy of mind which is almost always found in these cases. The *monomania ephemera* (§ 144) terminates in recovery immediately after the fit, but relapses are to be feared. The *mania gravidarum* and *puerperarum* (§ 144), that is, mania combined with these conditions, offers a better prognosis. Ideler declares that maniac criminals[2] are generally incurable. He says, "they cannot bear the torments of their consciences, and relapse into the stupefaction of insanity to flee from the consciousness of guilt."

Idiocy affords the worst prognosis of all. If it be primary, it indicates mental and bodily imbecility, which cannot be easily removed. If secondary, as the result of another form, it presents a last event, which admits of no further change. If, in addition, the brain be impeded in its development by the configuration of the skull, this configuration is likewise not susceptible of change. Pinel, however, mentions cases of acquired idiocy, in which the mental faculties returned with alternating fits of mania.

The, in some instances, absolute, in many, at least relative curability of cretinism (both, however, only when there is no original malformation of the brain in the way), had been already proved in individual cases. Langermann relates[3] that of a young peasant who could scarcely stammer a few words, and whom he, by discipline and by habituating him to mechanical employment,

[1] L. c. vol. ii, p. 725.

[2] Vol. ii, p. 127. Agreeing with Esquirol and Neumann, who likewise give up every one who, from consciousness of guilt, gives up himself.

[3] Ideler, vol. ii, p. 730.

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at length enabled to make his way in the world without assistance. More recently the exertions of Guggenbühl have shown how much may be effected by education, medically directed, provided the measures to obtain a cure be taken with sufficient promptitude. Dr. Odet affords an interesting example of this kind in his own person; he was himself a Cretin in the first stage of the disorder, and, by means of the most careful attention, recovered, so as to be able himself to write an essay upon cretinism.[1] On the whole, these results confirm the fact that cretinism is not to be classed among the monstrosities of the human race, nor to be considered as the brute state, but to be regarded as one among the varieties of psychopathies (§ 150).

On a review of what has been said it appears that, on the whole, mania is the most easy to cure (that is to say, among psychopathies, which are always intractable), fixed delusion more difficult, folly still more so, idiocy the most difficult of all.

Complications of several forms, for instance, of folly and mania, double the difficulty, and allow some hope, only when they become simplified.

Isolated prognostications, without any scientific foundation, which are here and there met with, deserve the less attention, because they are not supported by sufficient experience. The favorable symptom on which most reliance can be placed is the return of a regular, long-continued sleep, as the previous disturbance of it was the melancholy prognostic of the commencing psychosis (§ 127). The assertion of Haslam is more uncertain, that it is a favorable sign when patients become fatter than they were before.[2] We have seen (§ 154) that obesity often accompanies the transition of psychopathies into fatuity. In like manner the cessation of a concomitant epilepsy usually indicates the transition from other forms of insanity to idiocy.[3] Flemming maintains that those who, after a so called nervous fever, fall into a state of insanity, are seldom cured.

§ 158. Here another question occurs, which it is as difficult to solve as that of the curability of the disorder, viz. whether it is

[1] Idées s. l. Crétin. p. f. Odet. Montpell. 1805.

[2] Observations on Insanity. London, 1798.

[3] Pr. D. Schroff, in the 'Med. Jahrb. des Osterr Kaiserst.' n. F. xviii, p. 609. Remarkable cases of psychopathies are also there communicated which advanced to their cure notwithstanding the body was becoming highly diseased.

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actually cured? The difficulty of answering this question, lies in that of the diagnosis of psychopathies in general, and in their great liability to relapses (§ 127) in particular. Lippich, on this question, lays down very appropriately the following leading points :[1]

1. The consideration of the previously existing conditions of curability; for it is evident that, under circumstances otherwise similar, the certainty of permanent cure will be the greater in proportion as the curability is easier (§ 157).

2. The consideration of the phenomena which usually precede the cure; decided crises here afford the best assurance of a favorable issue. On the somatic side, it is reckoned a good symptom when the convalescent recovers his normal sensibility to impressions and bodily wants. On the psychical side, Ideler declares[2] that the cure cannot be relied on till the convalescent has attained to an objective reflection upon his disorder—to moral perception and to moral principle. Such a guarantee is certainly very important on the psychical side, yet I have myself seen cases in which, without this decided consciousness in the convalescent, the recovery proved to be trustworthy. At all events, it is a very happy symptom when the patient himself dreads the return of the fits, manifests in the intervals shame and sorrow, no longer resists the remedies to be applied, even calls for them, nay, urgently desires those which are painful and humiliating (maniacs, after recovery, often affirm that they should certainly have been cured sooner, if they had been treated with more rigour from the commencement of their attack), and when he no longer impatiently demands to be dismissed, but is still willing to remain in the institution, if it be judged necessary for the confirmation of his health. But it is likewise a good sign when he again remembers his former circumstances, as after a dream, when the lost attachment to his former associations, to the persons and things to which he has been accustomed, returns, and when he is resolved to resume with resignation his former position, even when it has been uncomfortable. I do not know any more pleasing proof of the health of mind and body in persons of undisturbed mental faculties, than the power of resignation (even at a sacrifice of

[1] L. c. p. 13.

[2] Vol. ii, p. 667. Subsequently (p. 776) the purpose of cure is declared to be attained "when the lunatic has been brought to possess complete self-knowledge and self-control." Who, in the full possession of health, can boast of having attained to this?

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ideal pleasures) to submit with a certain cheerfulness to the claims of daily life. The return of old inclinations and habits, even though they were bad, has been considered as a criterion; and properly so, so far as they express the restored standard of individual personality (§ 121); but improperly, when they bring with them the old emotions and passions which co-operated in producing the disease. We cannot be too much on our guard against the dissimulation peculiar to such patients. Ideler,[1] with much tact, here warns us against a too great readiness of the patient to conform to the wishes of the physician; also, against a certain uniformity of expression, which indicates phrases learnt by rote without having any meaning attached to them; and advises that great attention should be paid, not only to the language, but also, and indeed chiefly, to the actions of the convalescent. Animated gesticulations, wandering about, sleepless or disturbed nights, a love of solitude, irritability, indigestion, headache, an excited pulse, are all suspicious signs.

3. The consideration of the phenomena of restored health. This presupposes a very correct judgment of a concrete individual personality, and coincides with the diagnosis of psychopathies in general. We must not forget here the states of transition (§ 56, *et al.*) We must bear in mind Hechenberger's remark,[2] that like coins, which, though some of them are half copper, nevertheless pass as silver, there are individuals who, though possessing a pretty large proportion of psychopathic alloy, nevertheless, pass in the world as healthy. Relapses are least to be feared when the psychosis commenced and disappeared with the period of evolution. That in many of those who have recovered (but not as Pritchard says, almost in all) there is a depression of mental and bodily energy, may, from the storms which these complicated conditions excite, be easily conceived; this happens the more readily in proportion as the mental spontaneity, and the action of the nerves were originally weaker.[3] In rarer cases, according to the law of compensation, an increase of the mental capacity and energy has taken place after recovery.

[1] Vol. ii, p. 671. [2] L. c. p. 27.

[3] *Sapientis quoque animo, etiam cum vulnus sanatum est, cicatrix manet.*—Zeno. Pariset and Pinel desire the convalescents in their lunatic asylums to ask themselves whether they think that they are capable of returning to their former circumstances or not? Those who hesitate are thereupon required to remain in the institution.

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CHAPTER VI.

THERAPEUTICS.

§ 159. Proceeding now to the therapeutical chapter—the most important for our practical object, we must again bear in mind (§§ 62-79) that we have to do, not merely with diseases of personality, known by the name of mental disorders, and with their cure, but that our task extends to the psycho-physical, and physico-psychical, double relation. We shall therefore first consider the so-called psychical method of treatment in itself, then examine the effect and application of physical remedies to psychical conditions, next proceed to those composed of both kinds, and not until we have done this, review the therapeutics of mental disorders, (that is, of the compound forms of disturbed physico-psychical reciprocal relations,) according to their several symptoms.

Since, in the so-called psychical mode of cure, one personality has to act upon another, and since, in this case, the vehicle, as it were, in which the medicine is exhibited, is the person of the administering physician himself, this is the first point to be considered. It is not every physician who, though he may perfectly understand how to treat purely somatic diseases in a purely somatic manner, is likewise capable of contending with the above-mentioned compound diseases, with the requisite degree of skill. On this account, writers who speak of this mode of cure are accustomed, with good reason, to commence by describing the character of the psychopathic physician such as it ought to be, since he combines in his person the qualities of physician, remedy, and vehicle. They often err, however, in setting up an unapproachable ideal standard, which, strictly considered, could never be reached, for complete universality of knowledge, being beyond human attainment, excludes in this, as in other departments, the requisite perfection in individual branches.

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The most important and essential combination—that which must be found in the psychological physician, has been stated by us in the preliminary chapter (p. 21 et seq.) What is further necessary in individual cases, will appear self-evident from what follows. All is concentrated in the idea—self-command; a condition, without which the psychiatric physician especially, can never hope to fulfil his vocation, nay, must fear to be drawn into that labyrinth from which he would fain deliver his unhappy patient, of which there are many tragical examples.

Besides the difficulty of finding a properly qualified physician, the psychical method has other difficulties to contend with, which we have likewise pointed out (pp. 10, 11). The pathological chapter has made us still more accurately acquainted with them, because we are now able to take also into account the compound nature of the psychopathies, and the resistance which the patients themselves make to us. The psychical mode of cure (such as we at first conceive it in a general sense), though not only applicable, but even indicated in all disorders, since the reciprocal action of body and mind, with which our whole science is concerned, never ceases, is nevertheless chiefly necessary in the neuroses, on account of their closer relation to the central organ of mental life. Therefore, e. g. in epilepsy, St. Vitus's dance, whooping-cough,[1] hydrophobia, &c.

§ 160. Psychical remedies, great as are their number and their variety, can only act in and upon those symptoms in which psychical action is revealed. They refer, therefore, to thought, feeling, and will (§ 38), and their individual manifestations; but as these manifestations belong to only one power, and even pass into each other (ibid.), all psychical remedies belong, at the same time, to all of them, except that in many, the individual relations between symptom and remedy are more or less decisive.

The remedies which have reference to the thinking principle begin with perception through the senses (§ 16), and end with thought (§ 38).

fect produced through the medium of the cœnæsthesis elongs, strictly speaking, to the corporeal class of

[1] Comp. Med. Jahrb. n. F. xix, p. 647.

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remedies, as it determines the direction of the patient's mental action to his own body. It will therefore be treated of under the head of somatic remedies.

§ 161. Remedies applied through the senses, some exciting, some tranquillising, some concentrating, some dispersing and diverting, operate through the sensorium commune upon psychical action, first affecting attention (§ 25), and through it, imagination (§ 32) and memory (§ 35, *e*), and, finally, influencing the power of thought (§ 38).

The touch is too remote from the mind (§ 16) to be made available[1] when it is required to act principally upon this.

The taste is more readily applicable. A delicacy to which he was formerly accustomed will put an epicure, who is in the most melancholy state of mind, into a better humour; and, *vice versâ*, nausea, which, besides, has other secondary effects on the body, may forcibly and disagreeably divert the attention of a lunatic from extraneous objects, and fix it upon himself.

The smell has not yet been sufficiently made available in this respect (§ 18). Not only might a casket of perfumes, as Reil proposes,[2] afford an object for the exercise of attention, but the employment of the sense of smell deserves further consideration on account of its special relation to memory.

The sight is very well adapted to produce influences on the mind. Without having recourse to the theatrical tricks proposed by Reil,[3] which I look upon as degrading and useless, and which besides do not especially employ the sight, but the fancy, it is undeniable that light, darkness, and colour exercise the most decisive psychical influences. Light acts as an excitant; twilight as a calmant; darkness, according to circumstances, acts as both: the positive colours act as stimulants, the negative as sedatives (§ 19). Rösch and Esquirol affirm, from observation, that indigo dyers become melancholy; and those who dye scarlet, choleric. Paracelsus recommended red coral as a remedy against melancholy, and declared blue to be injurious.[4] The colour of the rooms inhabited by psychical patients is, therefore, not a matter of indifference, and, as the

[1] The remedies mentioned by Reil (l. c. pp. 183, &c., and 202) belong partly to the somatic, partly to the mixed, and partly to the fancy (§ 18).

[2] L. c. p. 202. [3] L. c. p. 209.

[4] Paracelsus, &c. M. B. Lessing, p. 185; Berlin, 1839.

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psychical effect produced by coloured glasses is particularly strong, it might be desirable to let certain patients, with morbid ideas, see the world through stained windows or coloured spectacles with the green hue of hope, or the red glare of pomp. Harmonious and brilliantly-coloured works of art have a cheerful effect on the mind, even independently of the subject which they may represent.

Hearing becomes, in like manner, a channel through which the mind may be excited by noise; soothed by silence; cheered by harmony and melody. Pythagoras called musical tone "the element of the spirit." Language is not to be taken into account here, since it acts by its import; but it is by no means inopportune to mention that a fine voice, lends it a much more enchanting effect upon the mind. Firing a gun, ringing bells, beating a drum, and other noises of this kind, especially in the midst of a dead silence, may prove effective in fixing or drawing off attention.[1] A lunatic was lulled to sleep, and cured by the noise of water dropping from the ceiling of his room into a copper vessel;[2] another by an alarm of fire.[3] Reil's cat harpsichord[4] was more likely to cause madness than to cure it. Music has, however, been justly and often extolled as a psychical remedy, and was employed as such by the ancient world, while by the moderns it has been far too much neglected. Music, according to Tissot,[5] when employed as a remedy, is to be divided into the soothing and stimulating. According to the indication, either the one or the other must be adopted. The major mode is generally chosen in preference to the minor;[6] and the patient is not to be dosed or surfeited with music.[7] How does music act? Not, properly speaking (purely), on the mind, that is, through ideas; nay, its effects on animals, for instance, spiders, serpents, mice, dogs, camels, horses, &c. appear to be still greater than on intelligent man. Neither does it act

[1] Quorundam discutiendæ tristes cogitationes, ad quod symphonæ et cymbala, strepitusque proficiunt.—Celsus, C.

[2] Reil, l. c. p. 204. [3] Van Swieten, vol. ii, p. 334.

[4] L. c. p. 205. Cats chosen according to the musical scale are placed in a row with their tails turned outwards; the keys furnished with sharp nails fall on their tails, and the cat which is struck squalls forth its note!

[5] Nervenkr. iv.

[6] Wilde die Zerstreuung als Heilmittel., p. 110. Berlin, 1830.

[7] At the place above quoted there are many instances of such cures. (p. 111, &c.)

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merely mechanically. So far as we are at present able to theorise on this subject, our view (with reference to § 20) must rest on some such principles as the following. Vibrations which sonorous bodies communicate to the elastic air, and which form regular sound-figures, throw the medium into a state of polar tension. They are dependent on electrical conditions. They propagate themselves, and, therefore, probably also all their polarities, through the auditory passage to the central organs of the auditory nerves, namely, the medulla oblongata and pons varolii. The reflex action on the nerves of the spinal system may explain the action of lively music on the organs of voluntary motion.[1] It has been justly observed that, for these purposes, more is to be expected from simple, melodious music, which speaks directly to the feelings, than from that which is artificial, founded on the laws of harmony, and addressing the feelings through a cultivated knowledge of the art, wherein, however, the requirements and special knowledge of the individual must be taken into consideration.

§ 162. After the senses, attention (§ 25) is the next atrium through which the effects of psychical remedies must pass. To a state of profound absorption (§ 110), we oppose dissipation of the thoughts; to dissipation of the thoughts (ibid.) we oppose their concentration and regular employment. We awaken obscure ideas from their slumber (§ 28), or seek to obscure those which have become abnormally powerful.

1. Dissipation (of the thoughts), for which all the above mentioned (§ 161) and all other external objects that act upon men, may be made available, has, for its object, to divert the thoughts and, to a certain degree, set them in motion.[2] It would be useless, and mere trifling, to enumerate all the means which are employed for this purpose. They are well known, and must be derived from, and adapted to, the individual circumstances.

The following maxims are to be observed in their application:

a. The remedy employed for dissipating the thoughts must

[1] See, on the subject, Starks 'General Pathology,' p. 337.

[2] "Our mind is so constituted that it is more refreshed by change, even of labour, than by doing nothing."—Kant, Menschenkunde, p. 222.

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correspond, in quality, with the course of ideas of the patient. Extremes act only for the moment upon one another; durable effects require gradual transitions.

b. With respect to quantity, it must correspond in strength with the morbid ideas of the patient.

c. It must apparently be accidental: if the patient be aware of design, the effect ceases. Hence it is so difficult to dissipate one's own thoughts.

d. Care must be taken that the dissipation do not lead to an abnormal new direction of the mind, to which there was a predisposition (see § 141, psychical causes).

e. The dissipating remedy must be varied, but not too suddenly.[1]

f. The treatment must be continued for a sufficient length of time, because the old ideas are so apt to return.[2]

2. The object of concentration is to fix vague thinking; its main levers are order and employment, which are the most important of the prophylactic and curative psychical remedies.

a. Order; the form of healthy activity is gradually followed by its reality. The psychical patient, who has become accustomed to rise at the same hour, to wash and dress himself, and to follow the routine of the day in taking his meals and sleeping, has taken the first step towards recovery.

b. Employment; which must be suitable to the circumstances of the individual, and not too uniform, is the second *conditio sine qua non* of psychical cure.[3] It must not be merely mechanical, or pursued in the form of treatment, but to the patient it must seem to have an external object. It must be varied according to circumstances, from hard corporeal labour, as agriculture and gardening, to mechanical, as working in pasteboard and basket-making, and from this to intellectual employment, as reading aloud, dictating, writing exercises, making extracts, translations, &c. (not, however, knitting, sewing, &c. which, from the uniformity of their mechanism, give too little occupation to the mind, and rather facilitate its

[1] Animo assidua objectorum variatio concilianda et quidem ipso ignaro.—Boerhaave, Aphorism.

[2] Comp. F. A. Wilde, l. c.

[3] Illa communia sunt, insanientes vehementer exerceri debere.—Cels. III, p. 18.

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reveries). Employment acts both physically (§ 168, *a*) and ethically, inasmuch as it teaches the wandering mind to return from its visionary world to the common daily duties of human life.

3. The awakening of obscure ideas is effected partly by employment on objects in which the patient formerly took particular interest, partly by calling into action his latent powers. The obscuring of ideas which have become too powerful, is effected in part indirectly by the same process, in part directly, in a negative way, by paying no attention to them, which, in most cases, is better than attempting to refute them. If the patient be able himself to contribute to his cure, it is indeed so much the better. A hypochondriac whom I attended, became convalescent from the moment that I prohibited him from continuing a journal which he kept of his condition.

With respect to means for dissipating thought, smoking, for those who are used to it, certainly deserves particular notice as a means of recreation. "The tobacco-pipe," says an experienced psychopathic physician, "follows tranquillity of mind as the latter does the tobacco-pipe."[1] Solitude must likewise be mentioned here, which in proper cases may be employed for concentrating the thoughts (2), especially for short periods; but, in general, Seneca's maxim holds good: "*Nemo est ex imprudentibus, qui relinqui sibi debeat. Tunc mala consilia agitant, tunc aut aliis aut ipsis futura pericula struunt.*"

§ 163. Upon the memory (§ 33) we act according to the laws of association (§ 34); that is to say, we seek to place before the patient those ideas to which we wish to assign, as it were, a larger space in the mind,[2] and desire to render permanent, and which we wish to oppose, in frequent and often repeated connexion (law of coexistence and succession) to those ideas which are morbid. We combine them with similar ideas, or we heighten their effect by contrast (law of analogy and contrast).

We endeavour to strengthen a dull memory (§ 115, 2) by exercising it in learning by rote. As all the energies of the mind are blended together, we attain by this exercise the

[1] Herzog, in the excellent Essay which we have so often quoted.

[2] Comp. Beneke, Beiträge zur Bearbeitung der Seelenkrankheitskunde. Leipsig, 1824.

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manifold advantage, not only of strengthening the memory, which in many cases (for instance, in idiocy) constitutes a main part of the cure, but also in other cases (e. g. in fixed delusion) of diverting the attention, or (as in distraction) of fixing it on another object. It must never be forgotten that the interest taken in what is to be remembered is the foundation of memory; the deeper the impressions, the more permanent they are. We must therefore never neglect to associate as much as possible the exercise of the memory with something that interests the feelings. Learning by rote what is uninteresting and dry, either becomes a useless mechanical operation, in which the mind is otherwise engaged, or the patient, who is agitated by violent feelings, rejects it with invincible disgust. Connected with a feeling or an object (§ 162, 2, *b*), the interest in the exercise of the memory increases by repetition, and by the very progress made, (e. g. in learning a foreign language;) and the efficacy of the remedy is augmented by its own effects.

§ 164. All the above remedies, nay, strictly speaking, all those of a psychical nature, act upon the fancy, as that is the immediate atrium to psychical effects—the birthplace of the images which form the mind. The influence of the fine arts on patients who are susceptible of being affected by them, must especially be noticed in this place. Here, too, theatrical representations, as proposed by Reil,[1] and recently practised, would be applicable, because they combine all the effects of art—poetry, by the composition; painting, by the scenery and acting; and music, by the overture and interludes, and thus attract the fancy in every possible way. Mentally diseased patients may, according to circumstances, derive advantage from them, either as spectators, or even as performers. To this head may be referred the reading of works rich in fancy, but at the same time sound, and composed in the spirit of genuine poetry, which has enlightened many a bewildered mind, while fantastical works have had the opposite effect of bewildering many a too susceptible one. But the utmost caution is to be observed in the application of these remedies, since in the very activity which they excite, the germs of dangerous extravagances slumber, and we may easily be led to conjure up spirits which we are not able, afterwards, to allay.

[1] L. c. p. 209.

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Attempts to effect cures by means which act upon the fancy through the superstition or fixed delusion of the patient are highly culpable; for instance, by imposing masquerades, appearances of ghosts, &c.; they are beneath the dignity of the physician, do future injury by confirming superstition, and violate one of the most important laws in the treatment of insane patients, namely, as far as possible, to be true towards them, so that, even after the cure, they may not be able to discover that any deception has been practised upon them.

§ 165. The understanding is acted upon immediately, either by direct instruction, or by general culture. Direct instruction will be applicable only in rare cases, because, in the first place, we have here to do, not with errors, but with disease (§ 120); secondly, because patients are seldom susceptible of it; thirdly, because, though a prejudice, a delusion, &c., be removed, still the root is not destroyed, and new delusions will continually spring up. Even in persons in health, effects upon the mind are very rarely produced through the understanding alone, but very easily through the temper; that is, through a union of the feelings and inclinations. (*Affectus nec coercereri nec tolli potest, nisi per affectum.* Spinosa, Eth. IV). Dialectics supply the excited spirit with additional arms to defend its illusion. Yet moral instruction conveyed in a proper form, delivered with seriousness and in a kind spirit, and directed more to conscience, as it were to the taste for virtue, than to the reflective faculty—particularly in states of transition, as, for instance, in hypochondriasis, and in the convalescent stage—combined with the treatment above pointed out, may contribute much towards thorough recovery. In such an attempt the Socratic method must be applied, because it is only thus that the spontaneity of thought is aroused. No truth is so salutary as that which the lunatic suggests to himself. Persuasion from others rather strengthens the patient in the sophistry of error. I should prefer suitable lectures, conveyed in a lively and agreeable form, to the learning sentences by rote, as recommended by Ideler. The intellectual feelings (§§ 43, 166) are the medium through which the understanding is especially to be influenced.

But whenever we can reckon on any susceptibility for it, we must never neglect the general improvement and employment of the mind. By these the intellectual qualities of the individual

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are strengthened, and the reaction of spontaneity is founded and improved. Culture is one of the surest protections against the inroads of insanity (§ 129), and in this respect psychical treatment bears a great resemblance to education, with which (under the title of psychagogics) it is so often compared. But here again everything must be adapted to individuals and to circumstances (§ 162, 2), and the appearance of design and dictation must as far as possible be avoided (ibid. I, *c*). Of all the scientific employments which may here be made available for our purpose, mathematics have undoubtedly the preference. They alone afford that complete evidence and conclusiveness which satisfy the requirements of man's reasoning powers. They arrange and exercise them, as it were, unconsciously; they are difficult enough effectually to abstract the mind from other trains of thought, and leave fancy and passion undisturbed. Even logic, if the study of it were admissible, does not afford these advantages, because, when half-studied, it only serves to support the sophistry of delusion, and forms points of transition to the dangerous abstractions of metaphysics. Hoffbauer[1] tells us of a lawyer, who, having, when in the deepest distress, applied himself to the study of mathematics, succeeded in raising himself from a state of despair. Next to mathematics (which may be very well united with music, § 161), or where the patient cannot, or will not employ them, I should recommend the natural sciences. They are clear, easy of comprehension, entertaining, unexciting, and highly instructive and improving. But where the mind is closed against all these remedies, play (cards, &c.) affords, in many cases, as exercising thought, a welcome resource.

§ 166. Feeling (§ 39) is most frequently acted upon for our particular purpose, and, indeed generally, according to the scheme of 'pleasure and displeasure' (ibid.), especially the individual feelings (§§ 40-42), nay, even the emotions are made to act on feeling (§ 43).

Pleasure and displeasure are employed in therapeutical psychagogics as reward and punishment; content should follow quiet behaviour, pain, turbulent behaviour. It is always a main principle that there is sense in rewards and punishments, only so long as the patient can be improved by them; where im-

[1] Untersuchungen über die Krankheiten der Seele, vol. i, p. 140. Halle, 1802.

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provement is unattainable, they lose their object, and measures of security should take their place. In the application, however, of rewards and punishments, various precautions are to be observed.

1. The motives of reward and punishment must counterbalance in energy (i. e. in degree) the motives of the delusion. Half measures must be carefully avoided, as they only produce a stronger reaction. Drunkards, in particular, require strict treatment.

2. We should be severe towards the faults of the patient, mild towards his person; we ought, therefore, to be just, equitable, and, above all, perfectly dispassionate. Punishment, with anger, excites a bitter feeling, and wholly fails of its object. How can the patient receive it as a remedy applied by a physician who desires his welfare? To impress his mind with the idea that justice is done him is the business of the medical man, and it is not always an easy task. The pure notion of right is by no means to be taken here as the guide, for it is not applicable to the mentally diseased patient. The degree of this applicability must be measured according to the actual state of the consciousness of the patient, that is, according to the degree of freedom in his volition (§ 56), and to the object of the punishment in the particular case.

3. The punishment, as well as the reward, must immediately follow its cause, and be continued so long as the patient has the consciousness of its applicability to his conduct.

4. Regard must be had to the milder or rougher disposition, and to the character and station of the patient, that we may avoid committing faults or absurdities.

5. We must be much more prompt and liberal in the bestowal of rewards than of punishments, in order constantly to remind the patient of the intention to effect his cure.

An adherence to these maxims constitutes practically the difference between discipline and mere drilling; the latter of which presupposes no consciousness, and is therefore at most applicable only in the lowest psycho-physical condition, in the case of idiots of the more advanced degree, or in the most furious attacks of mania (*pro momento*), where the patient must, like an unconscious natural power, be prevented from injuring himself and others.[1]

[1] See Ideler, l. c. vol. ii; Disziplin, s. 794-831.

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By this mode of proceeding the impulse, being always checked in its ebullition, will gradually subside; a sum of reminiscences of the consequences of his actions accumulates in the mind of the patient, which fails not to produce a salutary effect in the sequel,[1] for so long as the mental powers are generally active, and, therefore, until a total disorganisation of the brain takes place, their conformability and excitability never wholly cease.

From all this, the object of rewarding or punishing lunatic patients is pretty apparent. The means for the purpose are as various as the individuals and relative circumstances; and to discover and employ them, must be left, for the most part, to the tact of the psychopathic physician. Painful, corporal chastisements, which at the same time wound the sense of honour, as, for instance, flagellation, will probably be suitable only in the rarest cases (not at all?).[2] Those which do not wound it, for instance, a drip-bath upon the shorn head, should be employed but very seldom. Deprivation of food, abstinence, or, on the contrary, an indulgence in favorite dishes, a prohibition from walking out, from visiting the garden, or from greater liberty, in the cases of more docile individuals; a deprivation of books, a denial of some refined amusement, as, for instance, music, among the more educated patients; a disapproving silence, a withdrawal of marks of respect in our conduct, nay, a reproachful look, and, under opposite circumstances, a friendly demeanour, with a pressure of the hand, and a cordiality of expression towards those of the best education,—all this the psychopathic physician must be able to devise at the moment, and he must not be actuated therein either by convenient harshness, or by false philanthropy.[3]

The several feelings (§§ 40, 42) may often be employed as psychical remedies. Self-approbation (l'amour propre) acts in cases where the above-mentioned motives are called forth; compassion may be very successfully used to divert the mind

[1] L. c. p. 822.

[2] "The mind of fools is obliged by a cudgelling to remember the world from which the cudgel comes."—Lichtenberg.

[3] Hence we see clearly that in the question now so warmly disputed in England about the system of *restraint* and of *non-restraint*, the truth does not lie in the middle, but in a judicious application of both to individual cases.

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from hypochondriacal and similar egotistical feelings; but, above all, religious feeling has the most extraordinary effect as a salutary remedy, so that the physician, happy, on the one hand, to possess so excellent a means, has, on the other, every reason to be very cautious in its application, just as he would be in applying heroic and costly somatic remedies and psychical remedies of the fancy (§ 161); lest, in avoiding Scylla, he should fall into Charybdis. Here too we must constantly remember that the question is one of feeling, and not of dogmatic instruction, which the patient will hardly be capable of (§ 165) receiving.

Hope is likewise one of the most effectual of the feelings for the cure (§ 44) of all conditions in which the mind co-operates.[1] Religion acts, in this sense, as hope of a more elevated kind. Hope is, to a certain extent, a part of our *ego*, which has in it the principle of duration when other parts are threatened with destruction, a manifestation of the inmost psychical energy of life, which bids defiance to the storms of devastation, and thus represents the sanitary powers of nature in this sphere. It affords, therefore, an important psychical remedy, and it was no small praise which was bestowed on the excellent Reil, that even those patients whom he was unable to restore to health never abandoned hope. Yet even this remedy requires caution, and, as far as possible, adherence to truth (§ 164); for hope, often disappointed, destroys confidence, and leads ultimately to despair.

But, moreover, a physician who thoroughly understands the human heart, may with great advantage have recourse to those psychical remedies which create feelings of unhappiness in his patients. For instance, in cases of casual faults from levity, absence of mind, or excitement, he may desire to create repentance and becoming seriousness, as he would have recourse, on the physical side, to a nauseating or lowering treatment. Indeed, it may be confidently asserted, that a profound and thoroughly transforming influence on the mind cannot possibly be effected without wounding the spirit.

In a therapeutical view, the excitement of the more vivid emotions requires the greatest caution. Like the fancy (§ 164) they easily lead to extremes; often move the patient in an

[1] Spes bona dat vires. Vivere spe vidi, qui moriturus erat.—Ovid.

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undue degree, and are, for the most part, but too transient. Yet in sensitive individuals and in acute cases, where psychical symptoms predominate, these remedies invariably afford a safe and often a decisive aid, in carrying out the psychical cure. Of course, in sthenic cases of psychical activity, it is preferable to employ depressing emotions; for instance, fear and horror (the latter always with great caution), and in asthenic cases, exciting, emotions; as, for instance, enthusiasm.[1] There are many instances of the cure of psycho-physical states by means of emotions. One is the instance already quoted, of epilepsy caused by the power of imitation in the Orphan Asylum at Haarlem, cured by threatening the patients with a red-hot iron (§ 126). Conring recovered from an intermittent fever, which passed into melancholy, through joy at speaking to the celebrated Meibomius.[2] The mixed emotions are complex and uncertain in their effects; their application resembles what is called the metasyncritic method by means of medicine; an attempt is made to rouse the listless activity of the mind from its lethargy, without giving it a definite direction. Vexation and shame are the most effectual means for this purpose.[3]

§ 167. The will (§ 45) is in general influenced according to the schemes of love and hatred (pleasure and displeasure, ibid.), especially by the excitation of individual impulses (§ 46), in which, above all things, the gradual formation of a habit is to be aimed at, whereby the most durable effects are produced. It is, of course, evident that passions cannot, with propriety, be combated by passions, as if, for instance, we should endeavour to convert ambition into religious fanaticism.[4]

To a paralysed will we present objects which the patient, with whom we are acquainted, once eagerly desired and disliked. We seek to concentrate his interest on a single point, by imperceptibly giving everything a tendency in that direction (of course with due precaution, and with a view to

[1] *Simul conducit omni modo oppositum conciliare animi affectum illi, qui jam prædominatur.*—Van Swieten, Comment. iii, p. 478.

[2] Unzer's Physician, vol. ii, p. 370.

[3] We find examples in Ideler, vol. ii, p. 906, &c. Esquirol made use of a refined sense of honour by leaving a melancholy lunatic patient (an officer) for one night quite alone in his room, after exacting from him a promise not to commit suicide. Hill affirms that a madman seldom breaks his word.

[4] See Ideler, l. c. vol. ii, p. 887.

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fixing his ideas); nay, we place him in apparent danger, for instance, by immersion in water, &c. without, however, having recourse to the strange *coups de théâtre*, recommended by Reil.[1]

To an over-excited will, we oppose removal of the object (that is, when the excitement is but weak, for, in a higher degree, such removal only increases the excitement), repose, solitude, especially in combination with darkness and silence; and in the higher degrees, restraint. This restraint, whether it be purely psychical, by inspiring awe, or whether it be effected by corporeal means, as by fetters, &c., is a necessary condition in psychical cures. It is only thus—the patient's will (as the proper psychical manifestation of spontaneity) either co-operating in the cure, or, at least, not opposing it—that this mode of cure is successful, and no one is really a psychopathic physician till he has obtained the command over his patient's will. For this purpose every power of opposition must be taken away. Every insane patient must be treated, according to circumstances, at the commencement of his disorder with uncompromising firmness. The commands should be short and decisive, but such only as can be carried into effect. Corporeal restraint must be carefully adapted to circumstances. There lies a peculiar controlling power, especially in men of great vital energy, in the eye; we know that this power, which Neumann attributes to a light actually emanating from the optic nerves, is applied even to animals, as, for instance, in shoeing horses. The English call it "to catch or meet the eye," and Esquirol frequently mentions that he looks steadfastly at his patients. Here, again, it must be borne in mind that the physician who would exercise this kind of magnetism ought to be sure of his success, or he will make himself ridiculous.

The several impulses are variously used in psychical treatment, but not in that degree of violence at which they become passions (§ 47).

The psychopathic physician excites affection towards himself when he bestows it with an honest and warm heart. It becomes a longing for him, provided he keep it within prudent bounds, which, indeed, is his duty, as it is not to be supposed that he lives for one patient alone. With this limitation it is

[1] Rhapsod. p. 209.

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a mainspring in his treatment. Domestic life would afford one of the remedies most worthy of humanity, through love, if that were not, unhappily, too often the source of the disease.

The impulse or love of research and of gain, with other incentives, may be employed to excite a powerful interest (see above), and at the same time to effect a mental cure (§ 165).

The impulse of imitation, however (§ 46), is peculiarly suited to our object. Its power, which is especially strong in weak minds, acting in secret, pervades even the diseased mind,[1] and good example is justly commended as the main lever of psychogogy.

§ 168. We have to consider further (§ 159), corporeal remedies, with reference to their psychical action; but as it is only in this respect that they have a place here, no person who clearly understands our object will require that we should enter into their special indications. They may here, in general, have a threefold relation.

1. To the mental action itself.

2. To those diseases of the body which stand to the psychopathies in the relation of causes.

3. To those diseases which accompany the psychopathies as complications. In this threefold sense, principally, may corporeal means be employed in psycho-physical disorders.

The first series of remedies has been already partially noticed in the psychical mode of treatment (§§ 161, 162, 167); we need only therefore enumerate some that have not yet been mentioned.

a. Exercise; either active, as mechanical, agricultural, or horticultural labour, gymnastics, riding, walking, skating, swimming, dancing, playing at billiards and tennis, &c.; or passive, as driving in a carriage, being carried in a litter or palanquin, swinging, &c. Exercise has an exciting influence on all mental action. "I must walk," said Rousseau, "if I have to think." Travelling, which so often dispels incipient melancholy, hypochondriasis, and haunting thoughts, acts chiefly by change of scene, yet partly also by exercise. It works miracles, but, it must be confessed, only in milder cases.

[1] Ideler, l. c. vol. ii, p. 790.

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Cœlum, non animum mutant, qui trans mare currunt, and *post equitem sedet atra cura,* and *patriæ quis exul, se quoque fugit?* —so sang the wise Horace. The modern custom of frequenting watering-places, however, affords many remarkable results which are to be placed under this head, and it is particularly useful for our purpose when the patient is compelled, from want of conveniences, to take care of himself.

b. Lowering treatment of all kinds—hunger, thirst, blood-letting, purgation, cold, deprivation of sleep—acts psychically by weakening the energy of the mental action where it is excited.

c. Alterative and derivative remedies—as shower-baths, the beneficial effects of which, patients themselves confirm by frequently asking for them; calomel, carried to salivation; tartar emetic, in full or divided doses; sternutatories; rubbing in tart. emetic ointment over the shorn head (in the use of which, however, the greatest care and circumspection are to be observed;)[1] blisters, setons, moxas, &c.—act psychically by drawing off the attention, which is improperly fixed, and at the same time, according to circumstances, exciting or lowering mental activity.

d. Stimulants—wine, opium (see the next page), warmth, friction, electricity, &c.—act psychically, inasmuch as they promote the psychical functions by exciting a feeling of unrestrained organic vital energy. This effect is transient, and must be repeated with moderation, and a strict attention to the individual case.[2]

All these remedies may call forth, at the same time, organic changes which shall cause or accompany psychical conditions; but they have likewise a *purely* psychical effect, and it is in this sense that they are introduced in this place. Somatic remedies, as causing and accompanying corporeal conditions in

[1] See Sinogowitz, p. 480, &c.

[2] Experiments made of treatment by transfusion have hitherto produced far too few results to warrant their introduction into the therapeutical department of our subject otherwise than by way of note. With respect to them, Friedreich's Litterargeschichte, p. 177, may be consulted. The same may be said of the application of the mineral magnet, which yet requires a more solid organico-physical basis; as also of the experiments on inoculation, which, without a more accurate knowledge of the anamnestic causality, rest only on a *post, ergo propter,* argument; for instance, catching the itch, and likewise sometimes accidental burns, have cured insanity, therefore . . . . . .

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mental diseases, come to be considered under the individual forms of those conditions. Many bodily complaints of the insane must either not be treated at all, or but very cautiously, because they may be critical (§ 127); for instance, fever, without severe local affection, cutaneous diseases, abscesses, diarrhœa, rheumatism, &c. The very existence of many corporeal conditions is problematical, because the insane patient gives no information respecting them, although he often calls loudly for their relief.

I have purposely avoided a special allusion to narcotics in this place, though they are frequently recommended in the treatment of psychopathies.[1] In their first effects they belong to the class of stimulants, but must be used, as such, with very great precaution, on account of their dangerous after-effects, so that pure stimulants may with advantage be substituted for them. In their total effect, that of causing stupefaction, they are almost absolutely contra-indicated, as respects our object; they always diminish the efficacy of the psychical principle; if too long continued they change every form of psychosis into almost incurable idiocy; and they may, in their tranquillising power, be advantageously replaced by other sedatives. Special indications for the employment of the narcotic class, in individual cases, will naturally occur to the physician of discrimination.

§ 169. We mentioned above (§ 159) a mixed method of treatment. As such I would provisionally designate the so-called animal magnetism (§ 84) in its therapeutical application. Under the name of idio-magnetism (ibid.) we have learned to recognise this series of phenomena as a state of transition. Where it does not arise spontaneously, but is produced in a patient by medical interference, one psycho-physical state of disturbance is purposely opposed to another, perhaps more dangerous one, already existing; in the same manner, for instance, as with reference to the body, we oppose to certain cachexies a mercurial or iodine disease; an experiment which it is evident is always an affair of conscience, and an individual problem for the solution of the physician.

That this therapeutical magnetism represents a mixed psycho-physical remedy follows partly from the description which we have given of its psycho-physical phenomena, partly from the manner in which, according to experiments hitherto made, it is produced.

[1] See, on opium and digitalis, Friedreich's and Blumröder's Blätter fur Psychiater, 1837, I.

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This manner is twofold.

1st. Physically, by manipulation.

2d. Psychically, without manipulation, by a relation of the physician to the susceptible individual, occurring through the medium of feeling and fancy, which relation is called the *rapport*. This difference of the given phenomenon has hitherto divided those who explain it into one party which regards it in a psychical sense, and the other in a somatic sense, according to the best experience of each. The former, which is the older, adheres to a purely psychical view, and incurs the danger either of deviating into the domain of ethics and religion, or of explaining every human feeling, for instance, love, veneration, &c., to be magnetism, by which, in fact, nothing whatever is explained. The latter, which is the more recent, insists on an *empirically* communicated influence by *manipulation*, and is in danger of explaining all the phenomena either as (inconceivable) effects of electricity, or of a telluric magnetism in the human body, which likewise explains nothing; or else of entirely overlooking one series of these phenomena, which, nevertheless, is a part of the whole.

In our position, which with respect to this entire doctrine is provisional (§ 123, note), it only remains to accept *pro tempore* the given phenomena which it offers on both sides, and to consider them in their therapeutical relation.

1. The somatic manipulation of the so-called magnetism consists in strokes or passes, which the physician makes principally with the tips of his fingers, often with the thumbs of both hands, from the head of the patient to his extremities, either with actual contact, or (*in distans*) at some distance. The practice of the magnetiser consists in numerous variations, gradations, deviations, and combinations of this manipulation. The effect of this treatment is sometimes magnetic sleep (§ 81), with all its consecutive phenomena; but often only an allaying of nervous excitement, without those abnormal phenomena. Many of the most recent magnetisers intend only to produce the latter mild effect, with which the psychical side of the question has nothing to do, and disclaim all individual *rapport*, attributing the entire efficacy, as Hoffbauer formerly did,[1] to the passes, which, accord-

[1] Notes to Crichton on Mental Aberration, p. 75; only in the sense of going to sleep in the ordinary way.

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ing to their belief, are equally effectual by whatever hand practised. The neuro-electric, or electric vital current in the skin, proved by the experiments of Zantedeschi and Favio,[1] and which is ascertained to be connected with convulsive movements, is, at all events, worthy of attention.

2. The psychical influence is effected by an individuality of the physician, to which that of the patient (for the most part females) becomes subject or passive, so that the spontaneity of the latter is, as it were, merged in that of the former. In cases of great susceptibility on one part, and of great energy on the other, this *rapport* is often produced by the mere look, often too without intentional influence. These phenomena are, in essential particulars, the same as result from somatic treatment, only with a predominance of the symptoms of psychical exaltation.

§ 170. The so-called animal magnetism may be employed as a remedy with a threefold object.

1. To tranquillise: for this purpose simple magnetic sleep is sufficient, nay, often (as for instance, in toothache, slight convulsions, &c.), tractation suffices, without the induction of sleep. This harmless manipulation may at any rate be sometimes tried, and may have an advantageous effect, psychically through the feeling of hope, arising from confidence in its efficacy (§ 166), and physically through centripetal innervation.

2. By a higher degree of vitality, to excite, through the nervous system, a salutary (metasyncritical) reaction. This procedure demands great caution and individual discrimination, since, after all, it is only proceeding by guess. The physician may here be compared to one attacking the case with a stick. If he strike the disorder, so much the better; if he strike the patient, so much the worse. The question always is, how far may a psycho-physical exaltation go, in *this* or that individual patient, in order to produce only a *salutary* excitement, and where lies the point at which this excitement may become *dangerous?* It can never be a matter of indifference; he, therefore, who will venture to give a decided answer to this question, as applied to the case which he is treating, may likewise venture on this procedure.

3. To obtain, by the so-called *clairvoyance*, prescriptions from the patient himself as to the treatment of his case. He

[1] Comp. Schmidt's Jahrb. 1841.

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who has rightly conceived the essence of magnetism to be an over-wrought dream (§ 85), with extraneous psychical influence (§ 169), may consider, in the individual case which he is treating, whether he can really expect, from the heightened instinct of his patient (§ 85), a better insight into the case than from his own scientific knowledge. When the latter leaves him wholly at a loss, and nothing is risked, he may venture on the experiment.

It is sufficiently evident, from what has been stated, that merely making experiments with magnetism, to gratify scientific curiosity, is cruel, and to gratify philosophic or religious curiosity, is foolish (ibid.) This is not employing it as a remedy.

The so-called magnetic treatment thus offers physically a calming or enervating remedy, and psychically, an experiment which excites the fancy. It acts as a mixed method, through a mean state between psycho-physical health and disease, and should therefore, at most, be tried only in such mean states.

In what the efficacy of this strange method properly consists has not yet been decided by science. At all events, the term "magnetism," arising out of Mesmer's history and hypotheses (see the Historical Chapter, page 60), is wholly gratuitous, provisional, and by way of analogy. The term "mesmerism," which is here and there used, though the moderns differ much from Mesmer, would still therefore be more suitable. We are by no means informed how the forces of telluric or mineral magnetism, which, with those of the metallic tractor—the so-called rhabdomancy, require a more accurate physical elucidation, are related to these psycho-physical phenomena. To deduce them, as sometimes has been done, solely from the focus of generation, and consider them as merely hysterical, though the sexual developments have certainly much to do with them (§ 67), would be to take a partial and, I should say, unjust view, considering the character of many physicians known to us as friends of this method, and the experiments which we ourselves have occasionally had the opportunity of making on wholly unprejudiced young boys. To explain magnetism by the "rapport" in which all natural beings stand to each other, as was done formerly by Fr. Hufeland,[1] and more recently by

[1] Ueber Sympathie, 1811.

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Ennemoser,[1] is evidently extending the ground of explanation too far, as the question here has reference to a more definite "rapport." It is commendable in Ennemoser that, while he extols the improvement of somnambulists by magnetism, he likewise notices the fact of their being made worse by it; and it is certain, as Eschenmayer[2] has already observed, that the final explanation of this much-talked-of and often-abused mode of cure, is to be hoped for only by pursuing the course which we take in our inquiries between psychology and medicine, namely, pathology; but not even thus until some one possessing the requisite qualities shall be found to devote himself to the subject[3] (§ 86).

We need not here pursue in detail the therapeutics of the transition states, hypochondriasis, &c. They come, on the somatic side, under the head of special therapeutics, where they will be brought forward. On the psychical side there is only a difference in degree between them and those of the psychoses; consequently, the remedies which act on the lower members of the intermediate state (the senses, cœnæsthesis, &c. § 160, &c.) will, for the most part, suffice;[4] but where this is not the case, the following principles are applicable.

§ 171. We now come to the treatment (§ 159) of the different forms of psychopathies. As a first general law, we should here observe the maxim, always to treat the patient more than the disease; that is to say, in a disease where the personality (the individual) is in question, to individualise more than we do in treating any other disease. No two persons being alike, each case must be treated on its own merits; yet the psychopathies, like all other disorders, offer, on the whole, three indications:

[1] Der Magnetismus. Stuttgard, 1842. [2] Vers. d. Ch. Magn. &c., 1816.

[3] There are many reports of experiments of this mode of cure which bear the stamp of faithful observation; for instance, those of Dr. Spiritus, in Nasse's Zeitschrift, 1822, vol. i, &c. Experiments of the kind, which are to be mentioned elsewhere, have been adduced by myself, which forbid me to express a positive judgment in the negative.

[4] "Celui qui croirait tour à tour affecté le cerveau, les nerfs, le cœur, les poumons, l'estomac, les intestins, les reins, la vessie, et en conséquence irait combattre successivement tel ou tel symptome, poursuivrait le mal partout où sa racine n'est pas; mais celui qui connaît les connexions de tous ces organes, par les divers embranchemens des nerfs grands sympathiques, l'attaquera dans son foyer."—M. s. Dict. des Scienc. méd., t. xvi; where hysteria is treated of.

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the treatment of the causes; the treatment of the disorder; and the treatment of the convalescence.

Above all things, the physician must be furnished with a perfect anamnesis. It is not only necessary to the diagnosis, but is serviceable likewise for the treatment, because this must be guided by a knowledge of the patient's personality. An accurate anamnesis, or memorial of his symptoms, obtained without his knowledge, is likewise a good means of inspiring the patient with awe on the occasion of the first visit (Georget).

It is self-evident that the occasional causes, when they are discoverable, and admit of removal, must be removed. The predisposing circumstances existing in the personality must be particularly attended to here, where we have so much to do with the rule *principiis obsta* (§ 156, 3). On the physical side, the object is to give strength in general, and to the nervous system in particular, by light, air, baths, exercise, diet, &c.;[1] but on the psychical side, the measures to be recommended form a distinct system of prophylactics—of dietetics for the mind.

The remedial dietetics of the mind (as the prophylactics of psychopathies)[2], are those among the psychical remedies (§§ 160, 167) which are applicable to a still healthy personality. They too relate to thought, feeling, and will (ibid.), but accompanied with knowledge. By this, therefore, the prophylactic is principally distinguished from the curative, psychical treatment; that in the latter, the least (§ 156), in the former, the greatest effect is to be produced through the understanding. That strength of mind is partly a prophylactic against the psychoses is evident from this circumstance, that the energies of the functions and organs in general, and in this instance, therefore, those of the functions of thought and

[1] "As trees become more covered with moss and bark on the windward side to protect them from storms, so the nervous system is said to become case-hardened or epidermatised against the storms of life."—Hechenberger, l. c. p. 54. In other words, the nerves become strengthened by the habit of suffering; their sensitiveness is blunted by use.

[2] What, in my small work 'On the Dietetics of the Mind,' I called by that name, was a prophylactic system of treating bodily diseases, and (the states of transition) hypochondriasis, on a psychical plan; but the essential elements remain the same throughout.

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of the organs of the brain, help reciprocally to develop and heighten each other. Hence it follows that the individual concerned can not only contribute to the prophylaxis, but must himself have the chief share in it. Its basis is, therefore, self-knowledge (of a practical character, not metaphysical sophistry); its sum and substance, self-command. Here, then, we are at the limits of our medical domain, actually on the confines of ethics; and, in fact, as Schiller, in a physiological view (§ 44), so Esquirol, led by psychiatrical observation in a pathogenetic view, recognises *virtue* as the moral ægis of psychical health.[1] That the diffident man should not wholly rely upon himself, but, where his own judgment is not sufficient (as in choosing a profession, in contracting marriage, in various other affairs, &c.), should seek the advice of a qualified psychological physician, ought to be understood as a matter of course.

The several points to be observed so clearly result from the consideration of the conditions stated (§§ 129, 130), and the maxims to be deduced from them are so various and individual, that the greater part of them must be left to the physician's own reflection, and to his unbiassed and calm observation and procedure. But we will here recapitulate the leading points, in order to determine, at least, what is essential.

The first problem of mental dietetics, is to make ourselves objective; that is, to acquire self-knowledge. After understanding our psychical relations, the second problem is to harmonise them; that is, to do away with the preponderance of one tendency over another Above all, it is requisite for our purpose that fancy should be restrained and kept in subordination. Of the feelings, let the social (§ 40), especially, be cherished; let us endeavour to confirm and strengthen the will, and practically to cultivate the understanding, and direct it to external objects. Especially let the senses be stimulated to counterbalance fancy; let the temperaments (§ 125) be modified, and all the powers be harmoniously developed, since they are confirmed by action. It is very necessary that we should in particular exercise ourselves in recognising[2] and internally balancing these ever-fluctuating extremes of life—joy and

[1] Pathol. d. S. St. p. 51.

[2] See Diätetik der Seele, 1842, pp. 83, 122.

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sorrow, in order that in this respect also the equilibrium may be restored.[1] Lastly, let a genuine religious state of mind, "the free relation of man to a superior power,"[2] that ægis against everything mean, morbid, and destructive, in faith and moral conduct be preserved, and we shall be able to look from within with tranquillity on the threatening terrors of insanity.

All this must be effected and enforced by the physician, as a psychagogue or instructor of the mind, where the individual himself is not equal to it.

Langermann, if not the first, was, at all events, the foremost to compare the treatment of mental disorders to education, and to advise mental development and cultivation with a therapeutical view. As a prophylactic, it is fully adequate to its object; as a remedy, and that the best, the comparison fails;—the difference between the education of youth and psychical treatment must be the same as that which exists between their objects—childhood and insanity. Children and lunatics are said to have this in common, that "they speak the truth;" they have many other and more important resemblances, but likewise very many differences; both will be easily discerned by the attentive observer. Moreover, that self-command is possible, even in a state of mental disease, and consequently offers a means of cure, is proved by the cunning of lunatics, by which they are often able for a long time to conceal their insanity.

We will add here one special remark, that females in particular, with a decided predisposition to mental disorders, are often, as by a sure prophylactic, preserved from them, in the harmonious exercise of their psycho-physical life, by the regulating influence of marriage (we mean a comparatively happy marriage, of course).[3]

§ 172. The cure of the psychopathies (which, as evidently results from the notion that they are disordered relations of mind and body, § 121, and must always be at the same time psychical and physical) is different according to their several forms. It is clear, from what has been said (§ 155, &c.), that the notion of the *vis medicatrix Naturæ*, or natural cure—the religion of the healing art in general—must, in this department likewise remain

[1] Apprens, apprens . . . . à te souffrir, par là l'on vient à bout de souffrir toutes choses.—Trousset.

[2] Hemsterhuis.

[3] Compare Esquirol, Sinogowitz, and others.

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our leading star. All organic actions are efforts at self-preservation; here, therefore, we ought, at the right moment, to understand the art of doing nothing—of "letting well alone." With respect to pharmaceutical remedies, properly so called, their frequent application in cases of mental alienation is rendered difficult by various circumstances (opposition, insensibility, &c.), and there is nothing special to be said here respecting their indication and mode of application which would not be stated generally in works on pharmacology and special therapeutics.[1] They refer, therefore, principally to the somatic complications, which we shall presently notice.

Folly (§§ 131-136) offers no small difficulties in its treatment. A command over the patient must constitute the commencement of the cure. He must be brought into subjection by coercive measures (§ 167); circumstances must be changed, and new ones substituted; the main principle of these must be *order*, to which the confused psychical actions of the patient must be habituated. Occupation is here the chief psychical remedy (§ 162, 2, *a*, *b*), in order to arrest the vague flight of ideas. The coercion, however, must not be violent and continued, but must be mitigated or increased as a reward or a punishment (§ 166), according to behaviour. The kind and degree of employment, from field labour to reading, must be suited to the ability and inclinations of the patient; his fancy must on no account be consulted. An *object* must always be held out, which shall not appear as a mere remedy; the relation of the exercise to the understanding must be closely in correspondence with the returning activity of the latter, and direct correction of its irregularity must not take place till there is the most decided improvement (§ 165).

Suitable psychical measures must be opposed to the several psychical symptoms: to absence of mind (§ 131), a fixation of the attention to one object of interest (§ 162); to forgetfulness (ibid.), an exercise of the memory (§ 163); to talkativeness, solitude which affords no opportunities for conversation; to bursts of passion (ibid.), a categorical imperative; to the present morbid inclinations of the patient, his former anamnes-

[1] This subject is well treated in Bird's 'Pathol. u. Th. der ps. Krankheiten,' p. 324. Berlin, 1836.

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tically known ones; a generally suitable discipline with respect to instruction (§ 166) is, above all things, indicated in this form.

On the somatic side, a certain general neurosis (tendency to spasm?), which, indeed, perhaps primarily, arises from a topical nervous affection,[1] often stands to moria in the relation of a concomitant cause. Its symptoms are nervous erethism, decided periodicity, spasms, hallucinations. It is to be counteracted by nervine remedies, but especially by tartar emetic in increasing doses from two to eight grains, in six ounces of distilled water. Other causal states of the body, as well as complications (§ 168), among which, besides convulsions and paralysis, intermittent fevers certainly play a conspicuous part (which, however, must not mislead us to adopt, in periodical moria, the convenient resource of assuming what is termed a masked intermittent), may be counteracted in the manner already prescribed in the special treatment. Ideler is perfectly right in saying[2] that bodily diseases which are combined with insanity by no means require, on that account, as has been so often affirmed, a different mode of treatment.

Inunction with tartar emetic ointment, issues, and other similar annoyances, will scarcely be of much use in these cases,[3] and no sensible physician will expect anything from a specific, among which black hellebore, camphor, musk, opium, digitalis, stramonium, colocynth, anagallis, tartar emetic, &c. have been recommended; all which remedies, under the proper circumstances, according to otherwise well-known therapeutical indications, deserve to be applied.

§ 173. Fixed delusion (§ 137, except in the slightest and most recent cases, and taken at a particularly fortunate moment) is by no means removed, as Reil believed it to be,[4] merely by destroying the fixed idea. If this method ever were successful, it was probably where there was as yet no fixed delusion, but only a state of transition, in which state something may still

[1] Herzog, in the above-mentioned Bericht über die Petersb. Anst.

[2] L. c. vol. ii, p. 950.

[3] But a remark of Sinogowitz to the contrary effect (p. 487) merits further inquiry.

[4] Rhapsod. p. 324.

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be hoped for from instruction and opposition (§§ 165, 171). This form of mental disorder is not ultimately founded on the fixed idea itself, the object of which may be most various in kind (§ 137), but in that state of psycho-physical action which impels the patient to take up and to maintain such ideas. Still less is to be hoped from this method of procedure in those cases where the fixed delusion takes the form of permanent insanity—the termination, the crystallisation, as it were, of wayward folly. But though the idea be not the basis of the disorder, it does not follow that it is not its essential phenomenon, and thus intimately connected with its basis. Though contradiction does not cure it, it is not, on that account, useless, but contributes, when positively and negatively opposed to it, essentially towards the cure. In this, as in many cases of bodily disease, we must be content to act on the essential symptoms which are within our reach, the real focus of the disorder (the sensorium, § 140) being inaccessible to us, and the nature of its alteration unknown, (ibid.). In this sense the maxim *il faut être fou avec les fous* is wholly inadmissible. When, therefore, *modificatis modificandis*, we have endeavoured, in the manner indicated under moria (§ 172), to alter and to regulate the psycho-physical state of the patient in a general way, and have opposed to the state of isolation, which rises to the highest degree in this form of diseases of personality, an abundance of external excitements, nothing remains but to combat the operation of the fixed idea, nay, the idea itself. This is done, first, negatively, i. e. with respect to its operation, by uninterrupted, interesting, varying employment, which strongly claims the attention, and leaves it no time to develop itself; with respect to the idea, by not entering into it, by letting it pass unnoticed, and not appearing to think it worth while to refute it, or, when it can be done, pretending not to have heard or understood the patient. For all ideas, which at first fix our attention, are ultimately extinguished by time;[1] and as repetition (§§ 35, 163) confirms the idea, so does the want of it, for the same reason, gradually dispel it. Great advantage may be derived from a new and deep interest, nay, from artificially excited emotions and impulses (§§ 166, 167), and even

[1] Reil, l. c. p. 325.

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from apparent dangers in which the patient is purposely placed (Reil); but the greatest care must be taken that no new fixed idea be established. In slighter cases it sometimes answers to yield to the delusion, and then, by happily so applying it as to show its refutation, to recover the patient at least from the existing idea, by which procedure, time, and consequently much, is gained, and in the earliest stage, when the delusion is not wholly fixed, even a release from the disorder itself.[1] When this negative process has been tried with more or less success, the fixed delusion is next to be attacked positively. This is done in two ways, *a*, by direct opposition; *b*, by apparently yielding to the fixed idea, yet setting aside its object. The first of these methods will more frequently succeed than the second; and here regard must necessarily be had to the objects of delusion which constitute (§ 138) the varieties of this form.

In the metamorphotic fixed delusion (§ 138, 1) the most applicable procedure, in addition to bodily treatment, is to fall in with the ideas of the patient in the manner above mentioned, and apparently thus to carry out the cure. But special regard must be had to the local bodily malady on which, perhaps, the fixed delusion may be founded (§ 73), and to those hallucinations of the senses which are so often the source and the proper substance of the fixed delusion itself (§ 140).

In fixed delusion in the form of ambition (ibid. 2); indifference and, if possible, an ascendency on the part of the physician, is necessary. Here, too, a serious, religious influence of the feelings, which gives man a consciousness of his littleness, and disposes him to humility, has often a very beneficial effect. Indifference is, in general, the best remedy that can be opposed to the enthusiast of every description.

In religious fixed delusion, accompanied with remorse (§ 138, 3), the religious feeling itself must be employed as a cure, by endeavouring to change its direction and by inspiring confidence in the infinite mercy of God. In religious fixed delusion, combined with ecstasy, occupation of the soberest kind, alternated with cheerful recreation, must aid the direct instruction which may be practicable, and which must always be founded on the idea of religion.

[1] Numerous examples of the kind are known, but they are not always to be depended upon. Many are to be found in Reil, l. c. pp. 329, 340, &c.

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In the erotic fixed delusion (ibid. 4), occupation is likewise an indispensable condition.[1] The advice which even Reil[2] gave to gratify the longing, which is here the foundation of the disease, would, if followed, almost certainly lead to destruction.[3] Let us reflect that here, again (see above), it is not the individual idea, but that which fixes it, which is the point in question, and that the gratification of the desire never cures, but, on the contrary, increases it. A diversion to another object of the same desire, and a change of this diversion would be more likely to do good, if it were not so difficult to effect it. It is to be observed, moreover, that here, in every case, physical remedies, especially the antiphlogistic method, must likewise be resorted to, in order to lower the sexual orgasm.[4]

In melancholy (ibid. 5) the cure by diversion (§ 162, 1), but with caution and strict regard to the state of the individual, is applicable in its greatest extent. If it assume the character of spleen, sense of honour, duty, and religion, are perhaps the only interests which can rouse the deadened vitality of the mind.[5] If it assume the character of thanatophobia, let the cure, by means of occupation, gymnastics, riding, &c., be declared to be a cure for the disorder of which the patient is afraid he shall die. Emotions, sometimes of the sthenic kind, but often asthenic, e. g. fear which furnishes a negative excitement (§ 28, obs. 10), are likewise useful in every kind of melancholy.

Somatically the fixed delusion, especially the metamorphotic and melancholic, is often referable to an abdominal disorder, as a concurrent cause, to which the treatment, as far as the body is concerned, must be directed. Nothing is to be expected

[1] Venus otia amat. Qui finem quæris amoris, cedit amor rebus; res age, tutus eris.—Ovid.

[2] Rhapsod. p. 348.

[3] Dr. Hayner, on the contrary (Nasse, Zeitschrift, vol. ii, 1822), cured a nymphomania rationally, by gradually leading the patient to a romantic sensibility, and through it to a purer feeling.

[4] Goethe's vaudeville 'Lila' affords a pretty representation, founded on a knowledge of human nature, of a psychical cure by means of this variety.

[5] A profound trait is found in Goethe's 'Wilhelm Meister.' The harper, tired of life and mentally diseased, always carries poison about him, and the possibility of putting an end to his existence at any moment, enables him to bear it, but he at the same time fears death.—Vol. xx, pp. 287, 288.

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from specific remedies, such as black hellebore, gratiola, &c. (§ 172). An irritation of the mucous membrane of the bowels, which extends to the abdominal nervous plexus, and thence by the cœnæsthesis spreads to the sensorium, may arise from different causes, and must be treated accordingly by laxatives, derivatives, purgatives, &c. From the powerful and permanent effect of mineral waters, especially those of Carlsbad, and of warm baths in general,[1] they deserve to be especially recommended here. Greater difficulties are presented by diseases of the heart, which often accompany melancholy, and which indicate the antiphlogistic and sedative method of treatment. In the erotic fixed delusion, anomalies of the sexual life, which are generally to be treated antiphlogistically, are seldom wanting, whether they be primary, or, as is more frequently the case, consecutive.

§ 174. Mania (§ 143), though (§ 157) the most curable of the psychopathies, requires, however, a most energetic method of cure if the more favorable prognosis is to be borne out. The difficulty in deciding the mode of treatment lies principally in determining whether, in the individual case, the excess of excitement shall be checked or not, and if checked, in what degree. The answer cannot be general, it must be conditional. On the one hand, it appears natural to let the excitement take its course, so that it may exhaust itself, and, according to the laws of nature (§ 148, 48) pass to its opposite. On the other hand, the frequent repetition will make the impression on the motor system deeper and more durable. This consideration leads to three principal rules of treatment: 1. The patient must be tamed, that he may not injure himself and others. So far therefore the constraint, which is not to be looked upon as a cure, but as a measure of police, must be carried in every case. 2. The patient must be treated in a twofold manner; namely, in and out of the fit (§ 148), in order to prevent that impression already alluded to as caused by repetition. 3. When we employ constraint as a remedy (§ 167), and this may serve as a very general standard rule, a reaction of an inferior degree becomes

[1] Saline aperient waters (bitter wässer) are also frequently applicable (see C. D. Schroff, in the 'Medical Annals of the Austrian States,' n. f. xii, 367), the utility of which, in melancholy, may be accounted for by the abdominal plethora, which, for the most part, exists in the region of the *nervus vagus*.

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weaker, and a reaction of a higher degree, stronger by repression; as a storm extinguishes a small fire, and fans a large one. Further, the more the psychical causality predominates, the sooner will the constraint, and the succeeding reflex action avail, while, on the contrary, the physical operation of nature will take its headlong course.[1] The *mania ephemera* (§ 148) expires, whether repressed or not, in and through its own attack. These regulations must be adhered to, but always individualised to suit particular cases. A mistaken philanthropy has attempted, in recent times, entirely to do away with coercive measures by the system of *non-restraint*. Theory and experience show that, as concerns the patient, they are as little to be dispensed with as instruments in surgery; and, as concerns security, not without great danger. Let humanity be shown in the wisdom of their application.

1. Constraint is effected psychically and physically: psychically, by the means indicated (§ 167); but, as respects solitude, with this caution, that it be applied to lunatics only temporarily, because, if protracted, it deadens the effect, heightens the mania, concentrates the moria into fixed delusion, and more rapidly changes both into idiocy. Physically, there are many measures in ordinary use; among which are the following.

a. Remedies which directly check motion; the strait-jacket, the constraint-chair, the constraint-bed, bonds or shackles of every kind; their application is justified by experience. They act by producing absolute depression of the disturbed mind, and are therefore indicated *only where and so long as they produce that effect* (§ 71). They often act mechanically in preventing half voluntary motions, for instance, in the case of Onanists, who practise their ruinous habit by night, frequently without being conscious of it, when half asleep. In patients who have been subjected to such constraint, the mere threat of repeating it is often sufficient to prevent a coming attack;[2] others even call for it when they feel the approaching excite-

[1] If the limbs of a person who is in convulsions are held fast, they become cataleptic, as an isolated voltaic column supports itself. Ought not this observation to afford grounds for requiring, in the treatment of insane patients, means for unloading topical obstructions?—Reil.

[2] "Vous passerez aux incurables!" said drily by Esquirol, was a threat which had the effect of magic.

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ment, or, when the fit is over, thank the physician, whom they avoid during its continuance, for the measures which he had adopted.[1] The strait-jacket must be applied in slighter attacks; the constraint-chair in more severe cases. Ideler,[2] however, advises that its application should not be continued longer than one or, at the very most, two days, for otherwise œdematous swelling of the legs, erysipelas, proctocele, &c., are easily induced. When the mania is of longer duration, he, therefore, prefers the constraint-bed, recommended by Neumann. The strait-jacket possesses the advantage of causing no pain, no injurious friction, it is the least formidable in appearance, and does not impede the circulation, nor even motion, except that of the arms. The complete prevention of motion externally increases the patient's fury internally.

b. Means, which so shock the nervous system that the motor innervation is extinguished. Among these are, the swing, the revolving-chair,[3] the plunging-bath;[4] they must be used with due circumspection and a cautious regard to contra-indicating conditions, such as a threatening of apoplexy, hemorrhages, &c. In this class again work must be placed—an indispensable means for acting on the nerves, even in this form of insanity. The experience of every psychological physician proves its applicability. "Maniacs rave at their work, but they perform it nevertheless."[5] With respect to cold water, it is to be observed that the too protracted and irrational use of it, in the form of douches, &c., has often caused a transition to incurable idiocy, as has been proved by finding, on post-mortem examination, a softening of the brain. (The Graefenberg system in particular has furnished several candidates for lunatic asylums.) This observation is confirmed by multiplied experience.

c. Remedies which excite pain, by a lesion of the skin

[1] Hecker mentions that even in the case of the *convulsionnaires* of the middle ages severe chastisement alone was of any avail, and that they themselves asked for it.

[2] L. c. vol. ii, p. 848.

[3] Comp. Schneider, Entwurf zu einer Heilm. Lehre gegen Psychische Krankheiten. Tübingen, 1824. The manner in which the revolving-chair acts is described most clearly by Horn, in Nasse's Zeitscrift, vol. i, p. 219. Comp. Beneke, l. c. p. 324.

[4] "Præcipitatio in mare, submersio, in eo continuata, quamdiu ferri potest, princeps remedium est."—Boerhaave, Aph. 1123.

[5] Pinel, jun., Traité du Rég. alién., 1836.

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(§ 168, *c*). Ideler[1] observes that, besides their main effect, they have also a very useful secondary influence over the hallucinations; he objects to the inunction of tartar emetic ointment on the head, on account of its slow operation, its inconvenience, and the abuse of it, for sometimes it is carried so far, as to cause caries of the skull; while he commends the rapid and powerful effect of setons in the neck, and moxas on the spine; but prefers, above all, the electro-puncture, because it acts the most powerfully, and without occasioning a wound, or doing any harm. He mentions favorable instances of the employment of this remedy, and of urtication. It must never be forgotten, with respect to all these remedies, that pain, particularly if continued, and gradually increased to torture, is one of the most powerful means of weakening the whole organism.

d. Remedies which so affect the nervous system, that excitement is impossible (metasyncrisis). To this head belongs treatment by nauseants and emetics, the sufficiently protracted application of which presents, it must be owned, many difficulties. Transitory mania is, however, for the most part, cured by *emeto-catharsis*. Opium, as a soporific, either fails altogether in producing sleep, since, in mania, as in tetanus, the largest doses are often taken without effect, or the patients are more raving than ever when they awake.[2] The use of digitalis in increasing doses duly regulated is more frequently advantageous.

2. The treatment during the attack is rather negative than positive. The patient must be prevented from injuring himself or others. Positive remedies, both depressing and derivative, as well psychical as physical, must be employed during the period of intermission, or shortly before the approaching fit. Yet many measures, as calmants of excitement, are also negative. The patient should be removed to an apartment, neither too light, nor yet quite dark, for total darkness only tends to irritate; all causes of excitement should be withdrawn, all lively impressions avoided. Experience has shown that mild superintendence has a better effect than rigorous constraint. The patient must not be exasperated, but kept in awe by calm decision and equanimity, which overcome all resistance. A mono-

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tonous noise,[1] soothing music, the view of a garden, of a peaceful, cheerful landscape, may tend to induce religious impressions, during the intervals, so as to reduce the temper of the patient to a normal state. I have myself witnessed the unexpectedly favorable effect which mild treatment produced on a maniac, when, after the lapse of many years, he was withdrawn from a rigorous system, under which he had frequently suffered chastisement. A sense of gratitude towards his deliverers overcame him, he was extremely collected in their presence, the fits were less frequent, and at length entirely ceased—but the mania became converted into moria.

Somatically, a local affection of the brain is frequently a cause, but oftener a consequence, of mania. This begets, through the orgasm caused by it, a secondary irritation of the brain, in consequence of which, when often repeated, or of long duration, plastic abnormities are formed, and become the proximate cause of the idiocy into which it so frequently passes (§ 148). This is the moment when much may be effected towards the cure[2] by means of bloodletting, partly general, partly local, which is never indicated in mania itself, but only in the hyperæmia superinduced by it. The value of this remedy was formerly estimated too highly, while latterly, by Pinel, Neumann, and others, it has been too much depreciated. In cases of suppressed secretions (for instance, of milk, and of the lochia, in puerperal mania, &c.) their restoration must be attended to. They are, however, not always causes, but also not unfrequently consequences of mania. We often see profluvia suppressed by violent emotions.

In cases of antagonistically depressed functions of the nerves of nutrition, caused by continued irritation of the brain, *Tonico-solventia* are useful, and a cool regimen, water-drinking, cold baths, and ablutions, have a salutary effect. Cold shower-baths, applications of ice, &c., may likewise be employed when the patient is not in a fit. Solvents and aperients are almost

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§ 175. Idiocy (§ 149) is to be treated according to its degree by exciting mental action and releasing the fettered organs of the brain. In the first two grades (ibid.) the following means may, according to circumstances, be applied to effect a cure: the frequent enjoyment of fresh air and of the light of the sun, or, at any rate, an airy, light apartment; nourishing food; physical stimulants, such as mustard, horse-radish, pepper, electricity, galvanism, friction of the head, spirituous embrocations, snuff, sternutatives, and douches; but still more important are psychical stimulants, as exercise of the attention (§ 162), of the memory (§ 163); finally, of the understanding also (§ 165), which must begin with the cœnæsthesis, and gradually proceed to moral ideas. Here, where it is requisite forcibly and violently to arouse the patient from dull torpor to attention and spontaneity, great advantage might be derived from Reil's contrivances to involve him in apparent dangers from which he must extricate himself (§ 173). The love of imitation may also be turned to account in these cases, and the patient, by occupation and order, may at length be brought, if not exactly to a normal state, at least to a condition in which he is capable of mechanical employment, which is beneficial to his bodily health,

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and in which he represents an *Analogon humanitatis* not wholly useless to society.[1]

But even in the last stage of degeneration—in cretinism itself (§ 150), preceding experience,[2] but more particularly the present indefatigable exertions of Dr. Guggenbühl (§ 157), have afforded us the consolatory proof that we are not to give up all hope of relief and do nothing, as was long imagined. When the disorder is not hereditary, the first symptoms of its development should be attended to (§ 154); the patients should be immediately removed to a part of the country where the atmospherico-telluric conditions which favour that development no longer have influence—a pure, clear mountain air is best. They should then, when vegetative life begins to recover, be subjected to a medically regulated system of instruction, to which indeed, caution, zeal, and great perseverance, in a word, affection, on the part of the medical preceptor are indispensable. Recourse should be had to electro-magnetism, gymnastics, and, according to circumstances, to pharmaceutical remedies; for instance, cod-liver oil, iodide of iron, mineral waters, &c. As soon as it becomes practicable to have recourse to such a process, the plan already mentioned for the psychical cure of idiocy in general, by exercises of the memory, music, &c., should be introduced, and happy effects will not fail to result: at all events, we shall have the internal satisfaction arising from the consciousness of having fulfilled the duties of humanity to the best of our power.

§ 176. The third therapeutical indication[3] relates to the treatment of convalescence (§ 171), and the prevention, so important in mentally diseased persons, of relapses (§§ 127-158). The treatment of convalescence can rationally be no other than a prophylactic system (§ 171), modified according to the already known psychopathic tendency. The greatest forbearance, in every respect, is here the main principle; the

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be hoped for from instruction and opposition (§§ 165, 171). This form of mental disorder is not ultimately founded on the fixed idea itself, the object of which may be most various in kind (§ 137), but in that state of psycho-physical action which impels the patient to take up and to maintain such ideas. Still less is to be hoped from this method of procedure in those cases where the fixed delusion takes the form of permanent insanity—the termination, the crystallisation, as it were, of wayward folly. But though the idea be not the basis of the disorder, it does not follow that it is not its essential phenomenon, and thus intimately connected with its basis. Though contradiction does not cure it, it is not, on that account, useless, but contributes, when positively and negatively opposed to it, essentially towards the cure. In this, as in many cases of bodily disease, we must be content to act on the essential symptoms which are within our reach, the real focus of the disorder (the sensorium, § 140) being inaccessible to us, and the nature of its alteration unknown, (ibid.). In this sense the maxim *il faut être fou avec les fous* is wholly inadmissible. When, therefore, *modificatis modificandis*, we have endeavoured, in the manner indicated under moria (§ 172), to alter and to regulate the psycho-physical state of the patient in a general way, and have opposed to the state of isolation, which rises to the highest degree in this form of diseases of personality, an abundance of external excitements, nothing remains but to combat the operation of the fixed idea, nay, the idea itself. This is done, first, negatively, i. e. with respect to its operation, by uninterrupted, interesting, varying employment, which strongly claims the attention, and leaves it no time to develop itself; with respect to the idea, by not entering into it, by letting it pass unnoticed, and not appearing to think it worth while to refute it, or, when it can be done, pretending not to have heard or understood the patient. For all ideas, which at first fix our attention, are ultimately extinguished by time;[1] and as repetition (§§ 35, 163) confirms the idea, so does the want of it, for the same reason, gradually dispel it. Great advantage may be derived from a new and deep interest, nay, from artificially excited emotions and impulses (§§ 166, 167), and even

[1] Reil, l. c. p. 325.

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from apparent dangers in which the patient is purposely placed (Reil); but the greatest care must be taken that no new fixed idea be established. In slighter cases it sometimes answers to yield to the delusion, and then, by happily so applying it as to show its refutation, to recover the patient at least from the existing idea, by which procedure, time, and consequently much, is gained, and in the earliest stage, when the delusion is not wholly fixed, even a release from the disorder itself.[1] When this negative process has been tried with more or less success, the fixed delusion is next to be attacked positively. This is done in two ways, *a*, by direct opposition; *b*, by apparently yielding to the fixed idea, yet setting aside its object. The first of these methods will more frequently succeed than the second; and here regard must necessarily be had to the objects of delusion which constitute (§ 138) the varieties of this form.

In the metamorphotic fixed delusion (§ 138, 1) the most applicable procedure, in addition to bodily treatment, is to fall in with the ideas of the patient in the manner above mentioned, and apparently thus to carry out the cure. But special regard must be had to the local bodily malady on which, perhaps, the fixed delusion may be founded (§ 73), and to those hallucinations of the senses which are so often the source and the proper substance of the fixed delusion itself (§ 140).

In fixed delusion in the form of ambition (ibid. 2); indifference and, if possible, an ascendency on the part of the physician, is necessary. Here, too, a serious, religious influence of the feelings, which gives man a consciousness of his littleness, and disposes him to humility, has often a very beneficial effect. Indifference is, in general, the best remedy that can be opposed to the enthusiast of every description.

In religious fixed delusion, accompanied with remorse (§ 138, 3), the religious feeling itself must be employed as a cure, by endeavouring to change its direction and by inspiring confidence in the infinite mercy of God. In religious fixed delusion, combined with ecstasy, occupation of the soberest kind, alternated with cheerful recreation, must aid the direct instruction which may be practicable, and which must always be founded on the idea of religion.

[1] Numerous examples of the kind are known, but they are not always to be depended upon. Many are to be found in Reil, l. c. pp. 329, 340, &c.

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In the erotic fixed delusion (ibid. 4), occupation is likewise an indispensable condition.[1] The advice which even Reil[2] gave to gratify the longing, which is here the foundation of the disease, would, if followed, almost certainly lead to destruction.[3] Let us reflect that here, again (see above), it is not the individual idea, but that which fixes it, which is the point in question, and that the gratification of the desire never cures, but, on the contrary, increases it. A diversion to another object of the same desire, and a change of this diversion would be more likely to do good, if it were not so difficult to effect it. It is to be observed, moreover, that here, in every case, physical remedies, especially the antiphlogistic method, must likewise be resorted to, in order to lower the sexual orgasm.[4]

In melancholy (ibid. 5) the cure by diversion (§ 162, 1), but with caution and strict regard to the state of the individual, is applicable in its greatest extent. If it assume the character of spleen, sense of honour, duty, and religion, are perhaps the only interests which can rouse the deadened vitality of the mind.[5] If it assume the character of thanatophobia, let the cure, by means of occupation, gymnastics, riding, &c., be declared to be a cure for the disorder of which the patient is afraid he shall die. Emotions, sometimes of the sthenic kind, but often asthenic, e. g. fear which furnishes a negative excitement (§ 28, obs. 10), are likewise useful in every kind of melancholy.

Somatically the fixed delusion, especially the metamorphotic and melancholic, is often referable to an abdominal disorder, as a concurrent cause, to which the treatment, as far as the body is concerned, must be directed. Nothing is to be expected

[1] Venus otia amat. Qui finem quæris amoris, cedit amor rebus; res age, tutus eris.—Ovid.

[2] Rhapsod. p. 348.

[3] Dr. Hayner, on the contrary (Nasse, Zeitschrift, vol. ii, 1822), cured a nymphomania rationally, by gradually leading the patient to a romantic sensibility, and through it to a purer feeling.

[4] Goethe's vaudeville 'Lila' affords a pretty representation, founded on a knowledge of human nature, of a psychical cure by means of this variety.

[5] A profound trait is found in Goethe's 'Wilhelm Meister.' The harper, tired of life and mentally diseased, always carries poison about him, and the possibility of putting an end to his existence at any moment, enables him to bear it, but he at the same time fears death.—Vol. xx, pp. 287, 288.

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from specific remedies, such as black hellebore, gratiola, &c. (§ 172). An irritation of the mucous membrane of the bowels, which extends to the abdominal nervous plexus, and thence by the cœnæsthesis spreads to the sensorium, may arise from different causes, and must be treated accordingly by laxatives, derivatives, purgatives, &c. From the powerful and permanent effect of mineral waters, especially those of Carlsbad, and of warm baths in general,[1] they deserve to be especially recommended here. Greater difficulties are presented by diseases of the heart, which often accompany melancholy, and which indicate the antiphlogistic and sedative method of treatment. In the erotic fixed delusion, anomalies of the sexual life, which are generally to be treated antiphlogistically, are seldom wanting, whether they be primary, or, as is more frequently the case, consecutive.

§ 174. Mania (§ 143), though (§ 157) the most curable of the psychopathies, requires, however, a most energetic method of cure if the more favorable prognosis is to be borne out. The difficulty in deciding the mode of treatment lies principally in determining whether, in the individual case, the excess of excitement shall be checked or not, and if checked, in what degree. The answer cannot be general, it must be conditional. On the one hand, it appears natural to let the excitement take its course, so that it may exhaust itself, and, according to the laws of nature (§ 148, 48) pass to its opposite. On the other hand, the frequent repetition will make the impression on the motor system deeper and more durable. This consideration leads to three principal rules of treatment: 1. The patient must be tamed, that he may not injure himself and others. So far therefore the constraint, which is not to be looked upon as a cure, but as a measure of police, must be carried in every case. 2. The patient must be treated in a twofold manner; namely, in and out of the fit (§ 148), in order to prevent that impression already alluded to as caused by repetition. 3. When we employ constraint as a remedy (§ 167), and this may serve as a very general standard rule, a reaction of an inferior degree becomes

[1] Saline aperient waters (bitter wässer) are also frequently applicable (see C. D. Schroff, in the 'Medical Annals of the Austrian States,' n. f. xii, 367), the utility of which, in melancholy, may be accounted for by the abdominal plethora, which, for the most part, exists in the region of the *nervus vagus*.

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weaker, and a reaction of a higher degree, stronger by repression; as a storm extinguishes a small fire, and fans a large one. Further, the more the psychical causality predominates, the sooner will the constraint, and the succeeding reflex action avail, while, on the contrary, the physical operation of nature will take its headlong course.[1] The *mania ephemera* (§ 148) expires, whether repressed or not, in and through its own attack. These regulations must be adhered to, but always individualised to suit particular cases. A mistaken philanthropy has attempted, in recent times, entirely to do away with coercive measures by the system of *non-restraint*. Theory and experience show that, as concerns the patient, they are as little to be dispensed with as instruments in surgery; and, as concerns security, not without great danger. Let humanity be shown in the wisdom of their application.

1. Constraint is effected psychically and physically: psychically, by the means indicated (§ 167); but, as respects solitude, with this caution, that it be applied to lunatics only temporarily, because, if protracted, it deadens the effect, heightens the mania, concentrates the moria into fixed delusion, and more rapidly changes both into idiocy. Physically, there are many measures in ordinary use; among which are the following.

a. Remedies which directly check motion; the strait-jacket, the constraint-chair, the constraint-bed, bonds or shackles of every kind; their application is justified by experience. They act by producing absolute depression of the disturbed mind, and are therefore indicated *only where and so long as they produce that effect* (§ 71). They often act mechanically in preventing half voluntary motions, for instance, in the case of Onanists, who practise their ruinous habit by night, frequently without being conscious of it, when half asleep. In patients who have been subjected to such constraint, the mere threat of repeating it is often sufficient to prevent a coming attack;[2] others even call for it when they feel the approaching excite-

[1] If the limbs of a person who is in convulsions are held fast, they become cataleptic, as an isolated voltaic column supports itself. Ought not this observation to afford grounds for requiring, in the treatment of insane patients, means for unloading topical obstructions?—Reil.

[2] "Vous passerez aux incurables!" said drily by Esquirol, was a threat which had the effect of magic.

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ment, or, when the fit is over, thank the physician, whom they avoid during its continuance, for the measures which he had adopted.[1] The strait-jacket must be applied in slighter attacks; the constraint-chair in more severe cases. Ideler,[2] however, advises that its application should not be continued longer than one or, at the very most, two days, for otherwise œdematous swelling of the legs, erysipelas, proctocele, &c., are easily induced. When the mania is of longer duration, he, therefore, prefers the constraint-bed, recommended by Neumann. The strait-jacket possesses the advantage of causing no pain, no injurious friction, it is the least formidable in appearance, and does not impede the circulation, nor even motion, except that of the arms. The complete prevention of motion externally increases the patient's fury internally.

b. Means, which so shock the nervous system that the motor innervation is extinguished. Among these are, the swing, the revolving-chair,[3] the plunging-bath;[4] they must be used with due circumspection and a cautious regard to contra-indicating conditions, such as a threatening of apoplexy, hemorrhages, &c. In this class again work must be placed—an indispensable means for acting on the nerves, even in this form of insanity. The experience of every psychological physician proves its applicability. "Maniacs rave at their work, but they perform it nevertheless."[5] With respect to cold water, it is to be observed that the too protracted and irrational use of it, in the form of douches, &c., has often caused a transition to incurable idiocy, as has been proved by finding, on post-mortem examination, a softening of the brain. (The Graefenberg system in particular has furnished several candidates for lunatic asylums.) This observation is confirmed by multiplied experience.

c. Remedies which excite pain, by a lesion of the skin

[1] Hecker mentions that even in the case of the *convulsionnaires* of the middle ages severe chastisement alone was of any avail, and that they themselves asked for it.

[2] L. c. vol. ii, p. 848.

[3] Comp. Schneider, Entwurf zu einer Heilm. Lehre gegen Psychische Krankheiten. Tubingen, 1824. The manner in which the revolving-chair acts is described most clearly by Horn, in Nasse's Zeitscrift, vol. i, p. 219. Comp. Beneke, l. c. p. 324.

[4] "Præcipitatio in mare, submersio, in eo continuata, quamdiu ferri potest, princeps remedium est."—Boerhaave, Aph. 1123.

[5] Pinel, jun., Traité du Rég. alién., 1836.

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convalescent must be treated like a child prematurely born, which is every moment in the greatest danger, and for whose gradual vital development we must wait, before we can venture to expect anything from him. Above all, we should avoid recalling to his recollection the malady under which he has suffered.[1] The treatment must in all cases be continued for some time after recovery, and, by a gentle transition from point to point, gradually cease.

To guard against relapses, especial care must be taken, psychically, to interest the will of the patient himself (§ 171), without which we can never look forward with assurance to the future. On the psychical side, as well as on the physical, every excess in diet and regimen must be anxiously avoided. In case of need, the body must be supported by corroborants and particular regard must be had to the typical periods, known from the course of the disorder, or, in general, to spring and autumn (the equinoxes), to hot weather, to particular states of the body, menstruation, pregnancy, &c.

To well-educated convalescents, the keeping of a journal (according to Ideler, the composition of an autobiography) is as psychically advantageous as to hypochondriacs it is prejudicial (§ 162, 3). It results from what has been repeatedly said, that religious edification is especially salutary in convalescence, but that it is not so much so during the existence of the disease itself, because this weakens the susceptibility, and religion is therefore not estimated according to its worth.

§ 177. Before we proceed further, we have to notice some general maxims respecting intercourse with the insane; which, as not belonging, strictly considered, to the treatment, we could not before find a proper place to introduce. They form elements of that peculiar practical wisdom which it is the province of the psychopathic physician to possess—that *savoir faire* which is founded on morality, and of more importance than any other medical praxis, passing down as an inheritance from the master to the disciple, and to be increased by every one from the results of his own experience acquired by patient, careful industry, for the advantage of his successors.

[1] Reil (l. c. p. 447, note) quotes, from Moritz's Psychology, an instance of the bad consequences resulting from the neglect of this maxim. It is, moreover, admirably told.

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1. The physician should say very little to the insane beyond what is indispensable to the requirements of life, or of the cure. He must learn the art of engaging the attention of his patients, and of making himself intelligible to them with few words; he must listen to them calmly with unchanging, friendly, yet grave demeanour; must manifest an interest when they themselves call for it, indifference when they talk nonsense. Too much conversation creates a familiarity between the patient and the physician, which interferes with his influence. He must economise the resources of his personal authority. The oftener he repeats an admonition, the more inefficacious it becomes; the more confidential are the terms on which he is with his patients, the less will he be able to keep them in awe, which is frequently necessary (§§ 167, 174). On the whole, the physician should, as far as possible, behave to insane persons as if he had to do with people in health—as if he always assumed them to be of sound mind. Much is effected in life merely by presupposing it feasible.

2. The physician must, as far as possible, cause those about the patients to act in unison with himself, and himself with them. The patient must not perceive that there is any plan on the part of the physician in operation against him. The *tout ensemble* must act and press upon him like a surrounding atmosphere, from which he cannot in any way escape, and which he must recognise as a world in which he lives.

3. The patient must be acted upon by example and impulse, and the execution of the plan proposed must be left to his own mental activity; for, with respect to the intellect, the maxim holds good, that man can not permanently call anything his property which does not proceed from himself, or which, at least, he has not made his own by assimilation.

4. Advantage must be taken of the right moment; there are times when the patient is more susceptible, more accessible to impressions, nay, to reason, than he is at others. Let these be seized upon; but speedily resigned again, without taking advantage of the victory that has been gained; for the patient must himself continue to spin the thread which has been held out to him (3).

5. The physician must not expose himself, by practising deceptions which the patient soon discovers, nor degrade himself

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in any other way. The previously educated lunatic often penetrates deeper, at least for the moment, into the mind of one who engages in argument with him, than the latter does into his, so that it appears almost as if the understanding of the lunatic were less affected by insanity, than the reason of many sane persons by passions and prejudice.[1] Often too, a feeling of vanity, of supposed superiority to the physician, seems to amuse the patient;[2] it then only nourishes his disorder, and the physician must take care, for this reason also, not to expose himself.

6. The physician must neither contradict the patient, nor allow him to be right when he affirms an absurdity; the former irritates him, and makes him distrustful, without doing him good; the latter confirms him in error, and therefore injures him. Here then rule 1 is to be followed when possible; and an endeavour is to be made, unperceived by him, to connect reasonable ideas with the absurd ones which he expresses. That the lunatic should not, by way of drawing him out, be reminded of his fixed ideas, or encouraged in his follies, ought, one would think, to be self-evident, were not this maxim too often transgressed. Neither, on any account, ought he to be laughed at or turned into ridicule.

7. All measures prescribed by our art must be consistently carried out, from the first to the last, as one whole. No omission is so trifling but that it may paralyse all the rest. A proud lunatic is not cured if any preference, even in the most insignificant things, be allowed him above the other inmates of the establishment. The same is the case with erotic insanity, &c.

To confront together lunatics whose disorder is similar in kind, but different in degree, in order to advance a step towards the cure of at least one of the two[3], when it sometimes happens that the lunatic whose disorder is of an inferior degree, or who has less mental energy, recognises himself in the caricature of his own image, as in a concave mirror, and thus learns to correct himself,—is an attempt, like all those other experiments (§§ 165, 166, 167), which belong to the purely psychical influences.

[1] Herzog's Bericht, above quoted, p. 45.

[2] Weiglein, Diatet. Fragmente. Gratz, 1842.

[3] See Sinogowitz, l. c. p. 22.

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Such experiments will very seldom succeed, they must always be made with a particularly cautious and discriminating choice of cases, and that only by a clever, circumspect physician, and even by him but rarely, and with full command of his opportunity. All these stratagems of treatment are among those measures which we have already mentioned, as improvisations of the moment, invented by the genius of the physician, and taken advantage of by his tact, but which cannot be transmitted to the student, or at most, as is here done, can only be indicated to him.

§ 178. If we attentively review all the points hitherto laid down for rendering practicable and carrying out a system of therapeutics for mental diseases (§§ 155, 159, 177), it is scarcely necessary to adduce any further proof that it is quite chimerical to hope for a complete adherence to a rational treatment of lunatics; but that even what is possible in this important matter can by no means be attained in private practice, but only in public institutions.

In one respect, private treatment would have an important advantage over public. If in any disorder it be important for the physician to have a thorough knowledge of the patient, of his personal character, of his connexions, of his position, accurately to know his history, carefully to observe him at all hours, and under all circumstances, to adapt the system of cure completely to his individual case, to devote his attention almost exclusively to him, in a word, to be the friend of the patient, and to live a part of his life with him, it is in a disorder of the relation between body and mind. This kind of ideal treatment could be carried out consistently only in private practice, on one patient at a time. But this *ideal*, like almost every other in life, must be renounced, because the other conditions, under which alone cure is possible, can only be united in institutions, and indeed only in such as are public; that is, under the inspection of the state; for in private institutions, lunatics are too much withdrawn from the eye of the authorities, independently of the greater difficulties of management and the expense.[1]

[1] The private lunatic establishments in England were formerly asylums of the most frightful intrigues. The managers, at the periods of visitation, put the healthy out of the way, or administered to them some narcotic, in order to deceive the

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The chief grounds, partly negative, partly positive, for treatment in establishments are the following:

1. The isolation of the patient with a change of his situation (§§ 172-175) is the first condition, and the first step to every cure of mental diseases. It is not to be effected in the dwelling of the patient.[1]

2. Discipline and control are the most effectual aids to psychical treatment (§§ 166, 167). These are impracticable in the residence of the patient.

3. The lunatic asylum, as such, if it in any degree approximate to ideal perfection, is in itself a remedy, and many a patient has recovered without the application of any further means, merely by residing in it;[2] nay, there are instances in which the very entrance into the establishment, without any other treatment whatever, has sufficed to rouse the patient out of his dream, just as the transitory state of intoxication (§ 78) is often shaken off by a sudden change of situation. It combines in itself the powers of restraint, domestic order, example, education, recreation, variety, &c.

The disadvantages which public establishments bring with them, and which chiefly consist in the roughness of the attendants, and the difficulty of managing them, in the mediate administration through non-medical men, and in the wound inflicted on the patient's sense of honour, may be avoided or neutralised. Perhaps the most difficult problem which they present is how to maintain that incessant observation of the patient which is necessary to

visitors.—Pargeter on Lunacy, p. 87. The main advantage which can certainly be alleged in favour of private establishments—viz., that attempts at reform may be more easily executed in them, and, if there proved to be judicious, may be transferred to public institutions—might also be attained by the concurrence of several public asylums. At all events, private establishments ought to be subjected to a special public care and inspection.

[1] Experience also shows that isolating criminals is the way to diminish the great frequency of insanity in prisons. The admission of a particular species, *folie pénitentiaire*, is, however, one of those useless fancies which only disfigure the temple of the sciences, instead of adorning it. Further (§ 162), it is scarcely necessary to observe that solitude and isolation are not the same thing, and that both are to be applied, suspended or united at the right time and in the right place.

[2] "The lunatic establishment is to mental nearly what the powers of nature are to bodily diseases: it cures *without* the co-operation, nay, even in spite of the improper interference of the physician."—Ideler, vol. ii, p. 745.

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a knowledge of his state and consequent treatment. It is a problem, however, which, through the co-operation of others, admits of being rendered more easy of solution to the physician, and which he must, after all, exert himself to execute to the best of his ability. Encouraging experience, nay, even the testimony of those who have been patients, sufficiently proves the beneficial effect of these institutions, even in their comparatively imperfect condition. Professor Exner[1] saw a convalescent who, after being once cured, and feeling a return of the disorder, put the horses to his own carriage, and drove to the institution, which was several leagues distant.

§ 179. The lunatic institution (*morocomium, morotrophium*), as it ought to be, plays much the same part in the writings of the psychopathic physician as Utopia, the Platonic republic, the Fortunate Islands, &c. do in those of the prose poets. Many of the ideal perfections which they set forth will always remain ideal (§ 178); in many particulars they are still not agreed in their views.[2] Having offered these preliminary observations we will now endeavour to combine in our sketch what is most generally recognised as useful.

The situation of the institution should be isolated; that is, so far from any large town, that neither the noise and bustle of the town can disturb the lunatics, nor that of the lunatics the inhabitants of the town. A patient, who was asked by a visitor whether the loneliness of the residence was not irksome to him, replied, "I am more comfortable here, in the little madhouse, than there," pointing to the town, "in the great one." Let the institution then be situated about half a league from the town, at a distance from high roads and public

[1] L. c. p. 21.

[2] Compare, for instance, Reil, Rhapsod, p. 453; Ideler, vol. ii, p. 737; Roller, 'The Lunatic Asylums' (Karlsruh, 1831); 'Uber Irrenanstalten,' von Dr. F. Scunig (Wien, 1844). The most ideal of existing institutions is probably "the village of the insane" (Dorf der Verrückten). This name is given to a kind of colony at Gheel, a Belgian village, in a very fruitful valley, whither, though rather with a view to provide for them than to cure them, lunatics are sent from the neighbouring country, and even from Brussels. Air, rural labour, order, and a worthy clergyman who devotes himself to their care, are said to have effected many cures.—Vicomte de Villeneuve-Bargemont, Economie politique chrétienne. See also Kalkenbäck's Blätter fur Literatur, p. 208. 1837.

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walks, in a locality as cheerful as possible, rather elevated, affording light and air, and sufficiently supplied with water.[1] With respect to the size, opinions are divided; Heinroth in particular is an advocate for small institutions, and the most essential circumstance in their favour is doubtless the difficulty of superintending and treating patients in large ones. Roller gives the preference to large institutions, and the most essential reasons in their favour lie certainly in the capability which they offer of properly classifying and separating the patients, which can only be accomplished in great establishments, and in the saving of expense, since several small institutions are, in proportion, more burdensome to the state than a few, or one large one. The most advisable course therefore will probably be to concentrate, as it were, several smaller institutions in one large one, which, however, must still not exceed a certain extent.[2] This is effected by placing over every single division, which can be easily superintended, an able physician, and to make all these subordinate to one superintending physician.

Let the style of the building be cheerful, and conceal the necessary provisions for security under the character of rural arrangements. Harmony, the soul of architecture, should, even from the dead walls, attract and compose the mind of the patient. The whole should be separated, as respects the individual divisions, which should nevertheless be connected with each other, and with the centre, where the director resides.[3] This twofold object appears to me best accomplished by building in the form of an H. Two stories are sufficient, to avoid, on the one hand, the disadvantage of too much mounting of stairs, and, on the other, that of giving too great an extent to the establishment.

A garden is indispensable; partly for the reason above mentioned, and partly for the purposes of exercise and employment in the open air. Separate gardens for the several divisions might be made to unite in one large flower and kitchen garden,

[1] To require lakes, rivers, mountains, waterfalls, &c., as Reil does (l. c.), would make establishments of this nature somewhat rare. An agreeable situation, however, as well as a garden, are not unimportant in the eyes of those who are aware of the balm which Nature prepares for all the wounds of humanity.

[2] Roller assumes, as a maximum, 200 patients for cure, and 300 to be taken care of as incurable.

[3] Seunig, l. c. p. 21.

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inclosing the establishment. This garden, together with the whole institution, should be surrounded by a tolerably deep dry moat, bordered by a quickset hedge.

Such are the fundamental notions which the physician should not fail to possess, but the practical execution of which he must leave to others, unless medical psychology, as appears to be the object in many writings, is to become a branch of architecture instead of medicine.

§ 180. With regard to the internal organisation of institutions, the curable (at least presumptively so), who are to be treated, and the incurable, who are to be provided for, are the first objects of consideration. Three different plans of arrangement may, by possibility, be adopted in these institutions,—1st, absolute separation; 2dly, absolute union; 3dly, relative union; where the department for cure and that for care, are indeed, separate, but placed together under one direction. Damerow's admirable work has placed it beyond doubt, that, in a moral, scientific, and administrative view, the last-mentioned arrangement is most appropriate.[1] The first division of the institution, as it ought to be, is therefore into the cure and care establishment; the former, partly on account of the small number of curable patients (§ 155), partly on account of the difficulty of superintendence and treatment (§ 178), will constitute by far the smaller portion. The principle upon which it should be conducted is, that every other object be set aside for the attainment of that of cure.

The difference of the sexes furnishes the second ground of classification. Each of the above-mentioned two divisions is therefore again subdivided into two smaller ones, one for men, the other for women. The physician will of course understand that this limitation is to be removed in certain cases, such as dining at the same table, exercise in the garden, &c.

The forms and degrees of the disease furnish a third ground for division; the quiet and cleanly must be separated from those who are furious and filthy; convalescents, from those who are seriously ill. Roller would assign their several divisions to the several classes in life to which the patients belong; but this, for

[1] Ueber die Relative Verbindung der Irrenheil-und Pflegeanstalten. Leipzig, 1840.

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the most part, is regulated by their financial circumstances, it being of course understood that humanity requires that no difference be made in a medical point of view.

Such is the necessary division of the institution, in which idiots (according to § 175) are not to be entirely consigned to the care establishment; a persevering effort to restore them to society is to be first made, by classifying them according to the above-mentioned model of Guggenbühl's establishment (§§ 157, 175).

§ 181. The arrangement of the institution must offer everything that is requisite to the psycho-physical plan of treatment (§§ 159, 175), and remove everything which can cause injury: windows, which for maniacs alone, must be secured with iron gratings painted of a light colour, should otherwise be furnished only with tightly closing shutters; doors, which are likewise to be double, for maniacs should otherwise be merely provided with a small opening for the purpose of observation, and with locks which open with a master key; the walls should be panelled with hard wood;[1] the floors, for maniacs only, should be somewhat inclined for the sake of cleanliness; but, above all, without which no other arrangements will avail, there should be a good, uninterrupted superintendence.

The individual apartments of the insane must be adapted to their condition and circumstances in life. For places of assembly (which, however, is by no means to be understood as a general and convenient, but rather a therapeutic measure, or reward *suo loco et tempore*), they have the church, a common dining-hall, a common work-room, a play-room, the cold bath, and the garden. Of the modes of heating the apartment, that of Meissner[2] seems to me to be the best; of the modes of lighting, that with gas appears the most appropriate; added to which, it is in every respect desirable that there should be a steam-engine.

The clothing must be cleanly and suitable to the season, and to the rank of the patient, but by no means uniform. The diet must be regulated, not by a too rigid economy, but by the therapeutical indications. A farm and garden, connected with the

[1] Tschallener, Beschreibung der Irrenanstalt. zu Hall. Innsbruck, 1842.

[2] Sinogowitz, l. c. p. 31.

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institution, and to be cultivated partly by the patients themselves, would facilitate these measures.

The cleanliness, and, if possible, the elegance of the establishment, concerns indeed the institution itself more than the patients, though it has also a wholesome therapeutical effect; but order, even mechanical order, where all the wheels, like those of a clock, work together, is the palladium of a lunatic asylum.

§ 182. The conduct and government of the institution are most important practical points. With respect to administration, the same observation applies as was made (§ 179, conclu.) with respect to architecture; the leading principles must be left to the physician, the details to the authorities, that is, if psychiatrics are to be a branch of medicine, and not of state ordinance.

No person should be received into the institution till a judicio-medical examination has been made; and, whenever it is possible, an anamnestic history of the patient and of the disease should be presented at the same time. For this purpose, the institution should draw up a scheme containing such questions as are important for obtaining a knowledge of the case. The place for the answers must be filled up, if possible, by the physician who has previously been in attendance; or, when this is not practicable, by an unprofessional friend of the patient.[1]

[1] Such a scheme, which, in essential points, may serve as a model, is officially given in the March Number of the Medical Annals of the Austrian State for 1844; it is as follows:

1. The name, age, station, employment, native place, and last residence of the patient.

2. What disorders of childhood, connected with development, the individual has gone through from birth to the commencement of the present mental disease. Here, too, the injuries he may have sustained, especially those of the head, are to be noted.

3. Has he before suffered from insanity? How often and how long has he already been in a lunatic asylum? In what state was he discharged from it?

4. With respect to the predisposing and occasional causes, the following are especially to be attended to:—*a.* Physical; such as hereditary disposition (wherein it is to be inquired, what relations by consanguinity to the patient, have suffered, or do now suffer from insanity), corporeal development, sexual life, catamenia, pregnancy, childbed, &c. *b.* Psychical; such as education, development of the intellectual and moral faculties, religious tendency, conduct, connexions, predominant inclinations

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Permission to visit the institution is not to be granted but with the consent of the physician, and this very cautiously, and only with the strictest regard to the psychical state of the patient. Though, in some few cases, it may become a psychical remedy, in the majority it has a prejudicial influence.

Secrecy and discretion with respect to the patients who are admitted are highly desirable, but Reil's proposals[1] to give the institution a disguised name, such as, "A Boarding Establishment for Nervous Persons," and sometimes to admit other patients who require the psychical mode of cure, are ineffectual without, and dangerous within.

The most important persons in the institution are, the superintending physician, the sub-physicians, the director, the clergyman, and the keepers. The superintending physician is the principal person in the cure department, and the director in the care department. Both are properly made subject to the superintendence of a committee, that they may find, in a higher authority, means to reconcile frequently conflicting medical and financial interests. The sub-physicians should work in one and the same spirit with the superintending physician, in order that a result may be obtained beneficial to the present sufferers, and to science —that is, to *future* sufferers.[2] Here, above all, where man is called to act upon man, an aristocracy of charity and judgment

and favorite occupations; passions, domestic circumstances, remarkable events in life, and the influence which they may have had on the mind and temperament of the patient.

5. When and how did the first traces of this mental disorder manifest themselves?

6. What course has it taken from its commencement to the day of examination? What abnormal phenomena have appeared on the physical or psychical side? How were relapses or exacerbations, if any such took place, occasioned?

7. Has the patient previously been put under medical treatment? In what did this treatment consist, and what was its effect?

8. What form does the disease present at the present examination?

9. The diagnosis and denomination of the same.

10. Is the individual more fitted for the division of the curable or of the incurable patients?

N.B. The last questions can be answered only by the physician of the institution on the patient's admission.

[1] L. c. p. 457.

[2] A detailed protocol or journal must be kept of every patient in the cure department.

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should rule. The clergyman must be a worthy member of this union of humanity; his holy mission especially qualifies him, under the orders of the superintending physician, to act in this spirit with salutary power (§ 166), and also, besides the public performance of divine worship, to do good, partly by confession, which may be used with admirable effect for the purposes of curing mental disease, and partly by example and precept. The importance of the keepers, who, like all that surrounds the patients, must concur in the plan of cure (§ 177, 2), is manifest. Their reward must be proportioned to the physical and psychical qualifications which are required in them, and the great sacrifices which they make.

For the male patients, male attendants, for the female patients, female attendants, are requisite. The former on account of the personal strength necessary for imposing restraint, and for the sake of decorum; the latter for the sake of morality and of the mental influence, for exerting which, women are, according to repeated experience and remarkable examples, peculiarly qualified.[1]

The question whether, and in what manner, clinical instruction on mental diseases[2] may be combined with the other objects of the institution, will be, in time, cleared up by experience. That there is no possibility of obtaining a thorough psychiatric education anywhere but in an institution is certain. He, however, who has fully understood all that has hitherto been said, and carried it further by thinking for himself on the subject, will hardly overlook the difficulty of visiting such patients, as respects them, and the difficulty of acquiring knowledge merely from such visits, as respects the student. I am almost inclined to believe that, for the general physician, a theoretical study would suffice; for, without the opportunity

[1] In recent times the Societies of Brethren and Sisters of Charity have been particularly recommended for this purpose. It is certain that, with their pure motives for the exercise of religious duty, they may render the greatest service, provided they submit, unconditionally, to the medical superintendence of the institution.

[2] The reasons which are, on the whole, in favour of the introduction into lunatic institutions of clinical instruction (modified, indeed, in the manner there indicated), are found laid down in the work 'Die Irrenheil-und Pflegeanstalten, Deutschlands, Frankreichs,' &c.; von Dr. M. Viszánik, p. 274. Wien, 1845.

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for personal reflection and application, he would utterly fail in the attempt to treat these diseases. For the physician who specially devotes himself to this branch, a longer residence in the institution itself, after the above theoretical preparation, not as a visitor, but as a practitioner (ακόλουθος), as is usual with us in practical midwifery, is indispensable.

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APPENDIX.—JUDICIAL PSYCHOLOGY.

§ 183. The ultimate object of the application of human research and science, so long as we are inhabitants of this earth, is the realisation of the moral idea on which society is founded—the improvement of mankind. For the promotion of this ultimate object, society constitutes itself a ruling power or state, in which the moral law, as ideally conceived, assumes, provisionally, pending its realisation, the form of right as real law. All human efforts converge towards this centre, and thus, as to their ultimate object or general application, the investigations which we have hitherto made into psycho-physical conditions, in a medical view, unite in some vital questions on the relation of these investigations to the notion of right.

A concise discussion of these questions (so far as it is the result of medical psychology, and does not specially belong to the province of forensic medicine) shall conclude these Lectures.

They relate to—

1. The competency of medical psychology to bear a judicial application, whether in criminal or civil proceedings.

2. The notion of responsibility.

3. The detection of simulated or dissimulated psychical conditions.[1]

§ 184. The first of these questions is as follows: Is the physician competent to decide with respect to psychological responsibility? This must be answered decidedly in the affirmative. The question of psychological responsibility turns, as

[1] There are many more strictly-defined questions which, besides those above mentioned (2 and 3), the judge may propose to the physician. See on this subject, among others in our Austrian code, a paper by Fr. v. Ney, in the Med. Jahrb. (January and February, 1845). The physician will, however, easily refer them to the given principles; but he must take care not to answer *more* than the question requires.

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we shall see (§ 185), on that of psychological freedom (or free agency); and this, as we have seen (§ 56), comes before the tribunal of medical psychology. Practice has long since decided this question in the affirmative; and, in fact, made any further discussion of it a dispute *de lanâ caprinâ*. Nobody denies that the decision on a judicio-psychological case *may* rest with the physician. Whether the concrete case belong to his department or not (whether disease have to do with it or not), who can determine with certainty *prior to* a medical investigation? At all events, therefore, the physician must be consulted, and it must be left to him to define the limits of his own science. This has always been held by every wise system of legislation. The principle is even recognised in our profession itself. One physician sends to another, for instance, to the physician at a watering-place, to the operator, or to the psychiatric physician, in order to ascertain whether he consider such and such a patient a proper subject for his department of the art or not. All the objections that have hitherto been made against this competency turn either on the sufficiency of *pure* psychology, or the insufficiency of medical knowledge.[1] The former is, in point of fact, proved insufficient by the physical conditions of psychical operations (§§ 1-23, 50-53, 62-68), and by the false conclusions (arising out of those conditions) which *pure* psychology draws. The latter, granting even that the present state of medicine affords no sufficiently firm basis, does not touch the *punctum quæstionis*, because one may be found in future.[2] Injustice has, in my opinion, been done to Kant, when his aphorism, "The physician in judicio-psychological questions must call the philosopher[3] to his aid," has been taken in a strict and polemical sense. In the maxims of Kant, especially when they are paradoxes, the irony cannot be mistaken, and this aphorism is probably nothing more in reality than the expression of a wish

[1] The notion of Metzger, who would have psychology entirely banished here, because merely the corporeal basis of the mental condition is concerned, is opposed to both objections. Its refutation lies in a correct conception of medical psychology.

[2] Whoever desires to see a statement and satisfactory critical examination of this and of the objections of Regnault and Costes, will find them in Friedreich's System der Gerichtlichen Psychologie, chap. iv, 1842.

[3] Anthropol. § 41, &c.

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that the physician may at the same time be a philosopher—a wish in which we cordially agree.

§ 185. The second question demands—what constitutes the principle of responsibility? (which is not the same thing as that of the natural capability of showing disposition, for this is determined by physiological conditions, and depends on age, sex, temperament, &c.) We answer: the notion of medico-psychological freedom (§ 56, 3). He who is psychologically free, in a medical sense, is liable to responsibility, and *vice versâ*. This definition is decisive and universally valid when the decision of the physician is required, for it is only that psychological freedom which is identical with health, that (§ 56) belongs to his province. It is on that alone that he has to give his opinion; there is here only one will which is not free, namely, that which is fettered by disease, no quarter-free or half-free will. Passion, bewilderment, want of education, enthusiasm, &c. may, indeed, impede self-government; but the will, in these cases, is only morally, not physically fettered; that is, it is free in a psychologico-medical sense. Neither passion, nor emotion, nor habit can exclude imputability; in the first case control is possible, in the second, the mind is affected; it is passive (in abeyance), and does not act (here responsibility does not necessarily attach); in the third case, the commencement of the habit was the imputable cause of its results; thus the condition caused by repeated intoxication, which Clarus[1] calls *inhumanitas ebriosa*, is the consequence of a vice, and therefore imputable. This standard must be maintained, if we would avoid falling into the extreme of ultra-philanthropic tolerance, which now and then flatters the tendencies of our age. This extreme[2] would, in science, neutralise the endeavour to lay down definite boundaries, and, in life, would aid vice and crime in their escape to a convenient city of refuge. Who can venture to say of himself, "I am free;" none but the best, and even they should add, "perhaps." Who is there, whether man or woman, young or old, who is not subject to passions, to extraneous impressions? The law cannot here avoid a certain degree of harshness, from which

[1] Beitr. z. Erk. Zweifelh. Seelenzustände, p. 122.

[2] I call it "extreme," in contradiction to Heinroth's view, which would lead to the other extreme of imputing responsibility even to disease.

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fate itself does not exempt us. It punishes even our unintentional errors, our natural incapacity. We must e'en bear the consequences thence arising, of being what we are.

The physician will, therefore, decide that there exists an incapability of being a responsible agent only when the diagnostic investigation discovers a genuine mental disease (§ 121), nay, even in a state of mental disease there still remains (as recognisable, not by the judge, but by the physician) a remnant of moral imputability, which increases with convalescence, and which manifests itself by the fact that the insane impute to others their actions, complain of injustice, and are able to dissemble and to exercise self-command.[1] "I am convinced," says Langermann, "that even, in the highest degree of insanity, there still remains a trace of moral discrimination, with which we may connect the train of the patient's ideas." This "*distinguere bonum et malum*," therefore, implies an imputation of responsibility in the insane; such, for instance, as is implied in children when they are chastised for the purposes of education and improvement. If their actions could not be imputed to the insane, there could be no psychopathic physicians.

§ 186. But how does it agree with the strictness and inexorable nature of the standard given above (§ 185), that we have already ourselves (conclusion of § 56) established a state of half freedom?

As in nature in general, notwithstanding all the rigour of scientific definitions, everything is *transitional*, so there are, as we have seen (§§ 79-120) states which form a link of union between comparative psycho-physical health and disease, and which we have, therefore, denominated states of transition. These states by no means alter the principle of imputability, but they cause many modifications in its application. The law prescribes, with express reference to such states, notwithstanding the existing liability to responsibility, a ground for mitigating the punishment,[2] or, in other cases, the necessity for watching over the individual. It is in *this* view that these

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states were called *half free;* and all other questions that can be asked respecting liability arising from disposition (§ 185) are comprehended in it. The drunkard, for instance (§ 59), is so far liable to responsibility, that he might avoid intoxication. The temporary suspension of psychological freedom during intoxication affords ground, however, for a mitigation of the punishment for those crimes which he has committed during the fit. A man afflicted with such a high degree of hypochondriasis (§ 100), that hallucinations (§ 108) exist, and that transition to melancholy (§ 138, 5) is to be apprehended; or another with such a degree of anæsthesis (as, for instance, in deaf and dumb persons) or amnesis (§ 115, 2), that a transition to idiocy (§ 149) is near at hand, *are* imputable, but it is necessary to watch over them.

A physician who has well comprehended the principles and observations of medical psychology, and has, in however small a degree, accustomed himself to efficient self-reflection, will in general be able, on mature consideration, to understand similar cases; though he will meet with many where a special application of the general principles presents no small difficulty, in the present state of psycho-physiology. Thus, it is very difficult to judge[1] of the transitions between passion and insanity, sleep and waking, the actions of somnambulists,[2] of which criminal trials furnish remarkable records, and the state of epileptic patients in certain cases. Science can no more embrace all the individual cases, than can the legal code. There are, besides, laws which require to be further expounded and explained. The arrangement of the concrete case, under the abstract law, will ever remain a main problem to be solved by individual judgment.

§ 187. In individual psychopathies, the existence of which unconditionally does away with responsibility, doubts have been raised only with respect to the lucid intervals between the fits

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(*lucida intervalla*, § 127), of fixed ideas (§ 137), and what is called *manie sans délire* (insane conduct, § 144).

a. When real intermissions occur in a psychosis, i. e., when all the symptoms which characterise the condition have ceased, we are not authorised, as Professor Langer, by an appeal to nature,[1] proves, to assume, in a judicial point of view, a state of disease. The responsibility therefore returns, but only with the intermission. Yet how difficult it often is to distinguish between remissions and real intermissions, appears evident from the nature of mental diseases, and from the art of dissimulation peculiar to insane patients (§ 158). The difficulty increases in proportion as the intervals are shorter, and the principle of a half-free condition (namely, one requiring superintendence, § 186) must be called into requisition.

b. The circumstances are the same with respect to fixed ideas; for though the disease does not consist in the prevalence of one idea, but in the altered capability (§ 140) of forming an idea at all, so that after one fixed idea has been expelled, another generally succeeds it (§ 173); yet, during the predominance of one fixed idea, the understanding is to be pronounced in every other respect, except as relates to this one idea, healthy, the will free, and the act imputable. Nay, it seems as if the understanding, banished from one region, would indemnify its possessor for the loss; for such patients often show extraordinary intelligence in matters which are beyond the sphere of their disease (§ 137). The lunatic therefore is but the less subject to imputability the more nearly connected is the act in question with his fixed delusion.

c. Again, the circumstances are the same with respect to the *manie sans délire*, where, at the moment of "the insane conduct," there can be no question of freedom, but where it may be very difficult to determine on the existence or non-existence of the fit in the concrete case (§ 147).

§ 188. As we have ascribed exemption from imputability only to psycho-physical disease, properly so called (§ 185), wherein it is self-evident that the already stated notion is here to be maintained of an alienated personality (§ 121), which in most elementary treatises appears as the "higher grade" of mental

[1] Die irrsinnigen Zustände etc., Mediz. Jahrb. d. ö. St. 1843. März, p. 297.

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diseases, the mode of examination of psychopathic patients comes thus first of all to be considered. We have shown, in treating of the diagnosis of psychopathic forms (§§ 131, 137, 143, 149), *what* is to be inquired into, and that the physician must, in the anamnesis,[1] go back to the earliest conditions of the given personality; but the question, *how* the inquiry is to be made, brings us to the subject of the examination of lunatics, in which there are many points for consideration, which differ from an ordinary medical examination.

The physician must do his utmost to acquire the confidence of his patients, and to put them into a cheerful mood, in which the heart is most ready to open itself.[2] In this case even deception is allowed, in order to elicit from the patient, by an unexpected turn, the confession of his carefully concealed fixed delusion. Patients must be examined at various times, and unexpectedly, and the physician must form his judgment rather by collating his recollection of the past history with the objective signs of the present, than by depending wholly on the manifestations of these latter. "Great powers of reason are requisite," said the venerable S. G. Vogel,[3] "to understand men destitute of reason."

I must here mention what is called "recording the gesticulations;" that is, the process of noting in the recorded accounts, the gesticulations of those who are examined. All that can be said for or against this practice, appears from what has been stated on physiognomy (§ 54), for it is only an application of that science. The examiner, if he understand how to read its language, may decipher for himself as much as he can, but its letters can scarcely be rendered intelligible to others in the written record, and mere assurances can avail nothing.

Lastly, by all the above-mentioned data, the basis of a rational digest of medical reports on lunatics is also furnished. They will

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[3] Kranken. Examen., p. 52, sec. 32, 1797.

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contain and should, in essential particulars, furnish answers to the following points: 1. The circumstances of personality—the history and characteristics of the individual in all those respects mentioned at § 49, &c. 2. The circumstances of the disease—its arrangement according to the four principal forms, and their varieties—a narrative of its course—description of its present state—causal relations—complications. 3. The circumstances affecting the curability—the history of previous treatment, together with the prognostic indications pointed out in § 156, &c. 4. The result of all these circumstances with reference to the question submitted to the physician as the proper object of his report. This is not the place to discuss, or to illustrate by examples, the manner in which it is to be drawn up. Here, as everywhere, the physician's own reflections, natural capacity, acquired general knowledge, and practical experience, will best avail him. (A very good system of regulations, for the communication of which, I am indebted to the kindness of Dr. Ayrer, of Haarburg, was sent by the Hanoverian government on the 25th August, 1827, to all physicians attached to public institutions in town and country.)

§ 189. These investigations lead us to the last-mentioned psycho-judicial question, the discovery of dissembled or concealed, and the detection of simulated psychopathies[1] (§ 183).

The discovery of dissembled psychopathic states calls for as careful a regard as possible to all the circumstances connected with the anamnesis, such as the descent, education, mode of life and of thinking, etc. of the patient (§§ 50-54), together with a thorough examination of him (§ 188), wherein all conceivable psycho-physical circumstances, the representation and import of which constitute the substance of medical psychology, must be fully investigated.[2]

The detection of simulated (feigned) psychopathies, is like-

[1] Compare, on this subject, Siebenhaar's Encyklop. Handb. der Gerichtl. Arzneikunde. Leipzig, 1838, &c.

[2] "Though we lunatics have understanding enough, yet we sometimes go wrong," are the words which Boz (Pickwick) puts into the mouth of a lunatic, clearly teaching us thereby that this examination is difficult, and that it should be particularly directed to that "going wrong." Less will be effected by reasoning, which furnishes only cold abstractions, than by those animating means which, like the firm, steadfast gaze, the cordial expression, &c., are emanations from the whole individual character, and coming as such *from* the heart, go *to* the heart.

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wise attended with great difficulties. The two objective somatically characteristic symptoms which Friedreich mentions[1] as criteria of the psychoses, namely, the specific smell, and the peculiar physiognomy, are by no means always present. The physiognomy may moreover be counterfeited so as to deceive. Even the sleeplessness, generally (but not always) connected with psychopathies, may be assumed (though hardly beyond a certain point). The reluctance to look you in the face is not to be depended upon, because it also occurs in lunatics.[2] In all cases, a knowledge of the object of the supposed simulation is of much importance, because it points out a motive through which (after many a contrivance to be invented according to the individual case) the mind of the supposed simulator may be acted upon. Moria and idiocy are more frequently, mania more rarely, simulated. In pretended monomania (§ 144) the existence or non-existence of hereditary disposition, of physical symptoms (ibid.) and of other (ethical) motives, for the imputed crime, in connexion with a comparison of the deed, with the character of the individual, which must be inquired into in all attainable particulars (§ 56), may serve as guides to the decision of the physician; wherein it is true, as in every decision, no small scope must be left to the judgment for a free exercise of its powers. Hypocrites in general adopt conduct diametrically opposed to their natural character; the cunning pretend to be stupid; the cheerful, melancholy; the gentle, furious;[3] &c. Let the physician therefore set out from this point; let him accurately examine the harmony or want of harmony in the psychical and physical qualities of the individual; let him inquire long, surprise, deceive, tire the feigner; let him employ disagreeable psychical and physical means, as alleged remedies; with women, those which may disfigure them, and, in the most obscure cases, let him await with an indifference, which is, beyond measure, painful to the simulator, the effects of time, the solver and elucidator of all things. It must not be forgotten, however, that men have really become mad after having been long confined on suspicion of pretending to be

[1] System der Gerichtl. Psychol. p. 162.
[2] Pr. Pet. Wagner's Ger. Arzneik. vol. ii, p. 158.
[3] Sinogowitz, Geistesstörungen, p. 468.

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so,[1] just as hysterical women often really fall into a state which they have long affected.

§ 190. If we now look back once more upon the course through which we have run (for so I must express myself with regard to this compendious exposition), the views with which we commenced these Lectures will probably be justified in the minds of those who have accompanied us with their own reflections; namely, that medical psychology is not intended to be either a physiology and pathology of the nerves, or a pure psychology, but an exposition of all the relations under which mental operations may be presented to medical observation and medical treatment. In their metamorphoses, under the several divisions of development, disease, and convalescence, these operations lead to the idea of an intellectu-corporeal unity; an idea which, accompanying the whole subject, and being essential to its further prosecution, is here presented as a hint only, to those who are capable of carrying it out. That it should be more than a hint cannot reasonably be expected. The manifestations of the spirit, through the mind, are infinite as itself. In this instance of all others, our own reflections and ideas must perform the chief part. Without a free, independent pursuit of the subject, it can make no active progress. I have only erected the framework; study and experience must, in process of time, complete the structure. I have only been able to point out the road, you must yourselves perform the journey. Happy will it be for me if I have not directed you by a false route. I trust it may at all events be acknowledged that I have endeavoured to prove a faithful guide.

[1] Professor Wagner, l. c. p. 158. Lanti was one of the French prisoners in England, who was shipped off to France after his mental disease had been ascertained. He had determined upon acting the part of a cock, and carried it through to admiration. *He did not even forget himself through joy at his final deliverance;* he bore patiently ill-treatment from maniacs with whom he was confined (*but their mania, too, was feigned*), and the love of liberty and of his country stood every test. (See Weiglein's Diätet. Fragm. Grätz.) A miller, about 40 years of age, on hearing his sentence read for the murder of his wife, became raving mad, remained true to his part in the madhouse for four years, and was at length unmasked by decided evasion of the question respecting his crime and other circumstances.—Professor D. Schroff, in Kleinode Repertory, May 1837, p. 127.

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The following are recommended as standard Works on the principal departments of Medical Psychology.

ON ITS HISTORY.

Friedreich. Versuch einer Literar. Geschichte der Pathologie und Therapie der psychischen Krankheiten; Wurzburg, 1830 (Essay on a Literary History of the Pathology and Therapeutics of Mental Diseases). *By the same:* Systematische Literatur der ärztlichen und gerichtlichen Psychologie; Berlin, 1833 (Sytematic Literature of Medical and Judicial Psychology). *By the same:* Historisch-Kritische Darstellung der Theorieen über das Wesen und der Sitz der psychischen Krankheiten; Leipzig, 1836 (Historico-critical Statement of the Theories on the Nature and Seat of Mental Diseases).

Friedreich, as has been frequently mentioned, concurs in a scientifically-arranged somatic view. His writings afford a complete survey, in accordance, however, with his own opinions, of what has hitherto been done in our department. It follows that where they are critical, they must be read with discrimination.

ON THE PHYSIOLOGY OF MENTAL ACTION (PSYCHICAL LIFE) IN GENERAL.

Ph. C. Hartmann. Der Geist des Menschen in seinen Verhältnissen zum phys. Leben oder Grundz. zu einer Physiologie des Denkens; Wien, 1832 (The Mind of Man, in its Relations to Physical Life, or Fundamental Principles for a Physiology of Thought).

The physiology of the nervous system has indeed undergone, since the time of Hartmann, many improvements which have changed its form, nor must we overlook the fact that Hartmann's researches were not directed so much to a complete theory, as to a proof of the indepen-

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we shall see (§ 185), on that of psychological freedom (or free agency); and this, as we have seen (§ 56), comes before the tribunal of medical psychology. Practice has long since decided this question in the affirmative; and, in fact, made any further discussion of it a dispute *de land caprinâ*. Nobody denies that the decision on a judicio-psychological case *may* rest with the physician. Whether the concrete case belong to his department or not (whether disease have to do with it or not), who can determine with certainty *prior to* a medical investigation? At all events, therefore, the physician must be consulted, and it must be left to him to define the limits of his own science. This has always been held by every wise system of legislation. The principle is even recognised in our profession itself. One physician sends to another, for instance, to the physician at a watering-place, to the operator, or to the psychiatric physician, in order to ascertain whether he consider such and such a patient a proper subject for his department of the art or not. All the objections that have hitherto been made against this competency turn either on the sufficiency of *pure* psychology, or the insufficiency of medical knowledge.[1] The former is, in point of fact, proved insufficient by the physical conditions of psychical operations (§§ 1-23, 50-53, 62-68), and by the false conclusions (arising out of those conditions) which *pure* psychology draws. The latter, granting even that the present state of medicine affords no sufficiently firm basis, does not touch the *punctum quæstionis*, because one may be found in future.[2] Injustice has, in my opinion, been done to Kant, when his aphorism, "The physician in judicio-psychological questions must call the philosopher[3] to his aid," has been taken in a strict and polemical sense. In the maxims of Kant, especially when they are paradoxes, the irony cannot be mistaken, and this aphorism is probably nothing more in reality than the expression of a wish

[1] The notion of Metzger, who would have psychology entirely banished here, because merely the corporeal basis of the mental condition is concerned, is opposed to both objections. Its refutation lies in a correct conception of medical psychology.

[2] Whoever desires to see a statement and satisfactory critical examination of this and of the objections of Regnault and Costes, will find them in Friedreich's System der Gerichtlichen Psychologie, chap. iv, 1842.

[3] Anthropol. § 41, &c.

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that the physician may at the same time be a philosopher—a wish in which we cordially agree.

§ 185. The second question demands—what constitutes the principle of responsibility? (which is not the same thing as that of the natural capability of showing disposition, for this is determined by physiological conditions, and depends on age, sex, temperament, &c.) We answer: the notion of medico-psychological freedom (§ 56, 3). He who is psychologically free, in a medical sense, is liable to responsibility, and *vice versâ*. This definition is decisive and universally valid when the decision of the physician is required, for it is only that psychological freedom which is identical with health, that (§ 56) belongs to his province. It is on that alone that he has to give his opinion; there is here only one will which is not free, namely, that which is fettered by disease, no quarter-free or half-free will. Passion, bewilderment, want of education, enthusiasm, &c. may, indeed, impede self-government; but the will, in these cases, is only morally, not physically fettered; that is, it is free in a psychologico-medical sense. Neither passion, nor emotion, nor habit can exclude imputability; in the first case control is possible, in the second, the mind is affected; it is passive (in abeyance), and does not act (here responsibility does not necessarily attach); in the third case, the commencement of the habit was the imputable cause of its results; thus the condition caused by repeated intoxication, which Clarus[1] calls *inhumanitas ebriosa*, is the consequence of a vice, and therefore imputable. This standard must be maintained, if we would avoid falling into the extreme of ultra-philanthropic tolerance, which now and then flatters the tendencies of our age. This extreme[2] would, in science, neutralise the endeavour to lay down definite boundaries, and, in life, would aid vice and crime in their escape to a convenient city of refuge. Who can venture to say of himself, "I am free;" none but the best, and even they should add, "perhaps." Who is there, whether man or woman, young or old, who is not subject to passions, to extraneous impressions? The law cannot here avoid a certain degree of harshness, from which

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contain and should, in essential particulars, furnish answers to the following points: 1. The circumstances of personality—the history and characteristics of the individual in all those respects mentioned at § 49, &c. 2. The circumstances of the disease—its arrangement according to the four principal forms, and their varieties—a narrative of its course—description of its present state—causal relations—complications. 3. The circumstances affecting the curability—the history of previous treatment, together with the prognostic indications pointed out in § 156, &c. 4. The result of all these circumstances with reference to the question submitted to the physician as the proper object of his report. This is not the place to discuss, or to illustrate by examples, the manner in which it is to be drawn up. Here, as everywhere, the physician's own reflections, natural capacity, acquired general knowledge, and practical experience, will best avail him. (A very good system of regulations, for the communication of which, I am indebted to the kindness of Dr. Ayrer, of Haarburg, was sent by the Hanoverian government on the 25th August, 1827, to all physicians attached to public institutions in town and country.)

§ 189. These investigations lead us to the last-mentioned psycho-judicial question, the discovery of dissembled or concealed, and the detection of simulated psychopathies[1] (§ 183).

The discovery of dissembled psychopathic states calls for as careful a regard as possible to all the circumstances connected with the anamnesis, such as the descent, education, mode of life and of thinking, etc. of the patient (§§ 50-54), together with a thorough examination of him (§ 188), wherein all conceivable psycho-physical circumstances, the representation and import of which constitute the substance of medical psychology, must be fully investigated.[2]

The detection of simulated (feigned) psychopathies, is like-

[1] Compare, on this subject, Siebenhaar's Encyklop. Handb. der Gerichtl. Arzneikunde. Leipzig, 1838, &c.

[2] "Though we lunatics have understanding enough, yet we sometimes go wrong," are the words which Boz (Pickwick) puts into the mouth of a lunatic, clearly teaching us thereby that this examination is difficult, and that it should be particularly directed to that "going wrong." Less will be effected by reasoning, which furnishes only cold abstractions, than by those animating means which, like the firm, steadfast gaze, the cordial expression, &c., are emanations from the whole individual character, and coming as such *from* the heart, go *to* the heart.

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wise attended with great difficulties. The two objective somatically characteristic symptoms which Friedreich mentions[1] as criteria of the psychoses, namely, the specific smell, and the peculiar physiognomy, are by no means always present. The physiognomy may moreover be counterfeited so as to deceive. Even the sleeplessness, generally (but not always) connected with psychopathies, may be assumed (though hardly beyond a certain point). The reluctance to look you in the face is not to be depended upon, because it also occurs in lunatics.[2] In all cases, a knowledge of the object of the supposed simulation is of much importance, because it points out a motive through which (after many a contrivance to be invented according to the individual case) the mind of the supposed simulator may be acted upon. Moria and idiocy are more frequently, mania more rarely, simulated. In pretended monomania (§ 144) the existence or non-existence of hereditary disposition, of physical symptoms (ibid.) and of other (ethical) motives, for the imputed crime, in connexion with a comparison of the deed, with the character of the individual, which must be inquired into in all attainable particulars (§ 56), may serve as guides to the decision of the physician; wherein it is true, as in every decision, no small scope must be left to the judgment for a free exercise of its powers. Hypocrites in general adopt conduct diametrically opposed to their natural character; the cunning pretend to be stupid; the cheerful, melancholy; the gentle, furious;[3] &c. Let the physician therefore set out from this point; let him accurately examine the harmony or want of harmony in the psychical and physical qualities of the individual; let him inquire long, surprise, deceive, tire the feigner; let him employ disagreeable psychical and physical means, as alleged remedies; with women, those which may disfigure them, and, in the most obscure cases, let him await with an indifference, which is, beyond measure, painful to the simulator, the effects of time, the solver and elucidator of all things. It must not be forgotten, however, that men have really become mad after having been long confined on suspicion of pretending to be

[1] System der Gerichtl. Psychol. p. 162.

[2] Pr. Pet. Wagner's Ger. Arzneik. vol. ii, p. 158.

[3] Smogowitz, Geistesstorungen, p. 468.

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so,[1] just as hysterical women often really fall into a state which they have long affected.

§ 190. If we now look back once more upon the course through which we have run (for so I must express myself with regard to this compendious exposition), the views with which we commenced these Lectures will probably be justified in the minds of those who have accompanied us with their own reflections; namely, that medical psychology is not intended to be either a physiology and pathology of the nerves, or a pure psychology, but an exposition of all the relations under which mental operations may be presented to medical observation and medical treatment. In their metamorphoses, under the several divisions of development, disease, and convalescence, these operations lead to the idea of an intellectu-corporeal unity; an idea which, accompanying the whole subject, and being essential to its further prosecution, is here presented as a hint only, to those who are capable of carrying it out. That it should be more than a hint cannot reasonably be expected. The manifestations of the spirit, through the mind, are infinite as itself. In this instance of all others, our own reflections and ideas must perform the chief part. Without a free, independent pursuit of the subject, it can make no active progress. I have only erected the framework; study and experience must, in process of time, complete the structure. I have only been able to point out the road, you must yourselves perform the journey. Happy will it be for me if I have not directed you by a false route. I trust it may at all events be acknowledged that I have endeavoured to prove a faithful guide.

[1] Professor Wagner, l. c. p. 158. Lanti was one of the French prisoners in England, who was shipped off to France after his mental disease had been ascertained. He had determined upon acting the part of a cock, and carried it through to admiration. *He did not even forget himself through joy at his final deliverance;* he bore patiently ill-treatment from maniacs with whom he was confined (*but their mania, too, was feigned*), and the love of liberty and of his country stood every test. (See Weiglein's Diätet. Fragm. Grätz.) A miller, about 40 years of age, on hearing his sentence read for the murder of his wife, became raving mad, remained true to his part in the madhouse for four years, and was at length unmasked by decided evasion of the question respecting his crime and other circumstances.—Professor D. Schroff, in Kleinode Repertory, May 1837, p. 127.

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The following are recommended as standard Works on the principal departments of Medical Psychology.

ON ITS HISTORY.

Friedreich. Versuch einer Literar. Geschichte der Pathologie und Therapie der psychischen Krankheiten; Wurzburg, 1830 (Essay on a Literary History of the Pathology and Therapeutics of Mental Diseases). *By the same:* Systematische Literatur der ärztlichen und gerichtlichen Psychologie; Berlin, 1833 (Sytematic Literature of Medical and Judicial Psychology). *By the same:* Historisch-Kritische Darstellung der Theorieen über das Wesen und der Sitz der psychischen Krankheiten; Leipzig, 1836 (Historico-critical Statement of the Theories on the Nature and Seat of Mental Diseases).

Friedreich, as has been frequently mentioned, concurs in a scientifically-arranged somatic view. His writings afford a complete survey, in accordance, however, with his own opinions, of what has hitherto been done in our department. It follows that where they are critical, they must be read with discrimination.

ON THE PHYSIOLOGY OF MENTAL ACTION (PSYCHICAL LIFE) IN GENERAL.

Ph. C. Hartmann. Der Geist des Menschen in seinen Verhältnissen zum phys. Leben oder Grundz. zu einer Physiologie des Denkens; Wien, 1832 (The Mind of Man, in its Relations to Physical Life, or Fundamental Principles for a Physiology of Thought).

The physiology of the nervous system has indeed undergone, since the time of Hartmann, many improvements which have changed its form, nor must we overlook the fact that Hartmann's researches were not directed so much to a complete theory, as to a proof of the indepen-

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dence of the mind; but if we keep these points in view, Hartmann's work, both as regards principles and treatment, is a standard for all his successors.

ON THE ACTION OF THE BRAIN AND NERVES IN PARTICULAR.

Burdach. Vom Baue und Leben des Gehirnes; Leipzig, 1819-26 (On the Structure and Action of the Brain). *John Müller.* Handbuch der Physiologie des Menschen, Dritte Auflage; Coblentz, 1837 (Manual of the Physiology of Man).

The most recent researches in this branch, are found partly in the works which we have already quoted, *Valentin, Remak, Schwann,* &c., and partly dispersed in periodical journals, for instance, in *Müller's Archiv.*

ON THE SENSES.

Purkinje. Beobachtungen und Versuche zur Physiologie der Sinne; Berlin, 1823-25, II Vol. (Observations and Experiments on the Physiology of the Senses).

As a substitute for all the separate works on each of the senses, many of which are very excellent, I quote only these investigations, which are distinguished by their solidity and acuteness.

ON PSYCHICO-PHYSICAL RECIPROCITY OF ACTION.

Lenhossek. Darstellung des menschlichen Gemüthes in seinen Beziehungen u. s. w.; Wien, 1824-5, II Vol. (Description of the Human Mind in its Relations, &c.) Very useful as a guide to general and careful research.

ON PHYSIOGNOMY.

Lavater's Physiognomik; Wien, 1829, 4 bände. May be considered as the foundation of this science, affording much instructive and interesting information.

ON PHRENOLOGY.

The Physiognomical System of *Drs. Gall and Spurzheim;* London, 1815. *G. Combe's* System of Phrenology. The former in order to obtain information on the original, the latter on the more recent state of the science.

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ON VERTIGO.

M. Herz. Versuch über den Schwindel. n. Aufl.; Berlin, 1791 (Essay on Vertigo). I especially notice this work, because from its luminous treatment of the subject, it is, like *Hartmann's* work, classical, and, at the same time, affords more comprehensive views and information than the title would lead us to expect.

ON MAGNETISM.

Though *S. N. Wirth's*, *J. Ennemoser's*, and other works on this subject (1842) give highly acceptable information, especially in an historical point of view, and in its relation to religious interests, yet, for the reasons mentioned (page 209), a further and, as far as possible, impartial examination of its pretensions is desirable.

ON THE PATHOLOGICAL ANATOMY OF MENTAL DISORDERS.

Parchappe. Traité théor. et prat. de la Folie; Paris, 1841[1] (Theoretical and Practical Treatise on Insanity). A valuable collection of important facts for future scientific investigation.

ON MENTAL DISEASES.

Ph. Pinel. Philosophical and Medical Treatise on Mental Diseases, &c. *Esquirol.* General and Special Pathology and Therapeutics of Mental Diseases. I refer to these French works acknowledged by our own best psychological physicians as standard authorities, treating the subject as it occurs in practice with eclectic, critical empiricism; whereas the less comprehensive works of the Germans, many of which have great merit, represent individual views, which are very instructive for private reading, but do not offer any such broad bases for further improvement. Nevertheless, I cannot refrain from particularly noticing the work of *Sinogowitz*, Die Geistesstörungen in ihren Beziehungen; Berlin, 1843 (Mental Diseases and their Relations.) Though not all cast in the same mould, yet the whole is so ably deduced from one basis, and the style is so animated, and contains so many ingenious hints, that I recommend this work especially for private reading.

[1] Comp. also what has been added within the last three years by Flourens, in the name of the same inquirer, in the *Comptes rendus de l'Institut*, tom. xv.

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ON JUDICIAL PSYCHOLOGY.

Friedreich. System der Gerichtlichen Psychologie, 2 Auflage, 1842 (System of Judicial Psychology). This is the best treatise since the works of *Hoffbauer* and *Heinroth,* on a subject which, it is to be hoped, may not remain long without thorough elucidation.

The more important monographs have been often enough quoted and named in the course of this work. It was my object to give you in conclusion, instead of a diffuse and perplexing enumeration of the "literature" of our subject, an indication of the most trustworthy sources, from which, second only in importance to experience, further information and improvement are to be derived

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