WORKS

OF

DR JOHN BROWN.

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DR JOHN BROWN.

TO

WHICH IS PREFIXED

A BIOGRAPHICAL ACCOUNT

OF

THE AUTHOR,

BY

WILLIAM CULLEN BROWN, M. D.

LATELY ONE OF THE PRESIDENTS OF
THE ROYAL MEDICAL SOCIETY
OF EDINBURGH.

VOL. I.

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1804.

LIFE

OF

DR JOHN BROWN.

TO

THE REVEREND

SAMUEL PARR, D. D.

SIR,

IN prefixing your name to this edition of the works of your former friend, without apprising you of my intention, which, in strict propriety, perhaps I ought to have done, I trust that you will not consider me as having been guilty of an unbecoming freedom. Of all the surviving friends of my father, I know not one whom he held in such estimation as yourself; and it was to him a very flattering circumstance, that his acquaintance was sought by a scholar of the profound learning, and exquisite skill in delineating the human character, displayed in the elegant Preface to Bellendenus. *But the respect he entertained for you during his life, is not the only motive that has induced me thus publicly to address you. As one of a numerous family, who, on a most critical and distressing occasion,*

in consequence of your benevolent and well-timed exertions, were formerly laid under the deepest obligations, I must always consider you as the greatest benefactor we have ever had since the death of our father; and I claim the liberty of dedicating these volumes to you, as a privilege, to which our obligations to you in a measure entitle me. Nor do I think it can be displeasing to you, that, independently of the permanent celebrity, which your own works have so deservedly gained you, your name should be handed down to posterity along with that of the most eminent medical philosopher of whom the world has yet had to boast.

With warm wishes for your health and prosperity, and with profound respect for your virtues, talents, and learning, I am,

SIR,

Your most obedient humble servant,

WILLIAM CULLEN BROWN.

EDINBURGH,
January 1. 1804.

PREFACE.

It will be deemed incumbent on the editor of these works to assign some reason for having undertaken to become his father's biographer; a task which, as every one must perceive, places him in a very delicate situation, and which, on the whole, could not fail to be extremely embarrassing and unpleasant to him. It is certainly the last office in the world in which, for different, and many of them obvious, reasons, he would have voluntarily engaged. Biography, as holding a rank, in point of dignity, next to history itself, is a department of literary composition, to do sufficient justice to which he considered his talents as being far from adequate; and, in detailing his father's life, and exhibiting a just portrait of his character, how-

ever studiously he should avoid the partiality, which would naturally be imputed to him, he knew that, in all probability, little credit would be allowed him for his endeavours. In zealously striving, with the utmost regard to truth, to give a genuine view, both of the excellences and failings of his father, he was aware that, while many should accuse him of too fondly displaying the fair side of the picture, others would think, that, in not glossing over some of his frailties, he had acted a part inconsistent with filial piety. In short, he feared that his attempts to give general satisfaction would prove altogether unavailing. Such were the unfavourable auspices, attending the undertaking, which presented themselves to him on the one hand.

On the other hand; the whole of the works being out of print, and another impression required, it was necessary either to prefix to them a new biographical account of the author, or to permit them to be thrown off, accompanied with the biography and observations by Dr Beddoes, which were published along with the

last edition. However reluctant he was himself to assume the province of his father's biographer, and numerous as the objections were to his adopting such a resolution, he determined rather to choose that alternative, than suffer the works to be published without any life of him at all, or with that written by Dr Beddoes; and his reasons, he trusts, for this determination, are well founded. The materials with which Dr Beddoes was provided were too scanty to enable him to draw up a proper and regular narrative; and the persons who supplied him with these have too often misled him in matters of fact. The consequence has been, that a variety of inaccuracies, omissions, and mis-statements is discoverable throughout his observations. But this is not all. It appears not only to the editor and his relations, but to every old friend of the family, that justice has not been done to his father's memory. The very circumstance of a person's voluntarily undertaking the biography of a celebrated man, argues partiality in his favour; though it does not necessarily imply such a degree of partiality as might

be apt to blind the biographer to the failings and defects of the individual whose character he undertakes to pourtray. But Dr Beddoes, far from erring in that respect, seems to have run into the very opposite extreme. The foibles and imprudence of his author are fully exposed to view, without any extenuation of them (for which there was ample room) being attempted; the numerous virtues of his honest and warm heart are scarcely touched at; his genius is acknowledged, because that could not be denied; almost every compliment to his talent is qualified; his want of medical erudition confidently affirmed; his composition, both in Latin and English, vilified; the extent of his practice questioned; he is arraigned of bigotry and pedantry in his youth, and of irreligion and arrogance in advanced life; stories, the merits of which were never fully unravelled during the lives of the parties concerned, now that they are dead and gone, are ripped up afresh, and appear to have no other tendency, but that of injuring his author's memory, or the interest of his surviving

family * ; his person, which, in consideration of the eminence of the man, ought to have been mentioned with decency, if not with respect, is likened to that of the clumsy buffoon of Cervantes; his voice is mentioned to have been

* Of this nature is the perplexed story of the Brunonians having interfered with the practice of their opponents, in the case of a Mr Isaacson; after pursuing which, avowedly reluctantly, through upwards of eight pages, Dr Beddoes leaves the reader, on account of the contradictory evidence of an unprincipled and equivocating old nurse, overawed by the authority of a party, whom it was her interest to please, altogether at a loss to judge how far the remedies recommended by Dr Jones had been administered, or whether they had been employed at all. Dr Brown, also, by Dr Beddoes's own account, acted a part certainly much less culpable than his biographer would make it appear; since it seems that it was intirely on account of being applied to by Jones, in his alarm for the consequence of his clandestine interference, and of being told that the nurse, who had acted according to Jones's directions, earnestly desired to wait upon him, that he permitted the nocturnal conference, which is said to have taken place, if it ever took place at all. At any rate, the majority of the *Dramatis Personæ* in this tragi-comedy are now no more in existence, to answer to the charges brought against them; and they might as well have been allowed to rest in peace. The story, at best, is now extremely uninteresting, and was altogether unnecessary, unless to add respectability to the bulk of his biography.

hoarse, and almost croaking; and his metaphors in conversation, though, according to Dr Beddoes, vigorous, animated, and agreeable to all around him, were disagreeable to him, by whom his company was not desired a second time. These are but a very few instances of the sneering and contumelious manner in which so great a character is spoken of. That work which, by its own intrinsic worth, has wrought a revolution in medical reasoning and practice, and is disseminated all over the civilised world, is dedicated, forsooth, to the "Ingenious, the Candid, and the Humane;" as if medical men, who are not more remarkable than their neighbours for their *ingenuity*, *candour*, and *humanity*, by such a suppliant address, were likely to be induced, out of their vast humanity, to purchase a book, from the perusal of which they did not expect at least as much advantage as to be an equivalent for its price! And, lastly, though the practice hitherto followed, with respect to the employing of motto's to books, has been to prefix to a new book an appropriate quotation from a Greek or Latin classic, or more modern author of long standing;—the title-page of the Elements of Me-

dicine, which had been so many years in circulation, and had made such an uproar in the medical world, is adorned with a recommendatory quotation from Darwin's Zoonomia, a work of yesterday, the sole merit of which, at least with respect to the medicine it contains, lies in what similitude it has to, or rather in what it has borrowed from, the Brunonian doctrine.

In short, a vein of levity and disparagement pervades the production *. Whenever a conjecture is hazarded by Dr Beddoes, it is invariably prejudicial to his author; and wrong motives are ascribed to almost all his actions. Thus, when Dr Beddoes mentions his having taken an abrupt leave of the family where, in his youth, he had been tutor, instead of supposing the possibility that the fault lay on the side of that family, he thinks it "likely enough that he added

* The *Iatrologia*, whatever merit it possesses as a piece of humour, certainly stands very awkwardly in the serious biographical account of an eminent man, or, at least, what ought to have been so; and it cannot fail to strike many as being introduced there, like a great deal of other matter totally foreign to the subject, to increase the ponderosity of his observations.

the stiffness of pedantry to the sourness of bigotry." His institution of the lodge *Roman Eagle*, is attributed, not to the avowed and ostensible motive, but to the design of "gaining proselytes to his doctrine." His admiration of Bacon is not ascribed intirely to his respect for the mode of philosophising introduced by that great man, but Dr Macdonnel *acutely conjectures*, and Dr Beddoes, by quoting that conjecture, seems to agree with him, that it was in a great measure owing to the "countenance in disrespecting his predecessors," which that author afforded him. To quote the various instances of a similar nature, with which the observations of Dr Beddoes abound, would be tedious and unprofitable. Suffice it to say, that the life which he has given does not, by any means, appear to be the work of a real friend either to the author or his doctrine; and the indelicacies with which it abounds would make it appear that the biographer had actually taken it for granted, that when Dr Brown paid the debt of nature, his children and friends accompanied him to the grave.

SUCH were the reasons which chiefly actuated the editor, in rather hazarding his reputation, by giving his own account of his father's life, under very unfavourable circumstances, than allowing that of Dr Beddoes, to which he had so many and such serious objections, to accompany the third edition of the works. However much or deservedly he may be blamed for inaccuracy or inelegance of style, he has all along rigidly adhered to the truth, nor is he sensible of having violated it in any single instance. It must be supposed, that the mention of many particulars, which occur in the course of the narrative, could not have been agreeable to his feelings; yet, whatever regard he had for his own feelings, or those of his relations, he has all along deemed it a duty indispensably imposed upon him to sacrifice every consideration to the cause of truth. The obscurity of his father's birth, which has been audaciously objected to him by some of his enemies, so far from exciting a blush in his son, is a circumstance so highly to his father's

honour, that, in recording it, he has taken peculiar pleasure and pride; and he has always admired the sentiment of the illustrious Roman, who, on being taxed by a degenerate patrician with the lowness of his origin, replied to his adversary, "The only difference between you and me is, that I am the first of my family, and you the last of yours."

His information has been derived partly from the loose papers left by his father, of which he is in possession; but chiefly from the remembrance of scattered facts, preserved among the different members of the family. He has also had occasion to consult several old friends and former school-fellows of his father, from the same part of the country; and he has likewise availed himself of Dr Beddoes's remarks, as well as of several brief printed accounts, which have from time to time appeared in the public prints, and other periodical publications. He is therefore confident, that his account contains much more information on the subject than any other person could have had materials to furnish.

Still he is sensible that it is far from being a perfect one, and not fully entitled to be dignified with the name of biography. Its truth ought to be its chief recommendation; and though it may be by many considered as not sufficiently abounding with those original remarks and ornaments of composition, which enliven and enhance the utility of such writing, he hopes that the detail of facts, whatever objections may be made to their arrangement, will prove interesting; and, should he succeed in conveying to the reader an accurate idea of his father's character, he will attain the principal and almost only end which he had proposed to himself.

He has been compelled to make some very free, though, he trusts, well-founded strictures, upon the insincere conduct of Dr Cullen towards his father; and he is afraid that he may incur the displeasure of some individuals to whom he owes certain obligations. He has been under the painful necessity, in speaking of the persecution which his father sustained,

of alluding to the conduct of persons still existing. This, to some of them, may appear in the light of ingratitude. The hackneyed, though very just sentiment, *Amicus Plato, amicus Socrates, sed magis amica veritas*, is all he can allege in his vindication. Candour, as well as his own inclination, leads him to state, that, whatever his father may have suffered from the opposition of the medical Professors of the University of Edinburgh, they have not thought it necessary to visit the sins, or supposed sins, of the father upon his children. To all of them, except one (to whom probably his name, remarkable for uniting in it two names so diametrically opposed to each other, was unknown), he has owed, in common with a younger brother, the essential favour of gratuitous admission to their different class-rooms. To Dr Gregory, the present professor of the Practice, who, he believes, is the least disposed to countenance his father's doctrines of all the members of the University, he owes particular kind attentions, conferred with a degree of affability and openness, which is well known to mark the character of that accomplished gentleman.

With respect to what the editor has done to render the works more acceptable: He thinks that the order in which they are now presented to the public, though the *Observations* succeeded the publication of the *Elementa Medicinæ*, is the most natural, and most likely to prove serviceable. In the introductory part of the *Observations*, after holding forth the humiliating idea, that the different departments of human knowledge, to which implicit faith had almost universally been given, are, with few respectable exceptions, fundamentally false, and giving the outlines of the New Doctrine;—the author concludes his remarks with a masterly refutation of the once celebrated hypothetical doctrine, originally started by Hoffman, afterwards modified by the late Dr Cullen, and then taught at the University of Edinburgh. As calculated, therefore, to prepare the reader for entering with advantage upon the perusal of the *Elements*, to which the English work may be reckoned a key, the editor has thought proper to assign to it its present place. The article, containing the well-written strictures upon

the universal ether, adopted by Dr Cullen to explain the functions of the nervous system, and which he, for some time, suspected to be the production of the present Dr Gregory's father, it may be proper to observe, was composed by the late ingenious Mr Smellie, the printer, between whom and Dr Brown a very close intimacy then subsisted.

NOTWITHSTANDING that Dr Beddoes, in many instances, has considerably improved the translation of the Elementa Medicinæ, in others, owing to his not possessing the corrected copy of the original (to which the author had accommodated his own version of it), his alterations do not correspond with those of the Latin copy. Partly for that reason, but chiefly because it was his father's intention to render his translation useful, among others, to "those who do not "readily enter into a thought conveyed in pure "Latin, and who, therefore, might wish to be "possessed of a translation, for the sake of com-"paring it with the original, and thereby of "acquiring, renewing, or improving their know-

"ledge of the latter;"—the editor has thought proper to restore the original translation, as better adapted to serve the last-mentioned purpose, having taken care, however, to divest it of many inaccuracies, to which its hurried execution in no more than twenty-one days, had unavoidably subjected it.

With respect to the editor's making any observations in illustration of the new doctrine; the same objections which occurred to him previously to his entering upon writing his father's life, would hold good: nor, in offering them, would he have to urge in his favour the same necessity being imposed upon him in the one case as in the other. The doctrine is new, simple, short in every proposition, and in no respect, either in its reasoning or practical part, refuted by the utmost exertions of all its numerous opposers, the bigoted supporters of former systems, or bewildered followers of none. It holds forth a new scientific department of knowledge, as an addition to the very few systems which deserve that name; and when any

of its fundamental truths shall have been successfully refuted in a respectable work, which has never yet been attempted, it will then be good time, but would be superfluous sooner, to undertake its defence.

LIFE

OF

DR JOHN BROWN.

JOHN BROWN was born about the end of the year 1735, or beginning of 1736, either in the village of Lintlaws, or Preston, in the parish of Buncle, in Berwickshire. The condition of his parents was extremely humble. What his father's occupation was, is not for certain known; but it probably was not above that of a day-labourer. They were, however, people of great honesty and worth, and being seceders, their sole ambition was to bestow upon their son a decent and religious education. In this respect, it can hardly be supposed, that, in their contracted circumstances,

they were actuated by the expectation of his afterwards attaining a rank superior to that of a common mechanic. It was a frequent expression of his father's, as his son used often afterwards to relate, "That he would gird his belt the tighter, to give his son John a good education."

On account of the uncommon quickness of apprehension, which he displayed at a time when other children are scarcely out of their leading-strings, he was sent to a school, to learn English, much sooner than the usual period. Here, under the tuition of an old country school-mistress, in a very short time he made such rapid progress, that before the fifth year of his age, he had read through almost the whole of the Old Testament. This circumstance he has frequently since mentioned to his younger children, as an incitement to their industry, in emulating their school-fellows.

Such was the ardour for reading, which, even at this very early period, he shewed, that after school-hours in the evening, instead of

amusing himself with his play-fellows, his practice used to be, to retire to a corner of his father's humble fire-side, where his highest pleasure consisted in eagerly poring over such books as are composed for the amusement and instruction of children. When it is considered that, to the most uncommon natural genius, discovered at so early a period, for upwards of thirty years of his life afterwards, he added the most intense application, it will create less surprise to find him, at a more mature age, thorough master of all the literature and science of his time.

The astonishing progress, in the reading of English, which at this time he had made, together with the extreme avidity with which he perused every new book, that happened to be put into his hands, induced his parents shortly afterwards to extend somewhat the proposed plan of his education, by putting him to the grammar-school of Dunse, to receive instructions in the rudiments of the Latin language. Shortly after this, when he was still only about

five years of age, he had the misfortune to lose his father, to whom he was very warmly attached. He has since told his family a circumstance of himself, as having happened on this occasion, which may deserve being noticed, as shewing at how early an age he evinced that sensibility and warmth of heart which so eminently distinguished his character ever afterwards. During the confusion and distress, which this event occasioned at home, he had been removed, for a few days, to a friend's house. On returning home, after he had some time looked around for his father, he asked his mother "Where he was gone?" to which, with tears in her eyes, she replied, "That he was gone to heaven." The child, not being satisfied with his mother's answer, after putting a variety of questions to her concerning the situation and other particulars of that place, at length, unperceived by her, left the house; and having wandered very disconsolately a considerable way from home, his progress was at last interrupted by the river Tweed. Here, sitting down on the bank, he began to weep, and was

found in this situation by a neighbour and friend of his parents, who, surprised to find him so far from home, asked him the reason of it. The child innocently replied, "That he was going to Heaven to seek his father." Upon this the countryman, kindly taking him by the hand, and leading him back to his mother, soothed him by assuring him, "That he would become a father to him."

WHETHER or not it was this honest man who afterwards became his step-father, is uncertain; his mother, however, married another person, by trade a weaver, who, in point of tenderness and affection towards her son, does not seem to have fallen short of her former husband.

AT the grammar-school of Dunse, under the care of the celebrated Cruickshank, (a man, to whose profound classical learning, and extraordinary talents as a teacher, his surviving pupils have lately paid an honourable tribute, by erecting a monument to his memory), he made such

uncommon progress as excited the admiration, and ensured him the favour and regard of his master. Cruikshank was a man of great erudition, and remarkably successful in imparting his instructions; an office in which he took particular pleasure, on discovering in a pupil that eagerness for improvement, which generally characterises the youthful mind of an individual destined to make a shining figure in the world. The early genius, therefore, displayed by his new pupil, did not escape his discernment, and failed not to attract his particular attention. His unwearied application, the facility with which he made himself master of the tasks assigned to him, and the retentiveness of his memory, together with a certain gravity of manner, very uncommon in a child of his age, deeply interested his preceptor in his welfare.

SHORTLY after entering the Dunse school, he mounted to the top of the class consisting of the junior scholars. From this class he was again transferred by his master to one more advanced, in which he had not continued long, till

he displayed the same pre-eminence in point of talent. In short, the rapidity of his progress was matter of wonder to every one. At length, betwixt the ninth and tenth years of his age, he obtained the place of *dux*, among school-fellows generally much his superior in age; a place which was never afterwards wrested from him by their most eager emulation and earnest endeavours.

At this early period he had gone through the routine of grammar education, which is required previously to entering into college. But, as the humble circumstances of his mother and father-in-law altogether deprived them of the power of supporting him at an University, on deliberating with themselves, they came to the resolution of immediately removing him from school, and putting him to a trade; as they considered, that his farther continuance where he was would necessarily be attended with a total loss of time to him. Accordingly, he who enjoyed the quiet possession of the chief seat in the first grammar school, taught by the ablest master in

Scotland; the favourite pupil of that master, and object of envy to his school-fellows; who, considering his age, had made advances in intellectual eminence perhaps not paralleled in the biography of any individual, was dragged reluctantly from the scene of his happiness and importance, and actually doomed to lead the degrading life of a weaver.

To one of his ardent turn of mind and ambitious views, manifested by the intellectual distinction which, in every stage of his progress, he had enjoyed; whose eagerness for improvement had been so unremitting, that, as several of his school-fellows remember to this day, he was seldom seen without a book in his hand, even on the way to school; and whose mind, even at that early period, in a comparative degree had been highly cultivated;—it may be readily conceived how truly disgusting the sordid life of one of the lowest mechanical businesses must have proved.

How long he remained in this degrading si-

tuation, is not exactly known ; it must have been a very short time, however, as the constant aversion he expressed to his occupation, could not have failed to prevail with his parents, who had a most tender regard for him, to relinquish the idea of rearing him to a business, to which he evinced so rooted a dislike. He himself, indeed, afterwards acknowledged " having flung the shuttle ;" but mentioned that this experiment of his parents had scarcely been put into execution, when they found the impracticability of convincing him, by any arguments or promises, of the propriety of his persevering in his new occupation. To the disgrace of some illiberal and little-minded individuals, the author of the *Elementa Medicinæ* has been stigmatized with this circumstance in his life ! a circumstance which reflects such additional lustre on his name. As if the illustrious John Hunter's having been in his youth a carpenter, or the great Franklin's outset in life having been that of a common compositor in a printing-office, rendered the names of these philosophers less

venerable in the opinion of the good and the wise.

In an article of the Analytical Review, for August 1789, the writer of that article, upon what authority he knows best, mentions his (Brown's) having "submitted in his youth to be a reaper of corn, to procure for himself the means of improvement, &c." Even granting that such a sorry and transient occupation had been adequate to the end of procuring him *improvement*, at what period of his *youth* he could have handled the sickle, it is not easy to imagine. His progress, from the time of his being committed to the care of the old country schoolmistress, until he was doomed to toil at the loom, (which happened about the tenth year of his age), has been stated according to the account which he himself has since given his family. He will shortly be found once more reinstated in his school, where he constantly afterwards remained, until he went into the house of a respectable family in the neighbourhood, as tutor;

from which last place he passed directly to the metropolis, to take up his abode.

His step-father, as his father had been, was likewise a seceder. When, therefore, his master (on learning the insuperable aversion of his late pupil to the loom) urged his parents to allow him to return to the school, at the same time offering his farther tuition of him gratuitously ; it was agreed that he should resume his studies, with a view of ultimately becoming a preacher and supporter of their sect. He quickly regained the ground he had lost during his absence ; and, in a short time, became so necessary to his master in conducting the business of the school, that, on any occasion of the latter being called away for a time, the seat of authority always devolved on John Brown. Many of his schoolfellows, especially such as were considerably older than himself, did not much relish the marked partiality, with which he was treated by his master ; and their being frequently subjected to his authority naturally gave rise to occasional contests out of school. Fortunately, however,

for the favourite pupil, the growth and strength of his person kept pace with the improvement of his mind; and, after some successful rencontres on his part, the sons of the gentlemen, who had affected to look with contempt on the obscureness of his origin, and the plainness of his dress, were at length obliged to observe great caution in giving offence to one who proved so formidable an enemy.

At an early period he had imbibed from his parents devout sentiments of religion, which were every day confirmed by the example they set him; and, as has already been mentioned, his learning and talents were afterwards to be destined to the service of their sect, in teaching and propagating their favourite doctrines. A circumstance, however, which happened probably between the 12th and 13th year of his age, though at what precise time the editor has not learnt, had the effect of making him altogether relinquish the idea of becoming a seceding minister. In consequence of having been persuaded to hear a sermon in the established church of

Dunse, he was summoned to appear before a meeting of the seceding congregation, where he had reason to apprehend a very severe censure being passed on him for the unworthiness of his recent transgression. On this occasion, his pride seems to have got the better of his piety. He resolved not to submit to the censure that was about to be pronounced on him; and, in order to avoid the necessary consequence of a formal expulsion, he at once renounced his sect, and declared in favour of the established church. After mentioning this anecdote, Dr Beddoes introduces the following appropriate observations.

"THOSE who regard the Scottish establishment as the true apostolical church, may have cause to rejoice, that so ardent a seceder did not persevere in his original zeal. For complaints are sometimes heard in Scotland, as well as in England, of the increase of sectaries; and he might have become formidable as a propagator of schismatic doctrines. Among the divines of his nation, he would have been unrivalled in

classical learning; and I see not what should have hindered a man endowed with so acute and comprehensive a genius from attaining equal pre-eminence in polemical divinity. He would have marched with alacrity into the field of controversy, and confidently assailed the stoutest champion of the adverse host. His vehement eloquence must have been deeply felt by audiences, to whom his dialect was intelligible and inoffensive: and, as little regard will be paid to style, when the thoughts are intent on the high concerns of *grace*, *faith*, *good works*, *election*, and *reprobation*; he might have seconded, with his pen, the effect of his personal labours. Had the incredulity of the age induced him to undertake a general treatise on Christianity, he was capable of rendering Grotius obsolete by language of superior purity, and more skilful management of his arguments. If he had borne the cross as a seceding minister, he must have led a life of the strictest temperance; since in Scotland the clergy, even of the established church, cannot safely indulge in open dissipation. I need not therefore explain how

much leisure he would have had for his classical and theological studies. Nor would he have enjoyed fewer or less lively sensations of pleasure than a different course procured him; for to a person of his temperament, fame and fanaticism may well supply the place of wine."

After this occurrence, he gradually laid aside the gloominess of manner, with which the doctrines and example of the seceders had impressed him; nay, it was even alleged that not long afterwards he begun to speak disrespectfully of the religious principles, in which he had been educated, and to which he had lately been so much attached. The high reputation, which he had acquired for learning, and his uncommon talents, having made the country people consider him as a kind of prodigy, by raising in him the sense of his own importance, and gratifying that vanity which is so natural to youth, in all likelihood contributed considerably to weaken his religious enthusiasm. When he had completed the thirteenth year of his age, Mr Cruikshank having waited on his parents informed

them, "That he could teach John nothing more, since he already knew as much as himself." He, therefore, advised them either to remove him from the school immediately, and consider what they ought to do with him; or, if they chose, they might allow him to remain in the capacity of usher, in which situation he should be happy to retain him. They readily consented to his remaining on these conditions, proposing to themselves that, as he had already withdrawn himself from their sect, with the gradually accumulated profits, arising from the exertion of his own talents, he should afterwards commence the study of divinity at the University of Edinburgh, and become one of the established clergy. During some years that he spent at Dunse school in this new capacity, the superior talents he displayed as a teacher, and the attention and fidelity with which he discharged the duties of his office, attached Cruikshank to him still more, and procured him the respect of his pupils. Nor was he now observed in any degree to abate of the ardour and intensity of application, for which he had been all along so re-

markable. As the routine of school-duty required no previous preparation on his part, his time was intirely at his own disposal, excepting during the hours his presence was necessary in the class-room.

His reading in Latin embraced the complete circle of the classics, which he studied with such minute attention, that there was scarcely a shining passage in any of the Roman poets, which he had not committed to memory. Many of his friends remember well, that, whenever an ode of his favourite author Horace was suggested to him, at an advanced period of life, he used to recite it verbatim, with the greatest facility. He ever afterwards retained in his remembrance the whole of these odes, in consequence of the deep impression they made upon his mind at this time. One of his former pupils, (Mr Wait,) in a communication to Dr Beddoes, mentions that, after prelecting to the class two octavo pages of Cicero, he would give a proof of the uncommon retentiveness of his memory, by closing the book,

and repeating the whole over again, word for word.

But the study of the Latin authors alone did not engross his attention. While at school, he had made very considerable progress in the Greek language, of which he was enthusiastically fond; he now, therefore, accompanied the study of the Latin classics with the perusal of every Greek author which he could by any means procure. A portion of the day was likewise set apart for the study of Euclid's Elements, in which he took particular pleasure, and which, with the same persevering diligence, he at length carefully treasured up in his mind. The reading of general history, and of the best English writers, as requiring less intensity of application, generally closed the labours of his well-spent day.

His assiduous application to study, however, did not prevent his partaking in the games and athletic exercises, then much practised by the young men in that part of the country. He was

rather of low stature, but remarkably well proportioned, and strongly made; and, as his ambition was not confined to intellectual eminence alone, he practised wrestling, boxing, running, football, and other exercises, with as much assiduity and earnestness, during the time they engaged his attention, as he applied to his more serious pursuits. The consequence was, that, when he reached his full growth and strength, he had become so great an adept in these exercises, that few were found capable of rivalling, and none of surpassing, him in feats of agility and strength. He valued himself particularly upon his power in walking; and mentions, in a note upon his Elements, having performed in one day a route of fifty miles, from Berwick-upon-Tweed, to Morpeth in Northumberland, when he was a lad of no more than fifteen years of age. The attachment to boxing, which he acquired at this time, he never after altogether dropt; as many of his friends remember well, that while he latterly resided in London, the sight of an occasional *skilful* boxing-match, such as are so fre-

quently witnessed in that metropolis, used to excite in him no small interest.

Such was the happy and profitable time which he spent while he acted as usher to the Dunse school; during which his learning and talents, together with great openness of manners, benevolence of disposition, and an inexhaustible store of good humour and wit, had gained him the admiration and esteem of all ranks. The opinion entertained of him by the common people was, "that he could raise the devil;" and there scarcely occurred among them a single matter of controversy, which was not, by consent of all parties, left intirely to his arbitration, by which they as firmly abided, as they would have done by the decision of a civil magistrate.

Between the eighteenth and nineteenth year of his age, his master, who was as remarkable for his integrity, as learning, and had conceived a kind of parental attachment to his pupil, in an express conversation, which he held with him, assured him that, essential as his ser-

vices in his present capacity were to him, and serious as his loss would prove to the interests of the school, as a friend he would advise him no longer to remain in a situation so ill calculated to promote his future welfare. He likewise informed him, that a neighbouring gentleman, of considerable distinction, had applied to him to provide a young man properly qualified to undertake the tuition of his son; and concluded by observing, that, as his intention was to become a regular clergyman, it would be both proper to augment his slender funds, by accepting a more lucrative situation, in order the better, along with the fruits of his own labour in teaching, to support himself while studying at college, and also to secure the interest of a patron, through whose means he might ultimately obtain an appointment to a church. He, therefore, strongly recommended him to accept a situation which seemed so well calculated to answer his views.

Desirous as he was to continue in his present situation, in which he felt himself perfectly hap-

py, he was sensible that his doing so would not contribute to his future interest; and he, therefore, yielded to the advice of Cruikshank, who recommended him in the strongest terms to the gentleman, as one who would be invaluable in his family. His stay here, however, was of no great continuance; not, as Dr Beddoes supposes, because he "added the stiffness of pedantry, to the sourness of bigotry;" for pedantry, the very common characteristic of half learned and weak people, was so far from forming any part of his character, that, during the whole course of his life, among all the ranks of society with which he associated, he invariably maintained the reputation of a man who, in conversation, either instructed by the profundity of his observations, or delighted by the brilliant flashes of wit which came from him. And as for *bigotry*, he had, for a considerable time, so completely renounced it, that he was now very well known to laugh without reserve at his former prejudices. Indeed, the real cause of his leaving this family, will shortly make it appear what share bigotry had in the business.

He found that he was not treated with the respect due to his situation. When the family were by themselves, he was always invited to remain after dinner, and take one or two glasses of wine: but this act of common civility was never shewn him when company happened to be present. He had a very high and independent spirit; and such indelicacy of conduct very naturally hurt his feelings, and alarmed his pride. He was resolved, however, not to retire from the family on a pretence seemingly so frivolous. At that time he was not aware, that, far otherwise than what happens in our more liberal sister country, the families of condition on the Caledonian side of the Tweed consider even those very persons, to whose superior learning, talents, and probity, they intrust the cultivation of the mind, and care of the morals of their children, as very little better than a superior kind of servants. This is not one of the least contemptible relicts of feudal barbarity to be detected in the country. Accordingly, no person, who has the spirit of a man, can long endure the office of tutor, or, as it has been

absurdly named, *governor*, in a Scotch family. The immediate cause of his separation from this situation, was as follows. A number of neighbouring *lairds*, beings equivalent in most respects to what are called in England *country-squires*, had been invited to dine with the family on a particular occasion. John Brown, as usual, was present at table, but was allowed to retire to his own apartment, immediately after dinner, without an invitation to remain. When they had all drunk so copiously as to be prepared for philosophical discussion, a query was started by some one, to exercise their powers of disputation, concerning nothing less than "the decrees of Providence." After a great deal of noisy and unprofitable altercation on both sides, it was at length resolved upon, that the disputed point should be referred to John Brown, whom the landlord of the house had not considered as a sufficiently respectable person to continue for the evening among his ignorant guests. A verbal message was accordingly sent to him from the head of the family, stating the matter, and desiring his opinion.

His temper being then extremely irritable, in consequence of the contumelious treatment he had experienced that evening, instead of replying directly to the point, he returned for answer, "That the decrees of Providence were very unjust, which so often made blockheads *lairds*."

THIS occurrence, as it is natural to suppose, was immediately followed by his departure. Being out of employment, therefore, he proceeded from Dunse to Edinburgh, where, while he studied at the philosophy classes, he proposed supporting himself by instructing his fellow students in the Greek and Latin languages. The success he experienced as a teacher exceeded his expectations; and, in a short time, he acquired such reputation for his excellence in that way, that pupils flocked to him from all quarters. He attended the classes of philosophy with his usual diligence and application; and the pre-eminence he now held among his fellow students at college, was not less conspicuous than that which he had enjoyed at the

school of Dunse. He afterwards attended the Divinity Hall; for although, in proportion to the improvement of his mind, and his association at college with a variety of young men from all parts of the world, the fire of his religious enthusiasm had been damped, and his desire to become an established clergyman diminished; still he considered the church as holding forth the most likely prospect of affording him future support. He even carried his theological studies so far as to be called upon to deliver a public discourse in the Divinity Hall, before the professor and his fellow-students.

About this time a friend recommended him to a gentleman, then studying medicine, as a person well qualified to translate into Latin an inaugural dissertation, which was about to be presented by the candidate to one of the professors. He surprised both his friend, and the gentleman for whom the task was performed, by executing it in a manner far superior to the usual style of such compositions, and in a much shorter time than he had required. On being informed by

them how far he had exceeded their expectations, both in point of elegance and expedition, he observed, "That he had now discovered his strength, and was ambitious to ride in his carriage as a physician."

He now, therefore, resolved to pursue a different course from what he had proposed when he first repaired to Edinburgh; and, bidding adieu to the Divinity Hall and his theological studies, he determined on commencing the study of medicine.

Shortly afterwards, he retired to Dunse, probably that he might with more deliberation arrange the plan of his future proceedings. While he remained here, he resumed his former occupation of usher; and, after having continued in it a twelvemonth, from Martinmas 1758, to the same term in 1759, he at length took leave of a place where he had enjoyed so many years of happiness, and spent his time to such advantage; and returned again to the metropolis.

On his return to Edinburgh, one of the classes in the high school having become vacant, he gave in his name as a candidate, but without its being accompanied with the recommendation of any person of consequence to support his claim. The result might have easily been foreseen; the magistrates of Edinburgh, on a "comparative trial" of the merits of the candidates, fortunately both for the individual and mankind, thought proper to give the preference to another. The expence of feeing classes was the chief obstacle which he had to encounter at the outset of his medical studies; for, though his private teaching enabled him sufficiently to support himself, it was insufficient to supply him with the means of attending the various branches of science, which the medical course of study at Edinburgh comprehends. At the commencement of the session, therefore, in 1759, he addressed an elegantly composed Latin letter, first to the late celebrated Dr Alexander Monro, then Professor of Anatomy, and afterwards, in consequence of his success in this application, to the other Professors, who were induced to present him with

tickets of admission to their several classes. Having thus got over what proved at first so great a difficulty, the unremitting assiduity and ardour which he showed in the prosecution of his studies, soon attracted the observation, and recommended him to the notice, of his benefactors. Perhaps, scarcely any individual ever commenced the study of medicine so thoroughly prepared for it by his previous acquirements. He had made himself master, as has already been observed, of the dead languages, and of Euclid's Elements, before leaving Dunse school. After entering the University, to this essential groundwork he added great proficiency in the more advanced parts of mathematics, from which he derived the highest delight; as well as in logic, and the other departments of philosophy, to which he earnestly applied. The powers of his memory were such, that they seemed to retain every thing he had at any time studied. The *contentio animi*, which he could exert, either in studying an author, or in listening to a discourse, depending on the natural strength of his judgment, had been daily confirmed by his long

and constant habits of reading, as well as by his intense application to mathematics. Lastly, he was now no longer a lad, which too many of the young men are, who come to study medicine at Edinburgh, but a full grown man, between twenty-three and twenty-four years of age, in the possession of the greatest vigour, both of body and mind. As, therefore, his ample preparatory course of study left none of those stumbling-blocks in the way, which too frequently interrupt and retard the progress of the half-educated at the commencement of their medical studies; and, as his ambition to obtain eminence in his profession perpetually impelled him to redouble his exertions; it is not to be wondered at that in a short time his reputation for medical knowledge became so generally spread.

His vivacity and wit, along with the various accomplishments which he possessed, and a most benevolent and accommodating disposition, made him so popular among his fellow-students, that he was generally seen in the pub-

lic streets surrounded by them in numbers. At their private circles of conviviality, the seat of *magister convivii* was always assigned to him: for, as no man was ever more completely gifted by nature with the happy talent of keeping the "table in a roar," without his presence they found how little they enjoyed "the feast of sentiment, and the flow of soul."

AFTER studying medicine for two or three years, and treasuring up in his mind the knowledge he had acquired from the Professors, he renounced the business of teaching languages, by which he had all along supported himself, and devoted himself intirely to assisting his fellow-students in their medical studies. The private examinations, which precede the public ceremony of graduation, are conducted in Latin; and the various branches of medicine, on which the candidates are liable to be questioned at the first private trial, which generally decides their fate, present so ample a field for study and industry, that few of the students, even of the best abilities and information, anticipate the formidable

day without very uneasy feelings. Besides, it seldom happens that even the most accurately educated students are such adepts in Latin as to be able, with sufficient fluency, to express themselves in that language. It is usual for them, therefore, some months previously to offering themselves at their private examination, to submit to the instructions of a person, who converses with them in Latin, on the different subjects of their studies, in this manner both improving them in their profession, and familiarizing them with the language in which they are to be examined. The emoluments derived by Mr Brown from this occupation, which is distinguished by the familiar name of *grinding*, together with those he drew from the translation, or occasional composition, of inaugural dissertations, afforded him the means of living as a single man, in very comfortable and independent circumstances.

In the year 1761, he became a member of the Royal Medical Society, where medical theories being discussed with great freedom, he had an opportunity of displaying his talents

to advantage, and extending his reputation and acquaintance among his fellow-students. In the Preface to his *Elementa Medicinæ*, which, in the original, may be regarded as a complete model of composition, he gives an account of the progress he made during the first years of his medical studies, as well the ultimate result of them. For some years no particular alteration in his affairs occurred. His character for learning and abilities continued to stand high among the young men of the University; his time was as much engaged with private pupils as he desired; his circumstances, compared with what they had formerly been, were affluent; and, in addition to these advantages, he enjoyed the particular favour and patronage of the celebrated Cullen. In the year 1765, therefore, he conceived the idea of instituting a boarding-house, for the accommodation of gentlemen attending the University, trusting that his own name, together with the recommendation of Dr Cullen, who treated him with every mark of confidence, would always ensure him a sufficient number of boarders. Judging, also, that the various sources from which he should derive his income would enable him to

support a family, about this time he married the daughter of a reputable citizen of Edinburgh, of the name of Lamond. For several years after his marriage, every thing succeeded to his expectations; and his house continued to be filled with the most respectable students, who were generally also his own pupils.

UNFORTUNATELY for him, however, among his qualifications economy held no place. At the commencement of his medical studies, he very naturally turned his attention to cultivate the acquaintance of those individuals among whom he proposed earning a livelihood. It was not among the serious, the wise, or the aged, that he was likely to procure pupils; his companions, therefore, would necessarily be the young, the thoughtless, and, very frequently, the dissipated. The pleasures of the table, and the unconstrained hilarity he enjoyed at the convivial meetings of such companions, were by nature sufficiently agreeable to one of his vivacity of disposition, and strong passions; but the distinguished figure he made on such occasions,

as a man of brilliant wit, and the deference paid to his superior talents, must have rendered these meetings still more gratifying to him. It is not surprising, then, that after having been habituated to such association for a succession of years, he acquired a taste for company and high living, which was confirmed, as he advanced in life, exposed to the same necessity of cultivating the acquaintance, and rendering himself agreeable to, those on whom his livelihood depended. Had he possessed the common degree of prudence, which falls to the share of the generality of mankind, he might have lived, not only with comfort and even elegance, but, in the course of no great number of years, as his income at this time was very ample, he might have amassed no inconsiderable fortune. His manner of living, however, was by much too liberal for his resources, his table too well provided, his entertainments too costly and frequent, his management in other respects careless, and his expences continued to increase in proportion to the additions which, since his marriage, were occasionally made to his family. The conse-

quence was, that, in a few years he found his affairs so much embarrassed, that he was, at length, under the necessity of calling a meeting of his creditors, and of making a compromise with them.

THE reader has already been informed of his having, at the beginning of the winter, in the year 1759, presented a Latin letter to each of the Professors, and the liberality with which he was treated by them on that occasion. At what time the strict intimacy, which afterwards ensued betwixt Dr Cullen and him, took place, does not appear; though it seems probable, that the literary merit and genius of the pupil could not have long escaped the discernment of the preceptor. During the first or second year of his medical studies, before he had acquired a sufficient stock of knowledge to assist his fellow-students in medicine, Cullen gave him employment in his own family, as preceptor to his children. Afterwards he intirely threw aside the teaching of languages, as an office beneath one possessing his various accomplishments; and, having made

himself master of the medical knowledge delivered from the different chairs in the college, he devoted himself altogether to the more lucrative and honourable occupation of instructing the advanced students, and preparing them for undergoing their private examinations.

In what respects he proved of essential service to his patron, is so well known, that it need not now be considered as improper to mention the nature of their connection. Dr Cullen, who was extremely deficient in classical erudition, conceived the idea of turning his pupil's intimate knowledge of the Latin to his own permanent advantage, which he perceived could be done in various ways. There were few literary or philosophical societies in Europe, to which Dr Cullen did not belong. His correspondence was consequently very extensive, and necessarily maintained in Latin, a task to which he was little adequate. The value, therefore, of such a pupil, in preserving his credit on the continent, by acting as his Latin secretary, and gaining him as much reputation for literature, as he had ac-

quired by his medical hypotheses, could hardly be sufficiently appreciated.

His learning and talents, likewise, no doubt flattered the professor with the expectation, that in such an ingenious pupil and friend, he should secure a staunch abettor of his favourite opinions, which he was then earnestly striving to establish, and which had begun to require all manner of support, to prevent their sinking into total disrepute. Indeed, such was the zeal which at this time the pupil felt in supporting his patron's fanciful hypotheses, that no person in his company ever presumed to question their merits, without incurring his serious displeasure, and encountering the most vehement reprehension. Certain other services he rendered Cullen, which the editor is not at liberty to disclose, and which, even were no such restraint imposed upon him, it would be indelicate to mention. Such, again, was the unlimited confidence which Cullen reposed in him, that he permitted him in the evening to give a lecture,

in which he repeated and illustrated the morning lecture of the professor; for which purpose he was intrusted with the manuscript of his preceptor. On the part of the pupil, many tokens of respect and esteem for his patron might be enumerated. For example, he named several of his children after those of Cullen; and, some years afterwards, he gave to the editor of these observations both his name and sirname.

After his intimacy with Cullen had subsisted a good many years, in order to acquire a more intimate knowledge of anatomy than what was to be obtained by attendance in a public class-room, he was in the habit, for the greater part of a twelvemonth, of rising at five o'clock in the morning, and dissecting for two hours with a private instructor. The farther study of botany at this time also engaged his attention. The object he had in view, in so carefully perfecting himself in these two branches, was to qualify himself for an anatomical chair, in one of the infant colleges of America, to which the botanical department was probably attached, and

the appointment to which had been left intirely to the discretion of Cullen. He was persuaded, however, by Cullen, who, doubtless, did not wish to part with one so necessary to him, to relinquish the design of leaving his native country; and was farther influenced in following his advice, by the promise then given him, that he would exert his interest in endeavouring to establish him in the first chair that should become vacant in the University. Cullen's breach of faith, in this respect, which was shortly after followed by another occurrence, unequivocally demonstrating the change of his dispositions to promote the interest of his friend, first opened his eyes to the duplicity with which he had been treated, and occasioned the dissolution of that intimacy which had lasted so long.

When the present Dr Gregory, who was then travelling on the continent, was appointed to the professorship of the Theory, which had become vacant, and for which Mr Brown had unsuccessfully applied, it became necessary to find a person qualified for executing the duties

of the situation, during Dr Gregory's absence. Cullen, affecting to regret his having been disappointed of the chair, assured him, that he would by all means endeavour to procure him the temporary appointment, which might ultimately prove highly advantageous to him. In the mean time, he said, that it would be necessary for him to obtain a diploma, and to prepare a text book. The diploma could have been procured at any time; he, therefore, immediately commenced the composing of his text-book, which he did with such assiduity, that, as his materials had been long before prepared, in a short time he presented it to Cullen in a tolerably finished state. Cullen had never in the least doubted, that, in his pupil, his favourite opinions would always have a warm and able advocate, who would keenly defend them, in their fullest latitude. He was not a little surprised, therefore, when, on the present occasion, the first sketch of the *Elementa Medicinæ* was submitted to his inspection. The anecdote is perfectly consistent with the artlessness and unsuspecting disposition of the man. Whatever

chagrin Cullen felt, he certainly had the policy at that time to suppress it; and, so far from expressing any disapprobation, he repeated his promises of service, seemingly with equal sincerity as on former occasions. Mr Brown was again, however, unsuccessful. The independence of his spirit was such, that he disdained stooping to solicit the patronage of the great, confiding solely in his own merit, which, as it ought to have been, he thought would be, his strongest recommendation. On his standing candidate for the chair, without recommendation, it is reported, that, when the magistrates, who are the patrons of the professorships, jeeringly asked, who this unfriended candidate was, Cullen, so far from giving him his support, after some pretended hesitation, blasted his success, by observing with a sarcastic smile, "Surely this can never be our *Jock!*" The editor cannot vouch for the truth of this anecdote, which, however, long afterwards continued to be in very current circulation in Edinburgh. Dr Beddoes, after mentioning this unsuccessful attempt, makes the following very just observations: "On a former

occasion, of a nature somewhat similar, he had disdained to avail himself of recommendation, which he might have obtained with ease; and though, according to the friend, whose words I have just now quoted, he acquitted himself in a manner far superior to the other candidates, private interest then prevailed over the juster pretensions of merit. At the present competition he was also without recommendation; and, I suppose, could have obtained none. Such was his simplicity, that he seems to have conceived nothing beyond pre-eminent qualifications necessary to success; nor did he harbour any suspicion of that debasing system of influence, which has infected the land so thoroughly, that the post of a scavenger, were it held by appointment, would hardly be procured without cabal, or retained without servility."

He was not immediately informed of the unfriendly and deceitful part which Cullen had taken in these transactions; and, for some time, their acquaintance was continued, though much

less cordially than before. Not long afterwards, Cullen requested him to put his name to a small pamphlet, entitled *Thessalus*, which he had written with great asperity of language, and many invectives, against a lecturer in Edinburgh, whose mighty offence had been presuming to differ in opinion from him, in some points of his doctrines of no material consequence. Mr Brown, however, absolutely refused to have any concern in so mean an affair; which, of course, must have widened the breach that had already been made in their mutual regard and confidence. The pamphlet was afterwards published in the name of a well-known literary adventurer, called Wilson, who was at that time generally distinguished by the nick-name of Claudero.

A variety of concurring circumstances now contributed to heighten the jealousy which had for some time subsisted betwixt them. Notwithstanding that Mr Brown was pretty far advanced in life, still he was not established in a permanent situation. For a number of years

he had devoted himself almost intirely to the service of Cullen, who, he at length suspected, notwithstanding his repeated promises, had not exerted his influence in endeavouring to place him in more eligible circumstances. From the alteration in Cullen's manner, which shortly succeeded to Mr Brown's having submitted to him the first sketch of the *Elementa Medicinæ*, he had reason to be convinced that he had forfeited his friendship. His affairs, too, being still extremely dependant, and his income precarious, rendered him more impatient; and he determined at last to put Cullen's sincerity to the test, by making an experiment which would prove decisive. He presented a petition for admission into the Society which published the Edinburgh Essays, foreseeing that he would be rejected, though that had never happened to any individual before, and has never since. The influence that Cullen possessed among the members of that Society was such as to enable him to introduce among them whatever individual he pleased; Mr Brown, therefore, very well knew, that, should his petition be rejected,

all doubt would be removed of his having been the dupe of a pretended friend. Dr Cullen, who, from motives of policy, endeavoured to avoid coming to an open rupture with him, after the petition had been presented, *as a friend*, advised him to withdraw it, assigning a frivolous pretext for the opposition which threatened it. Mr Brown answered in a firm tone, that he was resolved to proceed in the business, and that the issue of his application ſhould be the criterion by which he ſhould judge how far he might rely on the friendſhip of certain individuals. The event proved to be what he had foreseen. The truth was, that Cullen, who well knew the powers of his pupil, in the publication of the new system of medicine, which Mr Brown had been for some time framing, dreaded the shock which his own favourite opinions, already tottering, would sustain from a rival system, supported by an adversary of such learning, talent and genius. On this occasion, therefore, he left no art untried, till he succeeded in gaining a majority to oppose his admission.

The consequence of his rejection was an immediate rupture between him and Cullen. Their connection, therefore, being finally dissolved, Mr Brown determined to try his own strength; and, relying on his abilities, and the merit of his discovery, he hoped to be able to bear up against the host of enemies whom the influence of Cullen, as he foresaw, would raise against him. Shortly after this, he commenced giving lectures in Latin upon his new system, employing the manuscript of the *Elementa Medicinæ* as his text book. The sources of his income were his public class, and his private pupils, from which, as appears from his class-book, he derived no inconsiderable sum annually, and what would have been amply sufficient for the support of his family, which was now numerous, had it been managed with prudence. From the rules for teaching laid down in his class-book, and subscribed to by his pupils, he does not appear to have neglected his interest. In this memorandum-book, every particular with respect to their time of entrance, the money due, hours of absence &c. is noted with the

precision of a merchant's ledger. As an object of curiosity, it may not be unacceptable to give an extract from it.

Rules for Teaching, laid down by John Brown, and agreed to by all his Pupils.

1. "Fewer gentlemen than two in a class cannot be admitted, unless any single gentleman desire an hour for himself, at the rate on which two are admitted: Which is,

2. "Four guineas each month."

3. "Every month consists of sixteen lessons to two, and of nineteen to three or more; with this exception in favour of a single gentleman, that he be entitled to nineteen lessons, if he be willing to join another, and another cannot be found at the time."

4. "Each month's fee must be advanced, without exception, for the future."

5. "EVERY gentleman must wait upon the preceptor at his house."

6. "EVERY gentleman is bound to remember the time of his entry, and the commencement of each new month; as it is not understood that the preceptor keeps any accounts."

7. "EVERY private pupil, who attends the public class, is entitled to five, instead of four, lessons a-week, and twenty, instead of sixteen, a-month: But every other, to sixteen a-month, and four a-week only."

8. "As the preceptor intends to teach privately as little as possible, and yet not to give it up intirely, for some time; no gentleman, applying at the beginning of winter, can be admitted as a private pupil for less than the season, or six months, from his entry."

BEING constantly attended by a numerous circle of private pupils, the emoluments which he derived from that source (as appears from

the terms mentioned in the rules already quoted), must have been very considerable; insomuch that, notwithstanding his former failure, he was still enabled to support a sufficiently respectable establishment. In his public lectures, as well as in private conversation with his pupils and other friends, he enforced his arguments in support of the new doctrine, with such energy and strength of reasoning, as to occasion universal conviction in the minds of men capable of thinking for themselves, and which had not been irretrievably enslaved by long-contracted and deep-rooted prejudices. It was remarked, that though his lectures were never numerously attended, they were always frequented by young men of the greatest talent attending the University. His powers of argument were irresistible; and he treated his pupils with such affability and kindness, that, while he made them staunch abettors of his system (or, as it was commonly called among the Brunonians, κατ' ἐξοχήν, *The Doctrine*), they became no less attached to the person of their master. Hence, notwithstanding a most keen and illi-

beral persecution, which the new doctrine sustained from Cullen and his adherents, the disciples of Brown, from their numbers, shortly became so formidable to their adversaries, that the latter, upon all occasions, and in all public societies, were perpetually annoyed and molested by them. The palæstra, where their contests were maintained with the greatest violence, was the Royal Medical Society. Here the partisans of both doctrines used to assemble weekly; and the debates on each side were conducted with such vehemence and intemperance, that they very commonly terminated in one member calling out another to the field. Such rencounters had so frequently disgraced the Society, that, in order to prevent the growing evil, it became necessary to pass a law, by which it was enacted, that any member, who challenged another, in consequence of what had been said in the public debates, should be expelled the Society *.

* Between fifteen and twenty years after this period, a medical work appeared, in which, through the disguise

Though Mr Brown, for so many years before his quarrel with Cullen, had attended the medical lectures, he had always deferred his graduation, as he perceived no immediate advantage likely to accrue to him from the acquisition of a degree. After the rupture between him and Cullen, and the consequent promulgation of his new doctrine, his views of graduating at Edinburgh were for ever precluded. He had been repeatedly importuned by his pupils, and

of changed terms, and varied language, may be fully recognised the leading features of the Brunonian doctrine. The author of it has observed: "The coincidence of some parts of this work with corresponding deductions in the Brunonian *Elementa Medicinæ*,—a work (with some exceptions) of great genius,—must be considered as a confirmation of the truth of the theory; as they were probably arrived at by different trains of reasoning." It is difficult to conceive how, by *different* trains of reasoning, two people could have arrived at the same important conclusion. At any rate, it was incumbent on the author to have pointed out the train of reasoning by which he had been assisted in drawing his *corresponding deductions*. The author of the *Elementa* has faithfully displayed his train of reasoning to the world; and in no part of it does he either assume an hypothesis, or dogmatically employ simple affirmation. See DARWIN'S *Zoonomia*, p. 75.

other friends, to procure a diploma from one of the other Universities in Scotland, but had made light of their advice. At length, little as the title of M. D. would add to his dignity, either in own opinion, or that of such as knew him, he was prevailed on to apply, by letter, to the University of St Andrews, a testimony in his favour having been presented to the professors there, among others of his pupils, by Dr Ford and Dr Mackenzie. As these gentlemen, however, had graduated but recently, and were therefore too young, the University did not attach sufficient respectability to their attestation, which was not admitted, and Mr Brown, by the College regulations, was required to make his personal appearance, and submit to the usual forms of examination. Upon this occasion, he pleasantly remarked to Dr Flint, the present respectable professor of the Practice, "That, although he did not enjoy the title of M. D. himself, he had obtained that honour for not a few:" as, on a former occasion, Sir Robert Walpole had observed, "That although he was not a peer

himself, he had helped to make many a lord." His diploma is dated the 21st of September 1779 *.

THE consequence of his discovery, and of the favourable reception of his opinions by his pupils, was a rancorous warfare betwixt him and the medical professors, as well as most of the medical practitioners in Edinburgh. And, if he sustained injuries at their hands (of which there is no doubt), the contemptuous language in which he invariably spoke of their learning

* The friends who had accompanied him from Edinburgh, and several of the professors, after his first examination, dined together at an inn. It remained for him to compose two short Latin papers, the one an aphorism of Hippocrates, the other the description and treatment of a disease. While the company were after dinner engaged at their bottle, he begged permission to retire to a side-table, to execute his remaining task, which cost him so little trouble, that, while he was engaged in writing, one of the party, who was regaling the rest with a song, having mistaken the tune, he stopt to put him right, and shortly after joined the company, with his task finished, which, to use the words of one of the professors, *omnibus mirabiliter satisfecit.*

and talents, and the asperity of his retaliation with respect to all of them, except one *, on his part cannot be well justified, and, in some degree, warranted the persecution carried on against him. The imprudence of his conduct in private life, and the intemperance to which unfortunately he had become too much addicted, gave his enemies many advantages over him, and exposed him to all the bad consequences, that the misrepresentations of envy and malice could produce. In order to prejudice the minds of the public against the Brunonian doctrine, reports were industriously spread, that its author cured all diseases with *brandy* and *laudanum*, the latter of which, till the proper use of it was pointed out by Dr Brown, had been employed by physicians in such very insignificant quantity, that they, as well as the vulgar, seemed to hold it not in the light of a medicine, but in that of a poison. The reports and wilful misrepresentations, so assiduously circulated, did not fail to produce a considerable share of their intended

* The celebrated Black.

effect. For a long time after the principles of the doctrine had been published, such was the prejudice with which the public had been inspired against it, that Dr Brown was generally their last resource in cases of danger. Mankind at large, as well as the medical faculty, seem to hold it as a true maxim, that, in desperate cases, *anceps remedium melius esse quam nullum.* Accordingly, whenever a patient had been given over by his physicians, and was probably lying with the dead-rattle in his throat, it was very usual for the friends to call in Dr Brown. Among other charges, which he used to bring against his persecutors, he alleged, that if, on these occasions, the patient did not recover (as might indeed have been expected), it was given out, that his death was to be imputed to the pernicious principles of the new doctrine: but that, if (as likewise frequently happened), by his superior skill the patient was rescued from the jaws of death, they then spread the report, that the merit of the cure was intirely due to themselves, as their previous treatment of the complaint had already paved the way to his

success, and in a measure done the work to his hands.

NOTWITHSTANDING that the injuries he sustained from his enemies may reasonably be supposed to have been magnified by him, there is no doubt that the arts to which Dr Cullen and his abettors had recourse, in endeavouring to crush the new doctrine, and involve its author and his family in ruin, were ungenerous and disgraceful. The principles and tendency of his system were so egregiously misrepresented, that, in order to display them to the world fairly, and challenge a refutation of them, if its opponents could produce any such, he published the first edition of his *Elementa Medicinæ* in the year 1780. Although the discoverer had not the advantage of being encouraged, in his undertaking, by the countenance of the great, while the principal adversary, with whom he had to contend, was placed in the most distinguished university in the world, where his influence was all-powerful, and enjoyed the patronage of noblemen of the first rank in the

country, the simple and beautiful principles, laid down in the *Elements* with the force of mathematical demonstration, created such a schism among the students of medicine, as to be matter of serious uneasiness and alarm to Cullen and his adherents. They had now, in consequence of the appearance of the *Elementa*, a fair opportunity of pointing out, in an express publication, and refuting, whatever erroneous principles the work contained. Convinced, however, as they must have been, of the undeniable truths which it brought to light, they were aware of the consequence of making so impolitic and unpromising an attempt. They, accordingly, pursued another plan; and, instead of entering the lists with him upon equal terms, and face to face, and leaving the issue to the impartial decision of the public, the opposers of the new system had recourse to secret arts, by which they thought the more effectually to withdraw from the founder his disciples, and bring discredit upon the doctrine. A medical tribunal of so severe a kind was established, that it only seemed to want the power of imprisonment, to

entitle it to rank on a footing with the Inquisition itself. The followers of Dr Brown were marked out, and, at their private examinations, were, to their sad experience, taught their dependence on the professors, and the respect due to their opinions. In their inaugural dissertations, any allusion to the work, or quotation from it, was absolutely prohibited. Had a candidate been so bold as to affirm, that opium acted as a *stimulant*, and denied that its primary action was *sedative;* or had he asserted that a catarrh, or a similar inflammatory complaint, was occasioned by the action of heat, or of heating things, upon a body previously exposed for some time to cold, and that it would give way to cold and an antiphlogistic regimen,—facts which are now no longer controverted,—he might have continued to enjoy his new opinions, but would have been very unlikely to attain the object he had in view, in presenting himself for examination. By which means, as it was only the bold and independent spirits, who dared to resort to his lectures, his classroom in time became so thinned, that his in-

come from that source was almost annihilated. This obstinate and inveterate opposition to demonstrable truth, however, appears the less remarkable, when we reflect on what David Hume has observed with respect to the clamours raised against the illustrious Harvey, on account of his important discovery. "It was remarked," says the historian, "that no physician in Europe, who had reached *forty* years of age, ever, to the end of his life, adopted Harvey's doctrine of the circulation of the blood, and that his practice in London diminished extremely, from the reproach drawn upon him by that great and signal discovery." If, therefore, Harvey, who enjoyed the particular favour of a powerful monarch, together with every advantage, that independent circumstances could afford, found such difficulty in establishing his discovery,—a discovery so simple, that it could have been demonstrated to the satisfaction of every candid man who chose to avail himself of his sight,—the reception which the new doctrine of medicine, the production of an unfriended genius, opposed by a powerful faction, experienced among the older physicians, is the

less surprising. In fact, physicians, as well as others, who have reached their *fortieth year* cannot well brook the idea of unlearning almost all the knowledge they have previously acquired; and it is certainly a very mortifying reflection to them, that for so great a part of a short life, they have been, at least with respect to their profession, as it were, groping in total darkness.

In the year 1776, he had been elected president of the Royal Medical Society; and such was his popularity there, that, notwithstanding the violent opposition made to his system by the older physicians, he was again placed in the chair in the year 1780. In the year 1785, he instituted the mason lodge of the *Roman Eagle*, not, as his late biographer has asserted, with the interested view of "gaining proselytes to his doctrine," but with the design of preventing, as far as possible, the rapid decline of the language and literature of the ancient Romans. Several gentlemen of distinguished talent co-operated with him in this laudable

undertaking; and, among others, the celebrated Crosbie, at that time one of the chief ornaments of the Scottish bar. No doubt many of his pupils were admitted into the association; but surely a mason-lodge, where nothing but hilarity and good humour is understood to prevail, and from whence every thing serious is banished, would be a very unlikely place for a zealot to succeed in gaining over converts to a new doctrine *. The obligation, which the promoters of the institution signed, sufficiently points out the object of their association; and, beyond the declaration contained in it, no person has a right to search for other motives, as having actuated the founder and his coadjutors. It is dated 1784, and

* The supposition that Dr Brown's view, in instituting this lodge, was that of "gaining proselytes to his new doctrine," will probably be greatly strengthened by perusing the publication of Professor Robison, in which so grand a detection is made of the plots and deep designs secretly carried on by the illuminati in the masonic lodges of Germany. With submission, however, to such authorities, it appears extremely probable, that neither the principles of republicanism, nor those of Brunonianism, are in any degree indebted, for their diffusion, to such a perversion of the original design of free-masonry.

runs thus: "Nos, quorum nomina subsequuntur, quantæ utilitati, quanto decori, quanto commodo et emolumento, Circulus Ædificatorius, Latino sermone expediendus, Caledoniæ, olim priscarum literarum cognitione per terrarum orbem celebratæ, futurus sit, clare prospicientes, lubentissimis animis, et sanctissima fide, promittimus, ei pro virili parte nos suffragaturos, et, ad necessarios sumptus tolerandos, quemque *dimidium aureum nummum* collaturos, circulumque protinus creandum curaturos, et omnia, quæ in nostra potestate erunt, ad illam concordiam, charitatem et bonos mores, quæ ædificatores super omnes mortales insigniunt, tuenda, præstituros." Upon this occasion he received the compliments of all who wished well to polite literature; and most of the gentlemen of classical attainments in Edinburgh joined the association: so that this infant lodge became as remarkable for the superior respectability of its members, as his class was distinguished for the abilities and spirit of his pupils. He received various congratulatory letters from different quarters, and from indivi-

duals with whom he was not acquainted. The editor will take the liberty of inserting one from an eminent classical scholar * in approbation of the institution. " Postquam rite institutum fuisse, te auctore, Fabrorum vel Architectorum Collegium, qui lingua Latina uterentur, audivi, eo precipue consilio, ut linguam istam antiquam, ex Academiis nostratibus propemodum abactam atque exulantem, revocares, eamque ad negotia domestica et sermonem quotidianum traduceres ;—mihi temperare non potui, quo minus hoc literularum, quanquam ignotus ipse, ex hac longinqua atque hyperborea plaga ad te, hæc præclara conantem, gratulabundus mitterem. Tibi quidem, vir eruditissime, atque tuis sodalibus læta ac fausta sint omnia, precor; linguaque hæc, quam tantopere tamque honeste colis, nobilissima, utinam regnum obtineat sempiternum atque latissimum,—firmissimum labantis humanitatis præsidium."

" Ut meam erga te observantiam ostendam, libellum, *de Puerorum Institutione*, a me com-

* Dr Chapman, then residing in Banff.

positum, tibi dono misi, quem, rogo, qualiscunque est, boni consulas. Perge, Vir ornatissime, juventutem Academicam, ut cæpisti, a barbarie revocare, literisque humanioribus excolere."

While Dr Brown presided as master of the Roman Eagle, his zeal and activity in promoting its interest may be fairly said for a time to have revived the spirit of the decaying language, and rendered it in some degree fashionable. But this spirit did not long survive the loss of the founder, when he was afterwards compelled, owing to the keenness of the most illiberal and rancorous persecution, at an advanced period of life, to abandon his native country, and take refuge among the more hospitable and generous inhabitants of the south.

It could scarcely have been imagined, that the purity and fluency, with which he spoke the Latin language, in conducting the ceremonies of the Lodge, would have been considered as a becoming subject either of derision, or reluctant approbation; yet, Dr M'Donnel, in a

written communication to Dr Beddoes, mentions his having " spoken it with the same fluency and animation *as he spoke Scotch.*" Surely, when a man of learning in these kingdoms speaks his vernacular language, whether he pronounces it with the musical accent of the English, the disgusting brogue of the Irish, or the uncouth twang of the Scotch, the language is not in fact different, but exactly the same, in point of words and composition. This disrespectful slur, therefore, would have been more properly withheld. Dr M'Donnel adds; " I was much *diverted* by his ingenuity in turning into Latin all the terms used in masonry." The gambols of a harlequin, the frolicks of a Punch, or the sagacity exhibited some years ago in London by Mr Astley's learned pig, are all sufficiently proper subjects of the inferior species of amusement called *diversion;* but the hearing of an extemporaneous oration, delivered in the Latin language with fluency, purity, and animation, on a subject, the novelty of which gives scope to the display of so much taste, in-

genuity, and erudition, appears to be calculated to afford a degree of intellectual delight somewhat more refined than that called diversion; and in the mind of a classical scholar ought rather to have excited a sentiment more nearly allied to admiration.

FINDING that the style in which he had composed his Elementa was too classical, or, in the language of superficial scholars, *too obscure*, to be generally read with facility; in the same year when he founded the Roman Eagle Lodge he published his English work, entitled *Outlines*, in which the fallacy of former Systems of Medicine is pointed out, and the principles of his own doctrine farther illustrated. For reasons which may be readily understood, he did not think proper to prefix his name to the work; but he afterwards acknowleges it as his own in the translation of his Elementa. In this work, which he meant to be considered as the production of some one of his pupils intimately acquainted with the subject, he speaks of himself

in the third person; and, like Julius Cæsar in his Commentaries, shews that a writer, in alluding to himself in this manner, may display himself to sufficient advantage without strictly incurring the censure of egotism.

For some years back his affairs had been declining daily. The reports of his excesses, which were eagerly listened to, and industriously exaggerated, by the Anti-Brunonians, brought both himself and his system into discredit among the majority of the politer circles of society, where he might have enjoyed a lucrative practice, had his conduct been guided by prudence, or had he been able, like too many of his professional brethren, to temporise, and bow to great men. But unfortunately he did not consider these arts as essentially necessary to his success, or rather, he did not know that they were practised at all, till he had lost the opportunity, if he had been inclined, of turning such knowledge to any account. At one time, his pecuniary distress was such, that, in consequence of being committed to prison for debt, he was obliged for a time to

continue the course of lectures, in which he was then engaged, in the place of his confinement. In this forlorn situation, a note, to the value of an hundred pounds, was secretly conveyed to him from an unknown person. This truly benevolent and beautiful action was afterwards, with difficulty, traced to the late generous and patriotic Lord Gardenstone.

THE torrent of opposition, against which he had so long struggled, now began to bear him down. The illiberality and detraction which he experienced from his numerous enemies, together with a constant succession of disappointments and misfortunes, had exhausted his patience, though he still retained his independence of mind. In his early life, when he was active and vigorous, and unincumbered with a numerous family, he had been prevented, by the repeated assurances of Cullen, " that he would place him in the first vacant chair," from leaving a country little calculated for rewarding his merit, and endeavouring to secure among strangers future provision for his family. He

had long meditated settling in London; and had received considerable encouragement from his friends to put this design into execution. At length, his prospects becoming worse daily, in the year 1786 he left * Edinburgh, elated with the expectation that his merit would be better rewarded in London than it had been in the metropolis of Scotland. The precariousness of such an undertaking, and the distress which would be the inevitable result of its failure, must have had a sensible effect upon most people, however sanguine; but the editor, young as he was, remembers nothing better, than the air of serenity and satisfaction which sat upon his father's countenance during the journey. In fact, the fortitude which he possessed seems, in no circumstances, however trying, to have deserted him, or, for a moment, to have allowed the intrusion of despondency. On this occasion, he

* Dr Beddoes mentions that at this time he "*embarked* for London," which he did not; his conveyance, the greater part of the way, having been a common post-chaise, in which he carried along with him his eldest son and daughter.

enjoyed, perhaps, in a greater degree than any individual ever had done before him, an advantage which cannot be procured in travelling by the most distinguished rank, or the most unbounded wealth. In almost every village or town, which lay in his route, on inquiry, he generally found either an old pupil, or former fellow-collegiate, established as a practitioner. In which case, a message was dispatched to the country doctor, intimating that a gentleman at the inn wished to see him. As no man was ever more generally beloved, the meeting was always as cordial as it was unexpected. A convocation of the gentlemen in the neighbourhood was the usual result; and, though the celebrity of his name had already preceded him, the delight which his conversation afforded them, surpassed what the fame of his talents had given them reason to expect; for, in point of profundity of conversation, or brilliancy of wit, no man ever, in a greater degree, possessed the power of fixing the attention, and raising the admiration of a company. The importunities and hospitality of his old friends protracted

his journey so long, that in order to expedite the remainder of it, he thought proper to dismiss his post-chaise at Doncaster, and proceed in the stage-coach, that he might not any longer be tempted to stop on the road.

Unfortunately, he had deferred his migration until too advanced a period of life to ensure success. He had already entered upon the fifty-first year of his age; he was burdened with a wife and eight children, and destitute of the means of commencing practice in London with the splendour which, at the outset, is so necessary in that metropolis to bring a physician into notice. His chief reliance for support, previously to getting into sufficient practice, was on the profits that might accrue to him from delivering public lectures, from the republication of his printed works, and from the publication of such as he had in contemplation. His reception in London was, at first, highly flattering, and his affairs, for some time, wore a promising aspect. His house in Golden Square (which acquired a temporary celebrity from his

residence there) was the perpetual resort of the literary and ingenious, who flocked about him from all quarters. It was also a receptacle for all former friends and pupils, who happened to be temporarily residing in town. But however gratifying it was to be thus surrounded by a numerous circle of ingenious friends and admirers, the expence with which it was attended, before he became sufficiently established, laid the foundation of all the distress in whch he was soon involved. He had been confidently assured by some friends in the metropolis, before leaving Edinburgh, that the instant his name was announced in London, his house would be crowded with patients, and that fees would flow into his pocket sufficiently fast to defray the expences of his family. Others, particularly his pupils, as an inducement to his leaving Scotland, had made voluntary and warm offers of pecuniary assistance to him, should it be necessary, during his probationary period in London. By the first set, who were well-meaning friends, but so enthusiastic in his cause, as to imagine that the public would immediately appreciate his

merits as they themselves did, he had been undesignedly misled, and by some of the latter, altogether deceived. He had not thought it necessary to carry any recommendatory letters to the inhabitants of London; and, as his acquaintance chiefly consisted of a few literary characters, his practice came in but by slow degrees. During his residence in London, he gave three courses of lectures in the Devil Tavern, which, being attended only by a few select people, added little to his income; and the only money he drew from his writings, arose from disposing of the first edition of his translation to Mr Johnson of St Paul's Church Yard. As his purse was scantily provided on his first arrival, it became necessary to procure furniture for his house upon credit, which was easily obtained. *Facilis est descensus Averni!* After some months of unsuccessful efforts to establish himself, the payment of this, among other debts, became due. He was unprepared to answer the demands against him; and the friends who had formerly proffered their pecuniary assistance, when they probably thought his plan of re-

moving to London would never be fulfilled, now thought proper to withdraw themselves. The consequence was, his being thrown into the King's Bench prison.

Some time previously to this distressing occurrence, while he was engaged in giving lectures in the Devil Tavern, a report had prevailed pretty generally (at least, among the medical people, and in the different hospitals of London), a fortnight and more before it reached his ears, that the king of Prussia had invited him to Berlin to succeed Dr Bayley, lately deceased, as his own physician. He was congratulated on the occasion by several of his friends. He assured them, however, that he was altogether ignorant of such an invitation having been given. The day after his congratulation, the Prussian ambassador, Count Lusi, sent his secretary to inquire, "whether or not he was the physician whom his master wanted." The next day, the ambassador himself requested his company at his own house. At this interview, he was informed by the ambassador, that his mas-

ter's express words in the letter he had written to him were: "Find me out a Dr Brown, an eminent physician, and inquire of him, if he is desirous of settling in my dominions; and, if he be, send him to me."

It was agreed, as no body knew of any other Dr Brown, eminent in his profession, and as the kings of Prussia, for the three last reigns, had piqued themselves on their professors, their universities, and their body physicians, that his majesty could mean no other physician than the author of the new doctrine. Count Lusi, therefore, advised him immediately to transmit to the king a copy of his Latin and English works, together with a letter, written in the English language; and engaged to get them safely conveyed by the first opportunity. The English letter was accordingly sent to the ambassador, along with the *Elementa Medicinæ*, and *Observations;* and, for some reason, shortly afterwards, another letter, written in the Latin language at greater length, was sent to the ambassador to accompany the former. But,

on this occasion, an intrigue seemed to have been set on foot. An apothecary of the same name, from C——n, in Wales, had gone to Prussia without the ambassador's knowledge. This pretended Dr Brown had never been heard of at the court of Berlin, as the genuine physician of that name had got certain information from the correspondents in Berlin of one of his patients in London, who uniformly asserted, that "Dr Brown from Edinburgh, then residing in London, was the person expected there." While he received this intelligence, a lady of some rank, from Berlin, informed the ambassador, "that a Dr Brown had already gone over." On the ambassador understanding this, the books and letters, which had not yet been sent off, were returned without any explanation.

Two of Dr Brown's friends in London, perfectly well acquainted with the court of Berlin, both of them with the late Dr Bayley, and with the former British ambassador, Sir John Stepney, as well as with the lady from Prussia,

(who had mentioned to the ambassador in London the circumstance of *a Dr Brown* having secretly gone over to Berlin), assured him that it was a deep laid and double intrigue, political and gallant. They informed him, that as this Dr Brown, in Wales, had been family practitioner, and *otherwise subservient*, to a lady of rank and intrigue, intimately related to a former British ambassador at Berlin, it was *probable* that she had advised him to use her own interest and that of her friends, and endeavour to pass for the Dr Brown, with whom the ambassador had been in conversation; but to be cautious how he should play his part before an absolute and discerning monarch.

Dr Brown's friends, therefore, advised him to dispatch his last letter (or that written in Latin) to the king, to undeceive him, and enable him to discriminate betwixt an ignorant apothecary, and the discoverer of a splendid system, by desiring him to explain any sentence of that letter which his majesty should think proper to point

out, or any paragraph of the Elementa *ad aperturam libri.*

For several reasons, he did not think it prudent, at once, to comply with the advice of his friends, in immediately writing to undeceive the king. He naturally judged, that if such a double intrigue really did exist,—as his friends had given him every reason to believe,—the influence of so many, and, as appeared from the freedoms they had used with the king, such powerful favourites, would infallibly prevail over the juster pretensions of a single individual, a stranger in the country, a mere philosopher and plain man, neither desirous nor capable of acting the politician, much less of conducting an affair requiring the utmost nicety of management, and which, according as the monarch's disposition, hardly then known, should turn out, might eventually terminate in forfeiture, banishment, or even death. He did not pretend to think, that in the eye of a great prince, the discovery of the difference of merit betwixt him and the meanest and most ignorant apothecary, would

have any weight, (at least, without the accompaniment of a miraculous cure performed on the king himself, or immediately under his eye), in serving any good purpose in his favour. But the history of courts sufficiently proves, that the agitation of such a question,—where indignation might arm the hand of power, and interest avert the poniard from its own breast to that of the innocent,—never fails to prove the small germ of much future disaster. It is not to be forgotten that one of the memorable articles in the charge brought against Cardinal Wolsey on his trial was, that of his having breathed upon the king when he was supposed to be affected with the venereal disease!

THE conjectures of his friends, after all, might possibly have been groundless; and he himself was rather disposed to think, that the most likely cause of his disappointment in being placed about the person, and in the family, of a great monarch, according to that monarch's seeming determination, was that the ambassador had taken the advice of some of the usual junto of the faculty,

and that there terminated the whole affair. In confirmation of the probability of this supposition, some years before, in a similar case, (as ought to have been formerly mentioned), the interference of his good friends prevented him from obtaining the Professorship of Medicine in Padua, the oldest, and once the most renowned, university in Europe. The honours and emoluments intended him there were flattering. The ambassador had been desired to apply to a physician in London; he chose to apply to Dr Cullen; and the consequence need not be mentioned. The Venetian ambassador, had he been contemporary with Harvey, might as well have made a similar application for a character of him to a London physician, or any other regular practitioner.

> Invidia Siculi non invenere tyranni
> Tormentum majus!

With respect to the present case, whether this was the sole cause, or whether it only co-operated with those formerly mentioned, it appears, from beginning to end, how assiduous the hand of per-

secution had been against him ever since the first enunciation of his doctrine, either in lectures or in publications. In short, he went through a chain of cross accidents, almost any one of which, at first sight, might seem to have been sufficient to derange his ill-cemented affairs, but which, when combined, place the consequence beyond surprise.

FROM the account delivered above, it appears, at least, probable, that the intrigue of a woman, along with other causes, was at the bottom of his disappointment in an affair which promised him so much prosperity; but his incarceration, beyond a doubt, was occasioned by the malignant interference of another female. To establish his house in London, he wanted furniture; and, being then a total stranger, it was necessary that some friend should recommend him to a broker for credit. He accordingly applied to a Mrs I***s, the wife of one who had been a zealous pupil of his, and equally friendly to himself, and enamoured of his doctrine; whose enthusiasm had led him so far,

many years before, as to make him prevail with his father to offer the sum of an hundred pounds to Dr Brown, on condition that he would quit his ungrateful native country, and try his fortune in London. This gentlewoman, accordingly, recommended him to a broker, whom she called an *honest man*, who afterwards, to fulfil the character given of him, sent furniture, for which, as the payment was not to be prompt, he did not scruple to charge double its value. A misunderstanding, which had frequently happened before, soon afterwards took place between this lady and her husband. The lady, who, it seems, contrary to her ordinary appearance before company, was addicted to the bottle, and, at times, carried her excess in that way to such a pitch of ferocity, as to disperse the whole family, and remain in the undisturbed possession of the house,

> (Interea Inachiis sese referebat ab Argis
> Sæva Jovis conjux, cælumque invicta tenebat,)

in some of these paroxysms of furious intoxication had conceived a disgust against all her hus-

band's friends, and, consequently, against Dr Brown among the rest. She ordered the broker, who appears to have been all submission to her, to demand and make good his money. Had he been acquainted with Virgil, he might have replied, in the words of Æolus,

> ——————Tuus, O Regina! quid optes
> Explorare labor; mihi jussa capessere fas est.

He did, however, what amounted to the same thing, he obeyed her commands with the utmost alacrity, and the *honest* means he employed were, to arrest his debtor, without any previous demand of the money due him. In allowing himself to be carried to the King's Bench, Dr Brown gave such a proof of inflexible honour, as, in his circumstances, could not have been reasonably expected. His credit would suffer an irreparable injury by its being spread abroad that he was confined in prison, and the success of his practice would be marred at the outset: he rather chose, however, to suffer every hardship, that might be the consequence of his misfortune, than involve the two bailsmen, who had become

bound for the debt, though either of them could have easily borne the loss, and he was well convinced of the rascality of one of them, a Scotch bookseller.

Besides these disasters, a plot, preconcerted long before he made his appearance on the spot, had been laid, to extract a lucrative article of trade from his discoveries. His bookseller, Murray, applied to him for a *nostrum*, offering a trifle for the property of it. He rejected both the proposal and the premium with disdain. Soon after, and, as he believed, not without the privacy of this man, he was assailed by no less than five persons, who solicited him to make up a secret medicine. The object of these honourable gentlemen was, to take advantage of his necessities, and, without making an adequate recompense to the inventor, to extort from him the possession of an arcanum, which, though it could not have failed to entail disgrace on its discoverer, would have been a fertile source of gain to the swindlers who wished to impose on him. His friend, Dr Gilbert Stewart, several

years before, when in Edinburgh, advised him to make up such a medicine; and, after his return to London, the constant burden of his theme among their common friends, was, "that Brown must make a pill." Dr Stewart had assured him, that such was the rage for these arcana, that he might get 10,000l. for the receipt, but much more in proportion, annually, by keeping it in his own hands. On being applied to, therefore, by these persons, he thought it prudent to listen to what they had to say. Their proposal was, to allow him one-third of the profits, and to divide the other two-thirds among themselves. Before making an answer to them, he desired that they would satisfy him with respect to two questions. The *first* was, after he had made up the medicine, and given each of the partners the receipt, what security was he to have that justice would be done him in the returns of the sale? Their answer was, that they could think of no other security for him, than what each of them relied on for himself, the *honour* of all the partners as gentlemen. He observed, that, in commercial transactions, ho-

nour was never regarded; for the truth of which he appealed to themselves. Besides, as this was a property that would descend to heirs and successors, what reason had he to expect that they, through all future generations, would turn out men of honour? He said, that before any such hope could be reasonably entertained, the golden age must have been again revived. The next question was; As the inventor, was he to have a premium allowed him? The answer was, "most certainly;" but, in such general terms, as to give no greater satisfaction than their answer to the first. He, therefore, concluded the conference by informing them, that if he ever submitted to so degrading a measure, it would only be in consequence of the inducement of a very large premium for the benefit of his family, and that, until they came forward with a specific offer, he could come to no ultimate resolution. He afterwards learnt, that the plan of this quintumvirate was, by every worthless artifice, to get him so far involved in his circumstances, that he should be obliged either to starve in prison, or comply with their terms. Two

of the confederacy, in particular, thought proper to wait on the broker, and assure him, that it was in Dr Brown's power to obtain his release whenever he pleased, by accepting a very advantageous offer which had been made him, and which would enable him to satisfy all the demands against him: they, therefore, advised him by no means to consent to any proposal for his liberation that might be made. Accordingly, their application was eagerly renewed, while he was in the King's Bench, in such circumstances as gave them hopes that he would gladly purchase his freedom at any cost. But they were mistaken. Since conversing with them, he had reflected deliberately on the subject; and, trying as his situation then was, he rather chose to run all hazards, than incur the stigma of having suffered a nostrum to be vended in his name. Alluding to this transaction, in a letter to a friend, he observes with not a little indignation: "Strange and various are the arts of London! While there is scarce any thing out of which they will not extract money, among other sources of this traffic, upon many occasions, they

find a very fertile one in their manœuvres on the human brain.—Cursed state of things! that blockheads, whose highest merit is low cunning and mean pursuit, should derive a comfortable living, and often affluence, from the merits of their superiors, both in worth and intellect, and leave the latter to mere philosophical reflections on the absurdities of what is called refined life!" In consequence of the friendship and activity of a worthy gentleman, from Scotland, of the name of Miller, who was unwearied in exerting himself to bring his creditors to a compromise, together with the well-timed pecuniary assistance of the late amiable and generous Mr Maddison, stock broker, of Charing Cross, who had formed a great attachment to him, he was at length liberated from his confinement, and restored to his family in Golden Square.

The conditions of the liberation granted him by his creditors were, that he should bind himself, within a certain time, at stated periods, to pay off his debts, which amounted to no more than 250l. Writing to a particular friend, who

had offered himself as one of a certain number, willing to raise among them a sum sufficient to extricate him from his embarrassments, and enable him to go on unmolested with several projected works, he seems, in his sanguine disposition, both to have forgotten that, while he was writing, he was still confined within the walls of a prison, as well as that upwards of half a century had passed over his head. His intention with respect to his future works was, to make no bargain with booksellers, by whom he had been greatly imposed upon, but to print and publish all his works for himself.

"******* To enable me," says he, "to live, and go on with these payments, I shall need 500l. An edition of a translation of the *Elementa* is gone to the press, but has been interrupted in its progress since my coming here. It will consist of 2000 copies; and, as all the world, ever since the publication of the original, have been in anxious expectation of it, it cannot fail to have a rapid sale. It is intended to be sold for ten shillings a copy, which will

bring in the neat sum of a thousand pounds. Deduct from that for printing and paper 150l. and 250l. for shop-rent and advertising, (which is a higher estimate made against me than that by the printer) and the money that will gradually flow into my pocket will amount to 600l *. This performance, were I left sufficient ease and leisure, would be in the hands of the public in less than three months † from the time of my resuming my task. Next, as the first edition of the *Observations*, which consisted of a thousand copies, is out of print here, and I believe also in Edinburgh (perhaps to my great loss, as I hinted to you above, in consequence of the knavery of my printer), a second edition of it

* The money which he drew for the first edition of this translation, consisting of 1000 copies, after all this deliberate calculation, did not exceed 70l. !

† It is a fact almost incredible, that he begun and finished this task, without the aid of an amanuensis, in precisely *twenty-one days*, during which he commonly rose at four o'clock in the morning, but never lay beyond five. While he was engaged in this labour, he lived well, but with unusual temperance in the use of the bottle; and he was then observed, by his friends, to look better in point of health than he had done for some years.

with some necessary alterations, will follow the translation to the press in less than a month after. This edition also will consist of a thousand copies, and the copy will be sold for 7s. 6d. in boards; which, with the deduction of expences, as stated above, will bring in of clear profit, about 200l. This second edition of the *Observations* will be followed by a treatise on the gout, and the operation of opium on the human body, which last will form a half crown pamphlet, and should bring in about 100l. of profit, as we may without hesitation throw off 2000 copies of it. All this I propose to accomplish before the king's birth-day. The next work to follow will be a third, and, perhaps, last edition of the Elementa, with the addition of three sheets to finish the local diseases, together with many corrections, abbreviations, enlargements, and polishings, to which all future editions of the translation may be accommodated. This should yield 100l.; and, as much pains must be taken with it to render it as complete as possible (since it is intended for a last edition), I shall allow myself the three summer months to

finish it. The last thing *in petto* is a Review of Medical Reviewers, to come out, not at fixed periods, but occasionally; the first number of which will probably finish my labours as an author for the first year *. The second year will be equally employed with the same sort of labour, partly in continuing the occasional Review, partly in giving other editions of some of the works of the first year, and also in composing a volume of Notes and Illustrations of the translation, and a second volume of *Observations* upon other false systems of medicine, after demolishing the most prevailing one at present, that of Dr Cullen. Between the continuation of the same subject through a third and fourth, and, perhaps, a still greater number of volumes, with other works that either have been mentioned, or to which I may be led by future accidents and circumstances, I think I shall be able to fill up all my vacant time for years to come. Any interruption arising from my practice will be an agreeable one." * * * *

* After his arrival in London.

SHORTLY after his arrival in London he had become acquainted with a select circle of highly respectable men, who assembled every other evening at the Orange Coffee House. Among the number was the late Mr Maddison already mentioned. This well known philanthropic character, notwithstanding that in acts of disinterested generosity he had sustained losses to the amount of upwards of 40,000l. with scarcely a single return of gratitude, or honesty, from those whom he had obliged, was not deterred from befriending Dr Brown during the embarrassment of his affairs. It was to his friendship and goodness that his release was due; and his being again set upon his legs, and re-established in his practice, were owing to the same excellent man.

HIS affairs, in consequence of the assistance of this amiable character, and of some of his other well-disposed friends, being now put into a better train, he set himself down with earnestness to execute the different works which he had been planning, and on the accomplishment

of which the emancipation from his difficulties intirely depended. A happier prospect seemed now opening to his view. He had become annual physician to several families of respectability, among whom, as he had performed some remarkable cures, in cases which had been given over by the London practitioners, his character stood very high. In consequence of their recommendation, almost every day brought him a new patient, or led to profitable connections; and it now seemed as if Fortune, tired with her long-continued and unremitting persecution, had at length resolved to allow him to pass the evening of his days in comfort and independence, as the reward of a life spent in almost perpetual trouble and vexation. He used now triumphantly to boast, that he would be able still to keep the press going for ten years to come, and hoped that he would yet live to see his enemies silenced; and, while various other literary speculations occupied his powerful mind, he had actually agreed with a bookseller, to dispose of the copy-right of a Treatise on the Gout, for

500l. to be paid down on presenting the manuscript. But, alas!

> Vitæ summa brevis spem nos vetat inchoare longam.
> Jam te premet nox, fabulæque Manes,
> Et domus exilis Plutonia.———

In the midst of these flattering expectations, while he was fondly planning future designs, a fatal stroke of apoplexy at once put a period to his life, and to the illusive hopes of future happiness which he had been cherishing. This melancholy event took place upon October 7th, 1788, when he was between the fifty-second and fifty-third year of his age.

Upon the day preceding that of his death, he delivered the introductory lecture of a fourth course, at his house in Golden Square. During the lecture nothing unusual was remarked in his appearance. He spoke with the vehemence and animation, which marked his conversation, when he entered deeply into the subject. The same day, at dinner, however, a very valuable and old friend of the family, Capt. William Hunter, at present one of the officers of Greenwich Hospital, observed so great an alteration

in the appearance of his face, (though he did not rightly know in what it consisted *), that, on returning in the evening to Greenwich, he could not banish a strong presentiment, which had laid fast hold of his mind, and which he communicated with alarm to his daughter, that his friend's end was approaching; so that next day, when the editor of these observations, then a boy, went to Greenwich to communicate the sad tidings, the instant he entered the house, Captain Hunter exclaimed with much emotion, "Your father is dead!"

This striking circumstance the editor has judged it proper to insert here, to prove the malignity of a report that was very generally circulated and credited, namely, that he had occasioned his premature end by swallowing a large quantity of laudanum. That, on the even-

* The appearance which had struck this gentleman was nothing more than a certain turgescence of the face, particularly in the eye-lids and eyes, with flushed cheeks, apt to convey to one ignorant of medicine the idea of florid health, but which, in persons predisposed to apoplexy, very commonly precedes an attack of the complaint, and ought, therefore, always to be carefully watched.

ing preceding his death, he did take a considerable quantity of laudanum (as he had been often accustomed to do on similar occasions, that is, when he apprehended the approach of a fit of the gout), is true; but to affirm, that this had been the immediate occasion of his death, would be as absurd as to allege that a person, accustomed to drink a pint of wine every night, on being found dead next day, had poisoned himself by drinking his usual pint the preceding evening. The fact is, that next morning between five and six he got out of bed, and walked across the room to ascertain the time of the day; and, on finding it too early to rise, he returned again to bed, and fell into the fatal sleep which closed his eyes for ever. He left behind him a wife, by whom he had had twelve children, of whom eight, four boys and the like number of girls, survived him.

The report of his death was rapidly spread over Europe. On its reaching the university of Pavia, where his doctrine had occasioned a schism both among the professors and their pupils, and

where he had even then many warm admirers, many of the students went into mourning, in honour of his memory. This anecdote the editor has from the mouth of Dr Joseph Frank, chief physician to the hospital of Vienna, who had then recently graduated at Pavia, and afterwards taught the Brunonian doctrine with eclat from one of the chairs of that distinguished seminary. For some time after his death the public prints teemed with different accounts relating to so extraordinary a character. Perhaps then even the most rancorous of his enemies thought, when it was too late, that their persecution of him had been carried beyond bounds: and the humane sympathy shewn by the public at large for the distress of his young and numerous family will for ever reflect honour upon the English nation. At a funeral meeting of the Roman Eagle Lodge, held upon January the 28th, 1789, the following elegant eulogium, composed by the late Charles Little, Esq. of Gilmour, was pronounced upon him by the gentleman who succeeded Mr Little as master of the lodge.

" Dum hac nocte ad exequias Circuli Conditoris nostri celebrandas conventi sumus, non a proposito alienum videtur, si pauca de vita ejus et meritis in vestras revocare mentes incumbem.

" Joannes Bruno, ut non patricia, ita admodum honesta genitus familia, et apud Dunsum, Scotiæ oppidum australe, anno circiter 1736 natus fuit. Hoc in loco animum primo Romanis literis dedit, et in pueritia quidem tanto antecessit condiscipulos, ut facile intelligi possit pari modo omnes in cæteris artibus superaturum— Parentibus ut morem gereret, Theologiæ aliquamdiu mentem applicavit: posteaquam, autem, studiis his relictis, Medicinæ toto animo incubuit. Artem hanc salutiferam, quæ adhuc conjecturalis, incerta, et longe plerisque sui partibus falsa erat, in certam demum, quæ vitæ dici possit, scientiam redegit. Morborum causas il lustravit, curationes amplificavit, ditavit; ac principia, quæ omnes illustrant, confirmant, explicavit. Communes omnes morbos in duas formas, phlogisticam, seu *sthenicam*, et *asthenī-*

cam seu antiphlogisticam distribuit. Illos in nimia incitatione, hos in deficiente, consistere demonstravit. Illos debilitantibus, hos stimulantibus, auxiliis tolli proposuit.—Sed hæc et similia fusius clariusque a seipso tractantur in *Medicinæ Elementis*, quæ preclari ejus et præcellentis ingenii ampla erunt et sempiterna testimonia.

" Illum autem tanquam Circuli nostri Conditorem libentius aspicimus ; et in hoc quidem conficiendo insigne monumentum et memoriæ suæ et patriæ profuturum exegit. Nam cum literæ Romanæ neglectæ passim et spretæ jacebant, illo auctore atque agente, Circulus Romanus ob eam causam et eo consilio fuerat institutus, ut non solummodo in artis nostræ mysteriis Aquilæ filii initiarentur, sed Romanis optimis studiis et exemplis imbuti essent et eruditi.

" Ob institutionem perquam utilem de patria plurimum mereri Bruno consendus : nam etiamsi quædam studia commodiora Romanis literis sint, nonnulla forsan delectiora ; attamen aut me amor instituti nostri fallit, aut nulla unquam

studia nec majora, nec bonis exemplis ditiora fuerunt. Quicunque enim Populi Romani res gestas fideliter evolvit,—non flagrante et omnia dejiciente fæda imperatorum tyrannide, sed vigente adhuc et florente republica,—multa laudanda inveniet, multa imitanda ; nec ulla virtutis meliora scio incunabula, quibus animi ad patriæ amorem, ad gloriæ cupiditatem aluntur.

" PRÆCLARO hoc opere confecto, totis viribus incubuit Bruno noster ad augendum Circulum quoque et confirmandum ; et dum ipse Aquilæ Romanæ præfuit, magistri munus summa cum laude et sibi et Circulo exercebat. Omnibus, præcipue Romanis, literis eruditus, arcanas nostras cæremonias, linguam Latinam uti vernaculam loquens, more Romano administravit.

" ATTAMEN nec doctrina nec ingenium moram instanti morbo indomitæque morti afferent. Stat sua cuique dies ; breve et irreparabile tempus omnibus vitæ est ; et pallida mors, quæ æquo pulsat pede pauperum tabernas regumque

turrea, Brunonem quoque e terris eripuit. Obiit Londini septimo Octobris anno 1788.

"Pudet vitæ ejus nobis et amicis tristis, uxori familiæque autem luctuosus et damnosus fuit. Sed a lamentis muliebribus ad contemplationem animi ejus dorium vocemur, quas neque lugeri neque plangi fas est; et sic memoriam ejus veneremur, ut omnia facta dictaque ejus nobiscum revolvamus. Fuit certe ingenii vir acutissimi, omnisque doctrinæ et auctor et admirator; ita etiam benignitate et benevolentia ornatus, ut bonum virum facile credere, magnum vero libenter. Tanquam medicinæ emendator postera et perpetua laude assequendus; tanquam pater Aquilæ Romanæ semper a nobis grata recordatione habendus. Quicquid, igitur, ex Brunone amavimus, quicquid mirati sumus, manet, mansurumque est in animis hominum; atque ille posteritati narratus et traditus superstes erit.

"Tu equidem fortunatus, Bruno! qui famam peperisti immortalem; qui tuo ingenio nomen tuum perpetuæ memoriæ commendasti. Unum

nobis et amicis tuis, vivente te an moriente, melius fuisset, noscit solummodo Deus Opt. Max. qui mundum regit gubernatque, qui hominum commoda vitasque tuetur. Is, qui suo ex consilio sapientissimo omnibus mortem proposuit, te quoque e nobis evocavit; et fiat ejus voluntas! Vale, igitur, vir præstantissime! vale, vale! Nos te, ordine quo natura permiserit, sequemur."

It has been already mentioned, that he was of low stature, but extremely well-proportioned, and in his youth had been reckoned handsome. His personal strength and courage, when he was a young man, rendered him so formidable to the adverse borderers, between whom and their neighbours perpetual skirmishes at that time prevailed, that no single individual dared to attack him, particularly when armed with his common companion, an Esculapian club, which he used to call his *cud*, and by which he ensured himself respect wherever he wielded it. Afterwards, the sedentary life which he led, and habitual high living, made him so

corpulent, and so heightened the natural ruddiness of his complexion, as to greatly alter his original appearance. When enraged, which he was very apt to be, his face might justly be said, in the language of Milton, to have been "too severe to be beheld." The dignity which he could summon up in his countenance was calculated effectually to restrain and overawe petulance. His eye, when animated, was so keen, that it seemed to search the very soul of his hearers; and the report which one of his daughters, then a little girl, made to her mother, after peeping through the key-hole of his class-room door, was, "that her father had seemed as if he would have *looked through her*." His voice, in consequence of repeated attacks of sore-throat, to which he was extremely liable, was in general loud and hoarse; but in rehearsing some of the beautiful passages of his favourite poets, he could so modulate it as to produce, according to the account of one of his former friends, "fine cadences and pleasing tones, which removed all the uncouthness of his accent."

He possessed an openness of heart which, though it frequently betrayed him to knaves, endeared him to good men; and his integrity and high sense of honour were acknowleged even by those who were but half his friends. A just pride, which arose from the consciousness of his own powers, was certainly one of the prominent features in his character, and contributed more than any thing to marr the success of his life. In his boyhood he was justly proud of his Greek and Latin, and personal vigour; and on attaining a more advanced age, of his proficiency in mathematics and philosophy at college. Afterwards, he plumed himself on his qualifications in making young physicians, and supplying the literary defects of his master in medicine, so distinguished a leader in the profession. And, lastly, his greatest boast was that of having detected the fallacy of all former systems of medicine, and establishing one of his own, incontrovertibly true, in consequence of thinking for himself, to a vast extent of range, and in a manner diametrically opposite to that of any of his predecessors. After making this

important discovery, and, in consequence of it, rendering some of the most essential services to several families of respectability in Scotland, by performing cures which were reckoned next to miraculous, that was the time for applying to the stronghold of patronage. None of the nobility, in whose company he ever was placed, had treated him otherwise than with the respect due to his talents; and they only wanted to be courted to protect and encourage him. But his pride had not then forsaken him, and he could not stoop to throw himself in the way of that countenance which would have been most gladly given him. The only two patrons he can be said ever to have had, men of equal fortune, benevolence and publicity, Lord Gardenstone and Mr Maddison, of Charing Cross, volunteered their assistance to him at a late period of his life, when a series of preceding misfortunes had so far broken his lofty spirit, as to force him to accept their aid. For some years, however, before his death, the largeness of his family, and the extreme dependence of his circumstances, made him frequently lament the past op-

portunities he had so often let slip, of bettering his affairs, by a profitable connection with the great and the opulent.

Mr Wait, in his communications to Dr Brown's recent biographer (in which he has been guilty of many mistakes), talking of his moral character, observes, "He *seemed* to be happy in his family, and, *as far as ever I could observe*, acquitted himself affectionately as an husband and parent," &c. It appears, that had this gentleman's intimacy with Dr Brown been so close as to authorise his voluntarily giving those communications concerning his former friend, that he might have safely spoken with somewhat more decision on this part of his subject. The words which the editor has marked with *Italics* certainly appear to imply, that the *seeming* affectionateness of his behaviour to his family might notwithstanding have been assumed, as that of too many apparently affectionate fathers before strangers frequently is. It required but a short and no very intimate acquaintance with his character to enable any one to affirm,

that his whole soul seemed to be wrapped up in the most unbounded affection for his family, for whose sake he would have sacrificed himself, and who, on their parts, were so intirely devoted to him, that, even at this distant period, when time must have in some measure effaced the recollection of him, the slightest disrespect paid to his memory produces such an effect on their feelings, as they could never have experienced, had they not almost adored their parent. So completely happy in the bosom of his family was he, that in his hours of relaxation, like the great Agesilaus of Sparta, he seemed to enjoy no amusement more than rolling on the carpet, and allowing his little children to mount upon him *. A farther proof of the same affectionate disposition towards his family, was the care with

* To be caught in such a situation, which was frequently his case, would no doubt highly mortify many of the little geniuses of the day, who so politely bestow upon each other the appellation of *philosopher*, on account of some unimportant and accidental discovery, and who know not the delight of such unbending.

which he himself, in the midst of his various avocations, superintended their education at a more advanced period of their age. His three eldest daughters and his eldest son he initiated in the Greek and Latin; and had led them on a considerable length, when his removal from Scotland, and a change of circumstances, interrupted his plan of himself completing them in these languages, as well as in the other branches of polite education.

The cordiality of his manner to his friends had something in it so prepossessing, as rendered them not only warmly, but enthusiastically attached to him. Many of the most respectable inhabitants of the metropolis of Scotland, once his contemporaries, proudly boast of their former intimacy with him; and not a few lay claim to an acquaintance that never existed. The accident which determined his renouncing the study of divinity, and entering upon that of medicine, has already been mentioned, p. xliv. The honour of having been agent in that trans-

action is claimed by no less than three respectable clergymen, who were at that time his fellow-students in divinity. His powers in conversation, and unequalled wit, always gained him the supremacy in company; a situation which he did not "assume," as Dr Beddoes alleges, but which was willingly yielded to him. Such is the character which he maintained during his life; and hundreds of his surviving friends, in different parts of the world, can bear ample testimony to its truth. There is certainly a description of individuals, who, while from defect of abilities they are incapable themselves of animating a social circle, envy the possession of such a talent in another; and there are others, again, of so phlegmatic a disposition by nature, as to receive no delight from the brilliant sallies of one of a sanguine temperament and glowing imagination:—to such his manners could not have been agreeable, or may have even been the reverse. The only person, who, either in conversation, or in writing, has expressed any sentiment in disapprobation of Dr Brown's companionable qualifications, is Dr

Beddoes, who observes: "In 1782, I remember to have spent an evening with Dr Brown. He *assumed* the sovereignty of the circle, which consisted principally of his disciples, and nobody thought of disputing his title; he displayed uncommon vigour of imagination, but to me the figures he called up were so little agreeable, that I never desired his company a second time. Others received entertainment; and by those who knew him well, he is remembered as the best companion in the world." Had Dr Beddoes conversed more frequently with Dr Brown; had he seen him in those moments, in which the native vigour of his mind displayed itself, uninfluenced by that adventitious stimulus, which, while it lends a temporary elasticity to dulness, is apt to hurry fervid imaginations into excentricity and error—in all probability he would have forgotten the disgust which this meeting excited in him, and which seems to have left such an indelible impression. The same gentleman observes of him, "He never seems to have been at pains to form a system of conduct advantageous to himself, and just towards others."

Philosophers in all ages, on account of the abstract investigations in which they are generally engaged, for the most part have been absent men with respect to the common concerns of life; and, in consideration of the important researches in which they are supposed to be employed, such negligence is very readily overlooked by the world. Such absence so generally accompanies the genius of philosophy, that people who would affect intellectual superiority, without possessing any of the essential requisites that constitute it, in order to impose upon the simple and credulous, very frequently have recourse to this external sign of it. If, then, this absence of mind, or inattention to the common concerns of life, so frequently characterises the genuine philosopher, habitually engaged in profound meditation, have we so much reason to condemn a philosopher, who possessed a mind capable of inventing one of the most splendid and important systems which the world ever received, for not cautiously and formally setting about framing "a system of conduct advantageous to himself, and just towards others?"

Suppose that, instead of pursuing his meditations in perfecting a system the most useful to mankind which can be conceived, he had devoted himself to forming a system of conduct "advantageous to himself," &c. (in other words, that he had stooped to cultivate the means by which medical men commonly get into extensive practice), and that he had done this with success;—he might, doubtless, in that case, have become a money-making physician, and his family at this day might possibly have been enjoying the fruits of his "advantageous system;" but would he have left behind him an immortal name, or would mankind at this time have had reason to venerate his memory as their greatest benefactor? The world, therefore,—which appears to be meant by the last word (*others*) in the above-mentioned quotation,—seems not only to have received ample *justice* from him, but even to have been laid under a deep and everlasting obligation, which it can never requite in any other way than by a grateful remembrance and due respect for the memory of him who conferred it.

With respect to the intemperate excesses, of which he is accused, though these were certainly too frequent, they have been egregiously exaggerated; and many ridiculous stories of the frolics committed by him in a state of ebriety have been circulated at his expence. Perfection of character is certainly not to be looked for in any individual; and that too frequent indulgence in conviviality was the principal blemish in his, cannot be denied. But even in this respect, too severe or premature a censure ought not to be passed upon him. Let a slight retrospect of his life be taken. Let him be viewed in the heyday of youth, with a perpetual flow of animal spirits, strong natural passions, and a vigorous constitution, constantly surrounded at college by a set of gay, and often dissipated, young men, upon whom he depended for his livelihood, and into most of whose excesses he was, from that circumstance, almost compelled to enter; can it be reckoned surprising that exposure to such circumstances first led him into occasional dissipation, and that afterwards, by the repetition of the cause,

his habits became more confirmed? Or is it to be thought wonderful that, at a more advanced period of life, repeated disappointments, persecution, and all kinds of mental distress, made him at times, as it were, glad to fly from himself, and banish his cares, by betaking himself to the bottle? He who can make no allowance for one, in such circumstances, giving way to so dangerous a habit, deserves little credit for the self-denial he would be likely to exert if exposed to a similar temptation. His capability of resisting the allurement appears as questionable, as those womens honour who can make no allowance for an unfortunate female that has fallen a victim to the insidious arts of seduction.

According to Dr Beddoes, "he had little medical erudition." Such an unqualified assertion certainly deserves serious consideration. His progress from the commencement of his medical studies, between the twenty-third and twenty-fourth year of his age, previously to which he had perfected himself in all the preparatory

branches of learning, until the discovery of his own doctrine, when he had attained nearly his fortieth year, has already been detailed. During the whole of that period he was unremittingly employed in the study and teaching of medicine, and enjoyed the advantage of being placed immediately under the eye of the first leader in the profession, whose library was open to him, and whose attachment to him must have given him decided advantages over his fellow-students. No systematic writer, or medical author of any note, from Hippocrates down to Dr Cullen himself, had escaped his attentive perusal. A competent acquaintance with the medical works contained in his own library, which was not inconsiderable, must have constituted *deep medical erudition;* and the marginal annotations, in his hand-writing, found in almost every page of his books, demonstrate that they had not been placed in the shelves for shew, but that he had ransacked every source of medical information with his characteristic ardour of research. Dr Beddoes allows that, previously to his discovery, he had *probably*

read more than ordinary students, but that after constructing his theory he seldom perused or consulted any medical author. In advancing this assertion, Dr Beddoes has been erroneous in the extreme; for, so far from not consulting modern medical authors, it appears from the extract taken from a letter of his already quoted, in which he announces to a friend his intended literary works, that it was his express design to write a *Review of Medical Reviewers;* a work for which he would have been ill calculated without general reading; and the idea of which must have been suggested to him intirely by such reading. How far this statement is reconcileable with his having been a man of *little medical erudition* appears no easy matter to determine. But waving all bare assertions, either for or against his medical erudition, which may be advanced by different persons, from very different motives, is the internal evidence of erudition in point of literature, science, and medicine, contained in almost every page of the *Observations* and *Elements*, to be considered as the effect, not of a long course of study, but of intuition?

With respect to his religious sentiments; after renouncing the gloomy sect, in whose tenets he had been originally educated, he soon made no scruple to ridicule his former opinions. But the effect of his early discipline remained pretty firmly impressed upon his mind; so that, though he had divested himself of his bigotry, he still retained a considerable portion of religious strictness. In this state of mind, the perusal of Hume's Essays at first excited much indignation in him; but the repeated study and discussion of them among his fellow-students, which, at the time these essays first appeared, was very fashionable at Edinburgh, terminated in a material change in his religious sentiments. An anonymous writer, who, a few years ago, published some anecdotes of him in the Courier, mentions, that on his receiving an unexpected pecuniary supply in London, he exclaimed, "Another such instance, and I'll believe in a Providence." The circumstance is by no means unlikely to have happened; but to draw any serious inference from a hasty ex-

pression, pronounced in a state of mind sufficient to throw one of a less sanguine temperament off his guard, appears to be extremely unfair. That he was rather free in his sentiments of religion, is undoubted; but that he was reserved in his communications upon the subject, is equally certain. A single sentence of the following extract from several pages of directions to a hypochondriacal patient of his, whom none but his physician could rouse from the profound silence which he occasionally used to observe, will shew in what estimation he held the *popular preachers* of his own country. The extract itself will likewise make it appear how little he thought of the affected gravity and solemnity, which was then so generally prevalent among physicians, and among many is so still. After some pages of particular directions, he proceeds: "I know not a more powerful remote cause of melancholy (not to speak of books which men of sense are in no danger of meddling with, or even thinking of), than Young's *Night Thoughts*. In this book a gloom

is thrown upon all nature, that is not cleared off by any consolations of grace, which the author could offer in compensation. The perusal of judiciously and elegantly written history, as Gibbon's *History of the Decline and Fall of the Roman Empire*, Stewart's *History of the Reformation of Religion in Scotland*, and of the *Reign of Mary*, together with the reading of light and elegant belles lettres style, as Marmontel's *Contes Moraux*, &c. might afford intellectual pleasure and amusement to our patient.

"The order of his management through the day may be the following.

"For breakfast, toast and rich soup, made on a slow fire. A walk before breakfast, and a good deal after it. A glass of wine in the forenoon, from time to time. Good broth or soup to dinner, with meat of any kind he likes, but always the most nourishing. Several glasses of port, or punch, to be taken after dinner, till some enlivening effect is perceived from them;

and a dram after every thing heavy. An hour and a half after dinner, another walk. Between tea-time and supper, a game with cheerful company at cards, or any other play, never too long protracted. A little light reading; jocose, humorous company; avoiding that of popular presbyterian ministers, and their admirers, and all hypocrites, and thieves of every description. The conversation of the intelligent, the learned, wise, and sprightly, would prove balm of Gilead to his afflicted and drooping spirits. Pedants, fops, beaux, and puppies would, if introduced to his presence, occasion an hurtful detestation. Lastly, the company of amiable, handsome, and delightful young women, and an enlivening glass."

THUS playfully, perhaps ludicrously, he has no doubt ventured to treat *some* of the professors of religion: but whatever opinions he may have held respecting those awful concerns, which are so intimately connected with our present happiness, and have agitated the hopes, and excited the fears, of the wisest and best of men; or however far he

may have indulged in those speculative disquisitions on the subject, into which men of enlarged and liberal minds are so apt to enter—he was extremely reserved in his communications upon such a topic, unless in the company of judicious and intimate friends: nor was he one of those dangerous scoffers, of whom, to their disgrace, too many infest society, who appear to take a malignant pleasure in staggering the faith of the illiterate and weak minded, and cruelly depriving them of the only consolation which can be held up in this life to those who labour under irremediable misery,—the firm belief in a future existence.

His attachment to the house of Stuart has not been allowed to pass without a slur by Dr Beddoes, who has pronounced his conduct in that respect to have been *absurd;* and he is at a loss to explain by what *analogy* such sentiments could have arisen, since they had no connection with the hostility he bore to the professors. But surely it is not so surprising that a cause, which had induced the most honourable

and the bravest chieftains in Scotland disinterestedly to draw their swords, and sacrifice their property and lives in its defence, and which still retained many staunch adherents, should have been espoused by a man of his warmth of heart and strong passions; and, at any rate, waving the consideration of the merits of that cause, he certainly had a right, in common with the rest of his countrymen, in a question which in his earlier years had divided the sentiments of a nation, to attach himself to that party, which seemed to him to have most justice on its side. Nor does his conduct in this respect seem to deserve being branded with the name of *absurd*. But Dr Beddoes on this subject has *written* what might have been expected from an *Englishman* in 1795, and Dr Brown in 1780 *thought* and *spoke* like a Scotchman, as many of his countrymen then did, and as the majority of them had done a very few years before. Were Dr Beddoes at present to avow and maintain the political sentiments, which, if report speaks true, he not long ago entertained at Cambridge, his conduct in that respect would be fully

more *absurd* and *unprofitable* than Dr Brown's was: yet, should any future writer, in narrating his life, tax Dr Beddoes with his quondam "unprofitable and absurd adherence" to certain republican sentiments, which in their tendency were probably much more pernicious than those of the Jacobites, the liberality of his biographer would not be reckoned the most prominent feature in his character.

Dr Beddoes has questioned the extent of his practice; and he mentions having "inquired with some solicitude, but in vain, whether, during the long period of his studies, he was peculiarly observant of diseases." This solicitous inquiry appears to have been extremely unnecessary; for how any man, however brilliant his genius might be, without supernatural aid, could have raised such a superstructure, as he has done in his new doctrine, upon any thing but the most laborious and attentive observance of diseases, it is not easy to conceive. Every deduction in the doctrine is the result of the careful investigation of facts; and though the

same morbid phenomena for a succession of ages had been observed by others, it was reserved to his superior genius to discover the principle upon which they are to be explained, and to draw conclusions with respect to the practice, the importance of which renders his discovery of the greatest possible consequence to mankind. Dr Beddoes's inquiry, therefore, seems no less surprising than it would be for a person, on viewing one of the productions of Michael Angelo, to ask if he had had much practice in, or paid much attention to, sculpture? Or, after admiring a master-piece of Raphael, to question whether the artist had paid peculiar attention to the study of painting! Dr Beddoes has already affirmed that he had little medical erudition; he next has questioned the extent of his practice; and, lastly, he seems, from the fruitlessness of his inquiry, "whether he had been peculiarly observant of diseases," to be inclined to believe, that he had paid no particular attention to the phenomena of disease in his limited practice. In what manner, therefore, he spent his time, "during the long period of his studies," it seems to be

impossible to divine; or rather, if what Dr Beddoes has advanced were true, he might be said never to have studied medicine at all. If, therefore, the grand truths contained in the *Elements of Medicine*, which are subversive of all former systems, be the production of Dr Brown; as he never was *learned in medicine*, as he never had *extensive practice*, and as he never paid *peculiar attention to diseases* in the course of his *limited practice*, it would appear almost certainly to follow, that the *Elements of Medicine* must have been a gift which he derived immediately from heaven, in whose hand he has merely been instrumental in conveying the doctrines they contain to mankind.

His practice certainly was never very extensive, if its extent is to be measured by that of many physicians in London and elsewhere, who, in their never-ceasing rounds, seem to be more actuated by the *auri sacra fames*, than their zeal to promote the advancement of medicine. And it appears next to a moral certainty, that such a continual and vertiginous

routine, so far from affording professional improvement to a physician, is of all things the most inimical to that calm contemplation, and assiduous attention to every minute change in the progress of diseases, which are so indispensably requisite in the physician to practise with advantage either to himself, or his patient. His practice not being too extensive, he always had an opportunity of paying careful attention to his cases, to do which, as a reformer in medicine, he must have felt himself particularly called upon; and it certainly is rational to conclude, that he who has three well-marked cases of a complaint to treat daily, bids fair to do his patients more justice, and himself to derive more improvement from them, than the physician who, in the same space of time, has to treat possibly ten times the number of cases of the same disease, and who, in the constant bustle of flying from place to place, has no more than time to write a hasty prescription and pocket his fee.

THE only works, which he has acknowledged, are the *Elementa* and *Observations*, together

with the translation of the former. The *Inquiry into the State of Medicine*, to which Jones's name is prefixed, to a *moral certainty* could not have been the production of that gentleman; and a variety of concurring circumstances, independently of the perfect similarity between the style of it and that of the *Observations*, amounts to a proof that it was written by his master. The editor, however, has not found any paper of Dr Brown's, which authorises him to assert with absolute confidence that it was the production of the latter. It may be sufficient, however, to observe on the subject, that, whatever its merits be, it has always been considered as the work of Dr Brown by every one of his family; nor can there be any indelicacy in mentioning the circumstance at present, since the alleged author is now no more, and has left behind him no children whose feelings might be hurt by such a disclosure.

ALTHOUGH these are the only works which Dr Brown has avowedly written, he would rank as a very voluminous author, were the ex-

tent of his printed literary labours, which have been published in the name of others, generally known. Some pieces of exquisite composition in Latin, which, by a good classical scholar, may be recognised as his, are to be found in the collection of inaugural dissertations entitled *Thesaurus Medicus*.

He is said to have had in contemplation writing a treatise on morals, to which he proposed giving the name of *Elementa Morum*: but, whatever truth there may be in the supposition, no hint is to be collected from his papers of his having entertained such a design. In confirmation, however, of the supposition that he considered such a work as very much wanted, the words of the preface to Jones's *Inquiry*, certainly his own, may be quoted. "In physics the analysis, or natural history, is complete; but that of *morals* is to begin." An anonymous writer, who published a few biographical sketches of him some years ago, observes: "I have heard Dr Brown mention his intended *Elementa Morum*. He one day, in Bushy park, imparted to me some part of his plan,

which may perhaps at a future day see the light: it was as simply philosophical as his *Elementa Medicinæ*." In justice to Dr Beddoes, with whom the editor, in the foregoing pages, has been obliged so often to find fault, it will be but fair to quote his words, in allusion to this intended work. "We may fairly presume," says he, "that it would have been original, luminous, and profound. And since no man, not deeply skilled in such knowlege, as physicians should possess, will ever trace back human actions and passions, along their winding course, to the fountain-head, the failure of Brown's design may be regretted as an heavy loss to literature."

It is a loss, not less to be lamented, that his sudden and premature death prevented the completion of a *Treatise on the Gout*, in which he had proceeded a considerable length, and which he had already agreed to dispose of to a London bookseller for the sum of five hundred pounds. This treatise was meant to be of a very comprehensive nature. The plan he had

proposed, in conducting the work, will appear best, from the words contained in his introduction to the subject.

"AFTER giving a general idea of the nature and merits of the writings of Hippocrates, and their influence upon after ages, I shall, in the prosecution of this work, give my readers, and the public at large, a fair opportunity of judging of the truth of what I have advanced, in so far as it applies to the particular subject of the gout, by beginning with the account which that illustrious personage has given of the disease, and then laying before them those of all the principal writers since that early period, each in the order of time in which he wrote.

"THEY will thereby gain many advantages that have never been obtained by reading books upon the subject of medicine. They will be led, as it were, by the hand, and step by step, into an intimate and familiar acquaintance with the source, and several subsequent causes, of the erroneous notions that have prevailed among

physicians with regard to a disease, in the knowledge of which the most respectable members in every polished society are deeply interested. The first part of the work will fully prepare them to understand a just and true description of the disease, which will constitute the last. And as the gout, instead of being a singular disease, and different from every other, will be found, with respect to the powers that either produce or remove it, to be of the same nature, and precisely upon the same footing, as the far greater number of general diseases, they will be enabled to discern the truth of a maxim, hitherto scarcely known, *That the causes of phenomena yet undiscovered, are equally simple as those that have been discovered;* that mystery and variety are foreign from the works of nature; and that simplicity and uniformity run through her productions over the whole universe. They will soon perceive a common relation betwixt the gout and a great number of diseases,—with which it has a close connection, both in its cause and cure,—and be ready to make the proper applications. Readers of every descrip-

tion, will, it is hoped, be variously gratified in the several degrees of medical knowlege to which they may aspire. Such as are interested in the subject, in consequence of being afflicted with the complaint, the inquisitive, and the philosophical, may all attain the different objects of their pursuit; the first in the acquisition of the means of preventing and curing their disease; the second, in the novelty of the subject of their inquiry; and the last, in the addition of a pleasant, extensive, and important science to the few, of which, after all our boasted knowlege, they only know we are yet in possession." * * *

He had not proceeded farther in the work than the introduction, and making some observations upon the description of the gout given by Hippocrates; what he has left, therefore, is by no means sufficient to serve as a clue to any one, however conversant in the new principles, to finish it in such a manner as in any measure to come up to the idea of what the work would have been, had it been executed as the author had proposed. In the extract from one of

his letters, beginning in p. cviii. of these observations, he gives a full detail of the other works, in the conducting of which he had flattered himself with the hopes of being able to keep the press going for ten years, from the period when his death unexpectedly happened.

BESIDES these projected works, he has left a great portion of a Greek grammar written in Latin, with rules in hexameter verse. He had been led to devote an occasional leisure hour to this task, in consequence of having conceived the design of teaching his daughters and oldest son the Greek language, having already instructed them to a certain length in the Latin, and being dissatisfied with the grammars commonly taught in the schools. He seems to have intended constructing it on principles similar to those of Ruddiman's Latin Grammar; and when we reflect how great a desideratum a good grammar on the subject has long been considered, it is much to be regretted, that the defect had not been supplied by one of his erudition and acumen.

He excelled much in the composition of Latin verse, which he wrote with great facility. Among many other specimens of his talent in that way, composed in different measures, one unfinished poem of four hundred lines, in which he celebrates the exploits of the ancient and noble family of the Grahams, seemed to be conceived in the very spirit and language of Virgil. Another poetical production, of very considerable length, written in elegiac verse, and addressed to his excellent friend and benefactor Lord Gardenstone, claims an equal title to admiration. It was at one time the editor's intention to have collected the different fragments left by Dr Brown into a small volume, which, though a posthumous publication, would have proved interesting at least to the curious and literary. Indeed, with this view, he had proceeded a considerable length in transcribing them for the press in a fair hand, when some literary depredator, taking advantage of his absence in England, thought proper to carry off the papers, consisting, among other things, of both the poems already mentioned, of an introduc-

tory lecture delivered by Dr Brown in London, —the only one he ever committed to paper,— and a very long and elegantly composed Latin letter, addressed to the late king of Prussia. This theft the editor has regretted the more, as, after making out the fair copy, he had unfortunately consigned to the flames the original, which was very much interlined and difficultly legible.

Dr Beddoes, speaking of his author's English style, has thought proper to observe : " His English, it is true, when he is unfettered by the Latin idiom, shows that he was poorly qualified to do his own work justice, *had he exerted his utmost care.*" It is an easier matter to deliver a general assertion than it is to substantiate it. The editor will not pretend to combat the observation ; but the candid reader, of taste and learning, may compare it with the initial paragraphs of the *Observations*, or with that work throughout, and judge for himself with what justice such an unfavourable and decided opinion has been advanced.

THE same gentleman also somewhere most unaccountably speaks of "the *laboured perplexity* of his Latin style." Of all the numerous opposers of Dr Brown's writings, no one—the editor believes,—at all solicitous of preserving the reputation of being a good classical scholar, however hostile he might have been to the doctrines, or author, of the *Elementa*, except in the present case, has hitherto ventured to bring discredit upon himself, by alleging any thing to the prejudice of *the style* in which that work is composed. On the contrary, it may be truly asserted, that, since the days of Erasmus and Buchanan, no medical work has appeared in Latin, which, by a competent, intelligent and candid judge, in point of classical purity, energy, perspicuousness, and pregnant brevity, can be said, in any degree, to equal the style of the *Elementa*. Nor is it conceivable, that one of the author's genius and vigour of mind, during half a life-time engaged in the constant habit of writing Latin, and retaining in his memory the style of all the best classics, could have fallen into the error of composing with laboured per-

plexity. He appears not, in his style, to have followed any particular authority; but his language, in which scarcely an expression can be objected to either as redundant or deficient seems to be composed of the very pith of the most approved writers. In no part of it can the reader detect a single word or idiom, not strictly Roman. Of what other Latin medical work, since the time of Celsus, can this be alleged? But this, according to the majority, who must necessarily be superficial Latinists, is the very fault of it. Had it been possible for Cicero or Quintilian to have arisen from the dead, and to have dictated to him the *Elementa*, would not the style still have been called *laboured* and *perplexed?* And why? Is it not because, owing to the almost universal and rapid decay of that manly language, so few are to be found capable of comprehending ideas conveyed in pure Latin? And, again, it may be asked, what are the medical Latin works which of late years have been said to be written with elegance? Are they not almost universally composed in a feeble, inert, unimpressive manner, with new-coined words, without

any attention being paid to idiom or purity, and either written by, or accommodated to, those who are but half acquainted with the language? Was it not by such an accommodation that Dr Aikenside's *Commentarius de Dysenteria*, as well as many other similar medical works in Latin, acquired, among those who estimate the elegance of Latin by its approximation to the English, the reputation of being extremely elegantly written? If this rule, that is, the accommodating the idiom of a language to that of another, for the convenience of foreigners, is to constitute elegant composition, and the opposite practice that which is obscure and laboured, the editor will readily admit the *obscurity* and *perplexity* of the style of the *Elementa*. But, on the same principle, were all languages to be thus newfangled, to accommodate those ignorant of them, a more extensive jumble of tongues might reasonably be expected ere long to confound the world than what formerly happened in the tower of Babel.

To give a minute account of the progress of the Brunonian doctrine upon the continent, and in other parts of the world, would greatly exceed the limits prescribed to these observations. Such a detail would necessarily imply a work of very considerable extent.

If, in spite of the obstacles that have conspired to retard the progress of the new doctrine (particularly in the country which gave it birth) it has gradually, but steadily, worked its way into every part of the world, where literature and science prevail;—the reflection naturally presents itself, what would have been the consequence, had its discoverer, instead of being a poor, unfriended, and persecuted philosopher, with his splendid abilities united the adventititious circumstance of being placed in one of the professorial chairs of the flourishing University of Edinburgh? In other words, what might he not have done, had he possessed the advantages of his adversary, patronised by dukes, enjoying extensive emoluments and honours, and sup-

ported, in whatever hypothetical opinions he dictated, by colleagues, whose common interest it was to oppose all innovation that did not originate among themselves, and to crush whatever doctrines militated against their own established dogmas?

Instead of being left, solely recommended by its own merit, to stem the torrent of opposition, and slowly push itself forward through the hosts of enemies leagued against it, the Brunonian system, countenanced by the great, would have been at once firmly established in the medical school of Edinburgh. It would have been received there by the students with implicit faith; and from thence have been rapidly diffused wherever the English language prevails. The continent would have next caught the flame, and the new light would have speedily illumined the different countries of Europe, and occasioned in them a revolution in medicine as extensive as radical. Instead of the inventor being allowed, during his life, to languish

in penury, honours and dignities would have been heaped upon him; and, after his death, statues would have been erected to him in grateful remembrance of the inestimable benefits he had rendered humanity.

But, though justice has not been done to his merits in his native country, abroad, where the reception of his doctrine did not in an equal degree affect the interests and pride of individuals, his system has experienced a very different fate. The trite, though very just maxim, "that a prophet is not honoured in his own country," has been fully verified by the persecution he sustained.

In Italy, in particular, the Brunonian system has found many warm admirers, as well as some opposers. As in other countries, candour, talent and learning generally characterise the writings of the former; while ignorance, illiberality and petulance are commonly the prominent features

of those of the latter. In Pavia, Milan, Rome and Naples, the shops of the booksellers teem with Brunonian and anti-Brunonian productions. In the former city, some years ago, in consequence of a defection in favour of the Brunonian system, which had taken place among most of the students, and several of the younger professors, the older professors applied to the government to interpose their authority. A decree was accordingly passed, prohibiting any professor, or lecturer, from attempting to teach the new doctrine; and the students were commanded to learn nothing but what was delivered by their teachers. Opposition operated as usual in such cases; and an effect, the very reverse of that intended, was the consequence. Every student eagerly sought after that work which had attracted the attention, and occasioned the interference of the state. Truth only requires being candidly heard to beget conviction. The perusal of the *Elementa* failed not to dispel from their minds the mists of error in which they had been wandering. Professorial influ-

ence was exerted in vain, and the revolt became universal.

Dr Vincent Solenghi, an eminent physician at Rome, has given a translation of the *Elementa*, accompanied with observations and additions; and Dr Dell'U, one of the first Brunonians in Pavia, and remarkably successful in the application of the principles of the doctrine in his practice, has written a system of physiology expressly on the Brunonian plan. But the physician, who, both in his writings and lectures, has been most assiduous and successful in promoting the new principles of medicine, is the present highly respectable and ingenious Dr Joseph Frank, formerly Professor of the Practice in Pavia, and now chief physician to the Civil Hospital at Vienna. This skilful physician has spared no pains in subjecting the new principles to the most rigorous test of truth in his own extensive practice. To his honour, he has done every thing in Italy to rouse the attention of the medical world to a proper investigation of the new doctrine, as his various and beneficial works bear ample testimony. Even

the work, falsely considered as the production of Jones, has not escaped his vigilance. He has translated it into Italian, and accompanied his translation with many excellent observations. The preface to his translation of a work of the celebrated Weikard, in illustration and confirmation of the Brunonian doctrine, in which he sets forth the motives that had led him to undertake the task, does him much honour; and, as applicable to this part of the subject, an extract from it cannot fail to be interesting. The editor, therefore, will make no apology for inserting his words here.

"THE medical doctrine of Brown, which has received, as it were, a second birth in Italy, has been widely diffused, and become generally known in Germany, where it readily found a defender in the illustrious author of this book.

"MONSIEUR WEIKARD, already well known on account of his excellent literary productions, particularly his classical work entitled the *Medical Philosopher*, was an avowed enemy to every

theory and system in medicine. He had been intirely engaged in studying nature, whether in the healthy or morbid state; and it was this cautious reserve which made him be considered by many in the light of an empiric.

" PREJUDICED, as I have said, against all medical theory, he entered upon the examination of the doctrine of Brown; and, having subjected it to the most rigorous analysis, he became so convinced of the utility and truth of its principles, that he determined to adopt and defend it. With this view he published the work which I now translate. He did not confine his zeal in favour of the new doctrine to this; he undertook the painful and irksome task of translating the *Elementa Medicinæ*. I have just received from him a new work, written in his native language, in which he gives a treatise on *Particular Therapeutics*, founded on the system of Brown, together with his own experience *.

* *Medizinisch-practisches handbuch auf Brownische grundsaetze und erfahrung gegründet von Weikard*, 1796.

" In adopting the new doctrine, he had few alterations to make in the plan of treatment which he had long followed.

" He was the only physician, whose practice coincided most with that of Brown, as his works published many years since fully testify *. The opinions he there delivered concerning apoplexy, the regimen suitable to the fevers called *putrid*, and the use of wine in diseases of debility, intirely agree with those of Brown. But our author is not the only one, whose practice perfectly coincides with the principles of the new doctrine. I believe that I have sufficiently shewn this in pointing out, in another work, the resemblance between Brown's method and that of Sydenham, Morton, and Riviere.

" It is unnecessary to mention all the motives which induced me to undertake the translation of this work. It was my intention chiefly to

* Vermischte schriften.

furnish materials to facilitate the examination and analysis of the doctrine of Brown.

"I have reason to think, that my labour will be well received both by the opponents and supporters of the new doctrine. Both are in pursuit of truth, which can only be found through the medium of a work, in which the fundamental principles of the new doctrine have been subjected to rigorous analysis.

"Too great attachment to systems has always retarded the progress of science. On the other hand, I firmly believe, that too great neglect in examining the discoveries of daily occurrence, is no less prejudicial to its interests.

"It could be wished that there never had existed either Galenists, Stahlians, or partisans of Hoffman; but that every one, without sheltering himself under any sect, had confined himself to the study of nature. I might express the same desire, in regard to the doctrine of Brown, were I not persuaded, that such a wish could not pos-

sibly be fulfilled. Most men rather choose to follow the beaten tract than to search after truth themselves: and, since it is impossible to destroy this natural bent of the human mind, let us try at least, as far as possible, to set bounds to it.

"If the new doctrine be subjected to rigorous analysis; if care be taken to publish, successively and impartially, such facts as may either favour or oppose it; if the opinions of both parties, and especially those of the unprejudiced, be deliberately discussed;—we shall very soon ascertain, whether or not this doctrine is admissible, and how far it ought to regulate the treatment of diseases.

"Brown does not hold the first medical appointments; he has no places to give away; he is now no more, and died persecuted and unfortunate:—no selfish view, therefore, could determine me to adopt or reject his doctrine. It is much to be wished, that we had always been placed in circumstances equally favourable to our search after truth.

"I believe I have sufficiently shewn, that I do not regard the new doctrine with an eye of prejudice, and that I do not indiscriminately adopt all its principles: to be convinced of this, it will be sufficient to consult the preface and notes, which accompany my translation of the work of Jones.

"THE limits it is necessary to observe in annotations not permitting me to state the different observations which I have been enabled to make during my practice,—observations which might throw great light on the ideas of our author;—I take the liberty of referring the reader, who is desirous of information, to another work *, the plan of which I have already published, where I lay down a series of observations, with reflections on the different cases of practice." * * * * * *

DR RASORI translated the *Observations* into

* *Ratio Instituti Clinici Ticinensis, a Mense Januario usque ad finem Junii, An.* 1795, *quam reddit Jos. Frank Vindobonæ. apud Patzowsky.*

Italian, at Pavia, in the year 1792. His translation, to which a very judicious preliminary discourse is prefixed, was again published in the year 1796 at Naples, where also an edition of the *Elementa* has appeared. This distinguished author has observed: "In the University of Pavia, undoubtedly one of the first in Europe, there is hardly a student, endowed with talents, who is not a Brunonian. The doctrine begins equally to spread in Germany. Many of the periodical publications of that country have noticed it, and the *Elementa* have lately been published there. A friend at Genoa assures me, that several surgeons to French men of war have informed him, that Brown is known and much admired in France. In the University of Pavia, he is in high esteem with some of the most respectable professors; and in other parts of Italy I can assert, from my own knowledge, that *old* physicians have not refused their sanction to many of the Brunonian principles."

A work appeared some years ago, under the title of JACOBI SACCHI *in principia Theoriæ*

BRUNONIANÆ *animadversiones*; which, however, is supposed to be the production of Professor CARMINATI. The author with regret confirms Dr RASORI's account of the popularity of the Brunonian principles at Pavia; and in some feeble and unsuccessful efforts to controvert them, he exposes his complete ignorance of that system, the truth of which he presumes to question. Reasoning as illogical as his language is inelegant characterises the pamphlet throughout: and this author's attack upon the doctrine, if it ever produce any effect at all, which it has not hitherto done, bids fair to do more good than harm to the opinions which he combats.

IN Germany, the eagerness, with which the Brunonian principles have been espoused, has occasioned still more remarkable events. No more than two years ago, the Brunonian students, at the University of Gottingen, to the number of four hundred, headed by one of the younger professors, made so outrageous an attack upon their opponents (consisting both of students and the older professors) not with

"winged words," but with the *argumentum baculinum*, that to quell the insurgents the police of the city interfered, when a rencounter having ensued the students were dispersed after several of them had been wounded. The intrepid Brunonians, indignant at their defeat, having assembled next day with greater force, resumed their attack upon the police, and stormed and succeeded in making themselves masters of the guard-house. Nothing less than a regiment of Hanoverian horse, which was called in, could bring the delinquents again under subjection. The students, of every description, considered the calling in of the military as so insulting a violation of their liberties, that fifteen hundred of them marched out of the city, nor could they be prevailed upon to return to the University until the troops were dismissed.

THIS singular circumstance, notorious to all Europe at the time it happened, tallies very ill with the report of one of the friendly writers of the Analytical Review, who

has been pleased to assert: "F. VACCA BERLINGHIERI, Professor of Surgery at Pisa, has written a *pamphlet* against the Brunonian system: and a History of Medicine has been published at Naples, in which Brown is attacked, *they say*, with much acumen. The Italian physicians *accuse those of Germany* with being too ready to adopt the doctrines of Brown, but certainly without reason; *for in Germany they are little known*, and understood by very few: the physicians there have recourse to the durable and diffusible stimuli not without fear and trembling, and when they venture to prescribe them, they *correct* their effects by the application of debilitating powers!" &c.

IN farther confirmation of the *truth* of this anonymous writer's intelligence, the words of the celebrated Weikard, already mentioned, deserve being quoted. This ingenious, liberal, and skilful physician, has given the most beautiful illustration of the Brunonian principles, which has yet appeared, not in a *pamphlet*, the

narrow limits implied by which are ill calculated to do justice to the discussion of an extensive work, containing so highly important a system, but in a production equal in size to the original. In the preface to his work * he observes with that candour which is the almost invariable concomitant of superior genius:

"It is almost incredible, that the Germans, who collect the productions of the English with such avidity, should have been so long ignorant of the work of Brown, which has at length passed from Italy to Germany. Nor are they more acquainted with a work, written according to the principles of Brown, and published at Edinburgh, under the title of "An Inquiry into the state of Medicine, on the principles of inductive philosophy," of which Moscati promises us a Latin or Italian translation by Dr Massini.

"As soon as I had received a copy of the *Ele-*

* The work from which the above extract is translated, was published a considerable time previously to the observation of the writer in the Analytical Review.

menta Medicinæ, having read and studied it with attention, I resolved to translate it into German. I learnt at that time, at Leipsic, that a Swiss physician and M. Reich of Erlingen had announced, in a Journal, the former a translation, and the latter an extract from that work. I then renounced a labour, which appeared both tedious and difficult: but as that translation has not yet been published, and perhaps never will, I resolved to continue and print my own. It will be followed by an *Abridgement of the Practice of Medicine* conformable to the new doctrine. In the mean time, having studied the doctrine of Brown with the greatest attention, and having compared it with the result of my own practice, and with the different opinions, published in various works, which I have written on medical subjects, I determined to present to the public only an explanation of this system, which will supersede the necessity of a translation of the *Elementa Medicinæ* *.

* M. Weikard has since given a translation of the *Elementa*, which he published in the year 1795 at Frankfort.

"It is easy to foresee, that the publication of the doctrine of Brown will be unfavourable to the scientific method usually employed in teaching the medical art. I am persuaded, however, that every skilful, enlightened, and impartial physician, in proportion as he acquires more information by his own practice and reflection, will be the more dissatisfied with the method of teaching hitherto employed in the medical schools. I am even certain, that among the professors there is a great number of *thinkers*, who have discovered the superfluousness and inutility of the usual method of teaching, who follow it against their will, and contrary to their conviction. As to the many *valuable practitioners*, who religiously abide by their creed, and *illustrious professors*, who speak with such complaisance of the importance and necessity of the doctrine of their university, I truly believe, that nature has ordained them to be *exclusively* well-informed.

"I have thought proper to follow closely, and almost in every point, the doctrine of

Brown; although some of his principles were contrary to many of my ideas, published in various works, and which it was easy to foresee would give rise to some doubts and weighty objections. I have always considered it as the highest weakness not to persevere with firmness in the execution of what we have once undertaken,—to defend our opinions only *in half*, and to yield to prejudice and error. In short, *I am altogether devoted to the system of Brown.* It will be seen from my early medical writings, how far I differ from, or coincide with, the theory or practice of this *new heresy.* It appears to me, that no physician coincides so far with it as myself, particularly with respect to the treatment of diseases.

"BEFORE I had determined to publish this work, I attentively examined whether or not, according to the new doctrine, medicine would become more hurtful than before. I wished also to satisfy myself, by living evidence, of the fortunate, or unfortunate result of the practice of

those physicians who followed the new doctrine.

" I considered whether or not the method of cure could be conducted with more promptitude and safety, and less expensively; I consulted my own experience and that of other physicians. *From a thorough conviction, I am resolved to embrace this luminous doctrine; to represent it in its proper light; and to recommend it to the friends of simplicity and truth.* I flatter myself that this work will diffuse some light, even among those who are attached to old principles, their *orthodox doctrine.*" * * * *

Such are the respectful terms, in which one of the most enlightened physicians on the continent speaks of him; an author, who, whether his excellent writings, or long and careful investigation of diseases, or the advantages he enjoyed as being chief physician and counsellor to the Empress of Russia, are considered, is entitled to the highest respect and credit. But he is only one of many throughout Germany

who entertain similar sentiments on the subject. Professor Frank of Vienna, the father of Dr Joseph Frank, well known for his numerous and excellent works, expresses the following favourable opinion of the author of the new doctrine: "Nemo sane *meliora in morbis phlogisticis, in febribus nervosis a debilitate oriundis*, meliora, nullus, & magis inter se cohærentia, proposuit. Hæc ab aliis jam fuise tradita, si objicias, fatebor id de *multis*; *de omnibus* non annuam: nec facile ab ullo tam pure ac tam vere id factum esse, concedam."

EVEN such physicians in that country as do not intirely favour the new doctrine, probably from having studied it too superficially, and with prejudice, speak both of it and of the author with a degree of deference, which he seldom experienced among the less liberal opponents of his sytem at home. Thus the ingenious and distinguished HUFELAND, in a note upon his *System of Practical Medicine* *,—a work

* *System der Practischen Heilkunde*, 8vo. Jena and Leipzig, 1800.

which has not yet been translated in this country—Vol. I. p. 62. observes:

"In forming an idea of the operations of life, we may distinguish two relations, the *material* (which comprehends the substances of which the body is composed, their chemico-mechanical properties, their form and structure, and all the circumstances which belong to them as matter,) and the *dynamical* (or all the powers, actions and effects, that are peculiar to the living body as such, especially the relation of stimuli).

"THIS appears to be the proper place for taking notice of the two systems, which have been founded on these two relations of animated nature, and which constitute the two leading sects in the modern medical world.

"* The first of these parties (the adherents of

* It would have been almost incredible to conceive, did not the fact stand upon record, that a man of Dr Hufeland's reputation could have avowed sentiments so erroneous, and which so decidedly argue his ignorance of the

Brown,) pay attention solely to the *excitability* of the system, and its alteration by the operation of stimuli. According to them, life is nothing

principles of the new doctrine. His view of the system is so superficial and incomplete, as not to convey the most distant idea of its nature; his objections are trite, irrelevant and unjust; his mixed praise and censure repugnant to, and incompatible with, each other; and the proposed conjunction of the Brunonian doctrine with the preposterous chemical system, maintained in Germany by a few crazy people, misled by the extravagant and incomprehensible philosophy of Reil and Kant, is an overture at which common sense revolts. This language may appear indecorous; but it proceeds from the indignation excited, first by the misrepresentation of the new doctrine, and next by the proposed improvement of it, by its unnatural union with one (if indeed it be allowable to dignify *it* with such a name) engendered in the delirious brains of a set of men, as mad in usurping the name of philosophers, as the happier lunatic, mentioned by Horace, who fancied himself owner of all the ships that sailed along Hellespont.

Though this is not altogether the proper place for entering upon such a discussion, the editor cannot allow these remarks of Hufeland to pass unnoticed. For the sake of greater brevity, he has thought proper to number the passages in the quotation, upon which he wishes to animadvert, with figures corresponding with those in this note, which the reader can compare with each other.

(1.) At the very outset, the author falls into an error which betrays how cursorily he has considered the funda-

more than an artificial excitement, and disease is merely a too powerful, or too weak, edcitement, which can proceed from no other cause

mental principles of the doctrine. A *too powerful*, or *too weak*, *excitement* does not proceed from a *change* of stimuli, which would imply a change of stimuli *in kind*, but from the more, or less, intense, or the more, or less, durable action of such stimuli, which uniformly act upon the excitability in the same manner, but with greater, or less, energy. For example: A person accustomed to take a bottle of wine after dinner, on some occasion is under the necessity of substituting instead of it half a pint of brandy made into punch, which may be supposed, in point of strength, to be equivalent to the wine. What is the consequence? No change of excitement ensues; because, though the wine and brandy, in common language, be different stimuli;—the operation of which, however, is the same in kind, while it differs only in *degree*,—the proportionably greater degree of stimulant effect exerted by the smaller quantity of the one fluid, being exactly equivalent to the proportionably lesser degree of stimulant effect exerted by the greater quantity of the other fluid, the excitability by each is wasted, or acted upon, to the same degree, and in both cases, a corresponding excess of excitement arises. Again, suppose that the same person takes double his usual allowance of wine; in that case *no change of stimulus* is made, but does no change of excitement follow? Far from it: the excitability is more than usually wasted, and a proportionably higher degree of excitement ensues: all his corporeal functions are, for a time, roused

than a (1.) *change* of stimuli, the external requisites of life. The different remedies, in like manner, operate only as stimuli, and by effect-

to greater action; his passions also glow with uncommon warmth; his imagination becomes inspired with the most lively conceptions; the energy of his brain is excited to a high pitch, and he delights the surrounding circle with unusual brilliancy of wit. These effects, which are succeeded by a corresponding languor in all the functions, corporeal and mental, are not therefore referable to a *change of stimulus*, as Hufeland asserts, but to the increased quantity or action of the same stimulus; and *vice versa*.

(2.) What idea the author can mean to convey by these words, it is hardly possible to conjecture. The conditions to which he alludes are, "the substances of which the body is composed, their chemico-mechanical properties, their form and structure, and all the circumstances that belong to them as *matter*." Now, that investigating the minute parts of the living system by themselves, such as bestowing attention upon the accurate analysis of the blood, of the bile, and of the other fluids, as well as on that of the bones and other solids, and overlooking the changes of the living body as a *whole*, the infinite and complicated parts of which are united by, and subjected to, the influence of an all-pervading and uniform principle, on the changes of which, occasioned by the surrounding agents, depend the changes of the body itself,—will ever advance either the theory or practice of medicine, appears to be an expectation equally chimerical, as such a study would be nugatory and unprofitable. Has the more perfect knowledge of the com-

ing a change of the excitement from without. The essential characteristic, therefore, of this system is, that it regards merely the excitement

position of the different biliary and urinary calculi, acquired by means of chemistry, led to a single solvent of either set of concretions within the body? Were a disease known for certain to depend upon the redundancy or deficiency of one or more of the principles of the blood, by what human contrivance can either one or other of these faulty conditions be obviated? Supposing that the analysis of both solids and fluids, in the healthy state, were thoroughly known, and that the changes which take place in both of these in disease were also ascertained to a nicety, what would such knowledge after all avail us? Who could affirm that such changes were the causes, and not the effects, of the several idiopathic diseases in which they might be discovered? If they were the effects of the morbid state, the remedies employed to restore the natural condition of either solids or fluids (supposing that there were any such,) as being directed to remove an effect of disease only, so long as the cause of the disease continued to operate, would prove altogether inert, and, very probably, hurtful. And were the changes alluded to the causes of disease, since there is no kind of analogy between inanimate and living matter, so whatever power chemists possess over different inanimate compounds out of the body, (the analysis of which is known,) in consequence of their knowledge of the affinities of different substances, their skill would be exerted to very little purpose upon the vitiated solids or fluids of the living system. For what remedy can be taken by the

of the living body, and does not attend to the (2.) *internal and material conditions of life*, and supposes the change of the former to be effected

mouth which in its progress through the *primæ viæ*, and other passages, before it reaches the blood, does not undergo so complete an alteration, as to be intirely changed in its nature before entering into the circulation, if it does so at all? What has pneumatic chemistry, lately so much boasted of, and from which so much was expected, effected in favour of medicine? Did not its enthusiastic cultivators, by publishing the most sanguine and confident accounts of so many *successfully treated* cases of consumption, first elevate the spirits of the friends of those labouring under that fatal complaint, with the expectation of their being able to rescue their beloved relations from the untimely fate that was awaiting them, and then plunge them on a sudden into a state of despair, the more poignant when contrasted with their flattering hopes, by bare-facedly recanting all they had advanced, and amusing the public with the information, that what they had been all along doing, was only an experiment, which, to be sure, had proved unsuccessful? In short, however much the arts of life are indebted to the present improved state of chemistry, medicine has not, of late years, received a single advantage from that source; and our ears are so frequently offended by the absurd explanation of the phenomena of the living system, upon reasoning, taken by *analogy* from the processes of the laboratory, as almost to excite that disgust against the science itself, which might, with much more propriety, be directed against the individuals who make such a pe-

only by means of the external conditions, or stimuli.

" THE following considerations, however,

dantic and preposterous abuse of it. But natural philosophy and mathematics are sciences not the less respectable that the same abuse of them, with respect to medicine, formerly for a time prevailed.

(3.) This objection, which seems to strike at the very foundation of the whole doctrine, is certainly specious; but a very slight consideration of the subject will evince its futility. No doubt, the author of the doctrine supposes, that a determinate portion of excitability is assigned to every living being at the commencement of its existence, which, in the progress of life, undergoes a daily, though partial, exhaustion. But, while this daily exhaustion takes place, it is not to be forgotten, that nearly a proportional repair of it is likewise daily going on, which, though it does not intirely regain the point where the exhaustion had commenced, does not however fall much short of it. The next question will be, what is the source of this daily repair of the excitability? Even this question, which at first sight may appear so difficult to be solved, may be satisfactorily answered, upon principles strictly consonant with those of the whole doctrine. The author observes, that the seat of the excitability is *medullary*, *nervous matter*, and *muscular solid*, otherwise, the *nervous system*. Now, as all the parts of the living body, including both solids and fluids, and therefore the *nervous system*, are ultimately derived from the blood, and as their continual waste is repair-

prevent us from adopting this view of the subject.

" 1. On the principles of the above theory,

ed by the apposition of fresh matter from the same fluid; it follows, that whatever is found to supply the blood, must necessarily be the original source of the renewal of the excitability seated in the nervous system, which last is immediately derived from, and maintained in its waste by, the continual fresh supply of blood. But that matter is known to be our daily food. It may next be asked, How food, which, like the other external stimuli, is acknowledged to *act upon*, in other words, to *wear out* the excitability, can likewise repair it? The explanation of this paradox will also be found reconcileable with the principles of the system. The action of taking in food is an operation in many respects highly stimulant: The exertion which mastication requires; the heat of the food; the agreeable sensations which are excited in an hungry person by the sight, flavour, and taste of such food; the direct application of such a stimulus to a most extensive surface of the body, (which, in that respect, to the same extent affects the excitability in the same degree:) all these prove in an high degree stimulant: or the primary action of taking food (which is a *durable* stimulus,) may be said, without inconsistency, to be *diffusible*, though in a much less degree than that of the highly *diffusible stimuli* properly so called. In so far then as food acts as a *diffusible stimulus*, it to a certain degree, in conjunction with the other external stimuli, produces a temporary excitement of the system, and

it is impossible to explain in what manner rest, as well as exercise, invigorates the system; for, if the human body has received from nature its

corresponding waste of the excitability present in the system at the time the food is taken in. That the primary and immediate operation of eating nourishing food, destined to supply excitability, is pretty highly diffusible, and to a considerable extent destructive of the excitability, will appear better from an example. Let a person, accustomed to live well and dine at a regular hour, all at once change the time of dining from four o'clock to six. Before the arrival of the time, unless his attention be occupied by some uncommonly interesting concerns, he will feel an unusual degree of weakness both of body and mind. Immediately before dinner he will be averse both to conversation and motion, and betray every symptom of languor. On the dinner being presented, however, he does not continue more than a quarter of an hour at table, when his wonted vigour both of body and mind returns. But, in so short a space of time, the digestive powers have scarce begun to act; not a particle of food has been converted into chyle, far less into blood. Consequently his renewed vigour is not imputable to any accession of matter to the body from the process of digestion. The fair conclusion, therefore, is, that the renewal of his mental and corporeal vigour is nothing more than the result of an increase of excitement, or exhaustion of excitability, occasioned by the stimulant operation, in a great degree diffusible, arising from the action of taking in food. So far, then, food (by which is meant the action of consuming it), has been

determinate portion of excitability, and life consists only in a successive exhaustion of it, *non-consumption may indeed preserve, but surely ne-*

shewn to exhaust the excitability; but let its farther effects be traced, and let it appear, how this same food can restore the excitability thus exhausted. At night, the person who had dined, as is already supposed above, in consequence of the action of the various stimuli of the day, has his excitability so far worn out, that sleep is induced. During sleep, a suspension of numerous stimuli, which are constantly acting upon the excitability during the day, and exhausting it, takes place. When the sleep is profound, the stimulus of passion and emotion, and of thinking, is nearly, or altogether, suspended; that of muscular motion no longer operates; the powerful stimulus of light and of sound is no longer perceived; the organs of touch, taste, and smell, are no longer subservient to their destined purposes. The vital and animal functions alone remain. The consequence of the subduction of all these customary and united stimuli, constantly acting upon and exhausting the excitability, is, that they no longer, as usual, reduce or wear out the excitability. But, admitting this to be the case, non-exhaustion of that principle certainly would not account for its accumulation. To explain this, it may be observed, that while all these usual stimuli are withheld, the process of digestion, which is always best performed in a state of rest, is gradually going on, and by the conversion of the food first into chyle, and then into blood, is adding fresh matter to the waste of the system, to the seat, or matter, in which the excitabili-

ver can (3.) *increase, it ;* and exercise must always diminish, but can never augment it. According to this sytem also, it is as difficult to

ty is inherent, and consequently is occasioning an accumulation of the principle itself. Thus it is that *rest*, but particularly sleep, repairs the exhausted excitability, instead of leaving it *stationary*, which, according to Hufeland's limited views of the subject, it ought to do. Such, however, is the nature of the excitability, that each successive exhaustion is attended with the irreparable loss of a certain portion of it, a loss which is *proportioned* to the extent of the previous exhaustion. This confirms and explains a fact, which has long since passed into a vulgar, but expressive, proverb, that every violent exertion, every instance of excess, in whatsoever way, is " knocking a nail in one's coffin ;" that is, that though a person may seem completely to recover the bad effects of an over-exertion in any way, he has in fact abridged the span of his existence. This useful knowledge teaches us the propriety of temperance, points out the right road to longevity, so desirable to all, and holds forth one of the most beneficial lessons for the regulation of our conduct as moral agents. In the same manner is it, that extreme cold, applied in any form, allows a portion of that excitability, which is always regenerated by the conversion of aliment into blood, and which would otherwise have been worn down by one of the most powerful stimuli, namely, heat, to accumulate, and render the system, in consequence of such an accumulation, more susceptible of the subsequent action of the usual, or a higher, temperature. The same is the explanation of the ac-

conceive, *why man should not die every moment of his life*, as, *why he should not live for ever.* (4.)

" 2. *It is equally inconceivable*, how it should

tion of fear, of grief, and of the other depressing passions. But it may be said, if the assimilation of the food be the source of the regeneration of excitability, how comes it that a famished person, according to the language of this doctrine, is in a state of accumulated excitability ? The answer here is equally obvious : It seldom happens that persons are starved in consequence of want of food, without being at the same time, from poverty or accident, deprived of a variety of the usual stimuli, which ought to act upon us, to occasion the due state of excitement, on which the healthy state depends. What is the state of a person who has been three days without his usual food ? On the third day of his starvation, he still retains a great share of the excitability which was left in his system at the last meal. As his hunger, shortly after that time, began and increased to an uneasy degree, his mental energy would become hourly impaired, his spirits would droop, he would remain actionless, the heart and arteries would no longer contract with their wonted vigour, from the excitability of the sanguiferous system being unduly acted on, the peristaltic motion of the intestines, from the want of the presence of their customary stimulus, would be weakened, and the different secretions diminished, the result of all which would be, that the excitability over the whole system, in consequence of so many

happen in the case of great and indirect debility, (which is supposed to arise from excessive stimulation, and the consequent exhaustion of the

customary stimuli being withheld, would be hardly at all wasted. But, while all these stimuli are in a great measure withheld, the remains of the aliment last taken in are constantly undergoing the necessary assimilation, so that even the excitability which is regenerated, (small in proportion as that is, compared with the usual regeneration of it,) not being acted upon by the usual stimuli, with an energy equivalent to the abundance of its regeneration, an accumulation will be the necessary result. Thus, paradoxical as it may appear, our food in its first operation *exhausts*, and in its ultimate *repairs* the excitability; and the withholding of it, *indirectly*, not *directly*, allows an *accumulation* of the same principle.

(4.) Absurd! According to this doctrine, man does *not die every moment of his life*, because the necessary stimuli, (which, by acting on his excitability, produce excitement, and the consequent phenomena of vitality,) continue to be supplied; and he *does not live for ever*, because the determinate portion of excitability assigned to him at his birth, sooner or later, according to his mode of living, is ultimately exhausted.

(5.) Inconceivable, indeed, it is, that in *indirect debility*, whether great or not, *the excitability may be restored by still stronger stimuli*; but, who ever, before Dr Hufeland, alleged that such an inconsistent principle formed any part of the Brunonian doctrine? In no part of the Elements is it asserted, that indirect debility is to be treated by *stronger stimuli* than what occasioned it; nor is it any where sup-

excitability,) that *the excitability may be restored by still stronger stimuli*, which, if the advocates of this system were consistent with themselves, should completely exhaust it (5.)

posed, that in such debility the excitability is to be *restored* by strong stimuli. All that is affirmed is, that when the excitability is worn out by any one stimulus, there is still a reserve of it capable of being called forth by a fresh one. This may be exemplified in the treatment of the indirect debility arising from intoxication. In such a case the excitability has been so far exhausted, that the renewal of it, which takes place during the first night's sleep, does not nearly compensate the previous exhaustion. Now it is a law of the excitability, that when it is worn out to a certain extent, stronger stimuli than ordinary are necessary to produce the usual excitement. It is not proper, therefore, to have recourse to *stronger stimuli* than what occasioned the indirect debility, but the rule is, to employ a force of stimulus *not much short* of that which produced the high excitement; a fact which is strictly conformable to the common adage founded on experience, "a hair of the dog that bit you." But it may be objected, if a force of stimulus not much short of what occasioned the indirect debility be employed, ought not the effect of it to be to completely exhaust the excitability, which is already so far exhausted? The answer to that is, that the impression made by every stimulus is less the second than first time, still less the third than the second time, and so forth, until it ceases to produce any further excitement. And this al-

" (3). ACCORDING to this theory, too, the distinction between *nutritive substances* and *stimulant tonics* (which is however sufficiently evident) is quite inexplicable. (6.) And also the distinction between (7.) *transient stimulant* and

so unquestionably is one of the properties of the excitability, as appears from its manifest effects. The treatment founded on this knowledge is, always to lessen the stimulus till the patient, by degrees, return to the usual and natural stimuli, during which, the system in the same gradual manner is recovering from the shock occasioned by the fit of intoxication, and, in proportion as the digestive powers are getting stronger, the accumulation of excitability, from the source already mentioned, goes on till it arrives at the healthy point.

(6.) This mighty difficulty can be answered and fully explained without a moment's hesitation. *Nutritive substances* are the different articles of our diet, which (as has already been explained), act first as slightly *diffusible* stimulants, but afterwards being converted into blood, in their ultimate effect upon the system, in supplying excitability, are much more *durable* than the diffusible stimuli strictly so called. And as for what he very unphilosophically calls *stimulant tonics*, or in other words, the inferior *diffusible stimuli*, and *nutritive substances*, or *durable stimuli*, the distinction between them is so clearly pointed out in this doctrine, that the most subtle caviller scarcely could have been thought capable of starting so frivolous an objection.

(7.) *Nugæ canoræ*! The beautiful expression *diffusible stimulus*, forsooth! must be changed into the inelegant and

permanent tonics, and why the former should occasion exhaustion of power, while the latter produce no such effect.

"*It is not my design to enter at present into a complete refutation of the Brunonian system* (8.) I was only desirous to point out some of the

verbose phrase, *transient stimulant tonic*, and the appropriate one of *durable stimulus* must give way to the absurd one of *permanent tonic*. What is *durable?* That which lasts for a certain time. What is *permanent?* That which lasts or continues for ever. Which of the two expressions, therefore, applies more properly to the temporary effect which food has upon the system? Let these new terms renew their Brunonian form, and the puerility of the objection will appear manifest.

(8.) From this innuendo it evidently follows, that he thinks himself *fully qualified to give* a complete refutation of the Brunonian doctrine, but does not consider it as proper to do it on the present occasion. Dr Hufeland here involves himself in a most unhappy dilemma. So far as it has been hitherto traced, the progress of the Brunonian doctrine on the continent, and its favourable reception, have been detailed. As the doctrine is in itself intirely new and singular, it must either be intirely erroneous, or irrefragably true; for there can be no medium between it and doctrines diametrically opposite. The pernicious consequences, therefore, of a doctrine almost universally admitted for truth, and followed in the treatment of diseases, if, after

principal and most striking particulars, which shew the insufficiency of this view of the subject, when considered by itself. And that this is a just exposition of Brunonianism, no person will deny who has studied Brown's writings and system, as it was first introduced into Germany.

all, it be *false*, are incalculable. Now, instead of Dr Hufeland compiling a *Practice of Medicine* of his own, would he not have conferred a much more essential obligation upon mankind in doing what he has deferred, that is, in clearly and decidedly pointing out the falsity of the Brunonian doctrine, in the mistaken adoption of which the lives of so many millions yet unborn may be the unhappy sacrifice? So momentous a consideration as this ought to have precluded as altogether insignificant every other. Why did he not first accomplish this truly desirable end, and then, after having so far prepared the world for its reception, step forward with his own Practice of Medicine? The words of Dr Brown's *Observations* apply well to the present occasion. Speaking of the arts of the regulars in maintaining their crazy systems, he says: "Some facts they *falsify*, *promise* explanations of others, which they never *mean* to give; and, whenever difficulties present themselves, they either *postpone the consideration of them* to some *more convenient opportunity*, or presume upon an agreement in them with their fundamental principle, either as a point granted, or formerly proved."

"ALL these contradictions and inconveniencies, however, vanish, when we connect with the idea of life the chemico-material processes which are constantly associated with it, and by which the restoration of the excitability can alone be effected. It is also very evident, that this assumption is essentially necessary to a satisfactory explanation of life, of the phenomena of health and disease, and of the operation of the remedies.

(9.) This is the usual and disgusting cant of the opposers of the doctrine. After a puny attempt to refute its principles, after having impotently and truly ridiculously, like *pigmies*, assailed an impregnable and inaccessible fortress, they retire with much complaisance, and acknowledge after all that they highly admire that system, not one tenet of which they will admit the truth of, that they only do not wish to bestow unqualified praise upon it, that it certainly has led to the right road of medical investigation, and much more meaningless and senseless jargon, shewing that they at least, even with the light of the new system for a precursor, are not destined to be the men who are to improve upon the model set before them.

(10.) If the objections by him hitherto stated be well founded, so far from esteeming, he has every reason for condemning and denouncing the doctrine. *Nil umquam erat tam dispar sibi!*

"At the same time it must appear, (what I beg leave to add of myself,) that *I by no means am liable to the imputation of being hostile to the Brunonian system.* (9.) I receive it for what it is, the doctrine of the relation of stimuli with respect to the organic body, and on this account *I esteem it very highly.* (10.) Only I believe, in the first place, that even this is not completely developed to its full extent in this system: and, secondly, that the knowledge of the rela-

(11.) A most hopeful combination! Somewhat similar to the abhorrence excited by such a proposal, is the indignation that arises in a humane breast, on hearing of a young, innocent, beautiful female, being compelled to submit to the loathsome embraces of an old, decrepit, doating sensualist.

(12.) No doubt all the works of the Creator, without the exception of the most insignificant production, either of the animal, vegetable, or mineral kingdoms, are admirable, incomprehensible, and calculated to inspire in us sentiments of devotion and reverence for the great ruler of the universe. But it has all along been considered that all the stupendous and mysterious works of God, even the most sagacious and docile animals of the brute creation, as the elephant and dog, are left at an inconceivable distance in point of perfection behind man. When an ignorant person, or a child, is informed for the first time, that even

tion of stimuli is not alone sufficient for attaining a just idea of life, and of disease and its mode of treatment. I am also of opinion, that we must take advantage of the good parts of this system, reject the bad, and endeavour to supply the imperfections; and this I was desirous to do, when I both wrote and spoke against the implicit adoption of the Brunonian theory, as the only complete and satisfactory system of medicine. And I am happy to observe, that

vegetables, as well as human beings, enjoy a certain species of vitality, the individual's pride is somewhat mortified on learning that there is any property in common to himself with the trees of the woods, or the grass of the meadows. But mortifying as such information may be, what is it compared with the humiliation occasioned by the doctrine, that the lovely form of a Helen, animated with the impassioned mind of a Sappho, instead of holding in the scale of perfection an intermediate rank between the author of the universe and the beasts of the field, is in short nothing more than a species of chemical compound possessed of the faculty of locomotion! Mixed emotions of contempt and indignation arise on our being gravely informed that muscular motion, the senses, passion and emotion, as well as intellectual exertion, in short, that all the phenomena of the living state, depend upon the same or similar compositions and decompositions as those which regu-

the recent improvers of this system, under the name of *Theory of Excitement*, are daily fulfilling these desiderata, and, in particular, *are combining* (11.) *with it the material relations of the living system*, which makes it to be sure no more true Brunonianism, to which the above observations are no longer applicable.

" The *other sect* pays regard merely to the material relations, and to the chemical processes which are necessary to life, and which constant-

late the form and structure of the different inanimate and inorganic bodies of the mineral kingdom! Or as those which take place, when, on the mixture of two different fluids, a third, different in its properties from either of the fluids which compose it, is the result. Life, *a determinate chemical process!* A most sublime conception truly! Consequently, mind must be the result of the different modifications of this determinate process. The magnanimous soul of Hannibal was not an immaterial and incorruptible principle lodged in him by Omnipotence, but the effect of unknown chemical changes taking place in the apparatus otherwise stiled his body. And that frame which contained the divine mind of Homer, was merely a walking laboratory, or alembic, in which perpetual chemical combinations and decompositions were going on inspiring him with poetic fire! One very flattering prospect appears to be held forth by these creative philosophers, these *internal material relationists*, namely, that if they go on

ly accompany it. According to this view of the subject, *life is merely a determinate chemical process*, (12.) disease is merely a change of this process, and remedies act only by the chemical changes which they effect in organic nature.

" This system is unquestionably the one which promises to be most fruitful for future investigation; but our knowlege of the chemical nature of life, is still too imperfect for us to consider this as the sole cause of its phenomena.

" I therefore esteem very highly the labours of those who have devoted themselves to this

and prosper in their favourite pursuits, they may ultimately, by the improvement of their art, hit upon what would prove a very happy and grand discovery, that of attaining such perfect knowledge of synthesis, as may enable them to form the chemical compound, vulgarly called the human body, just as easily as they make soap, or other articles of commerce, and thus ensure the population of the earth, without the necessity of descending to the means hitherto employed for that purpose, which, as being a practice in common to us with the brutes, can scarcely fail to be extremely derogatory to the exalted feelings and dignity of such profound and sapient philosophers.

species of research, particularly those of Reil, and am convinced, that the view of the operations of the living system, which is founded upon it, is absolutely necessary for attaining a complete idea of the objects of physiology, as well as of the thereapeutic treatment of the living body."

Some years ago, when democratic phrensy raged throughout France, the *Elements* were translated into the language of the country, and presented, along with some other productions of inventive genius, to the National Convention. Honourable mention was ordered to be made in their archives of a work so congenial to the prevailing spirit of the times, as tending to create a revolution in medicine, similar to what the republicans were then aiming at in politics. Since that period, various writings on the subject have at different times appeared there; and such publicity and popularity has it acquired, that not many months ago the Chief Consul himself, now the self-created Emperor of all the Gauls, at his levee, condescended to ask an

English physician, whether or not in his practice he followed the principles of the Brunonian doctrine?

In Portugal, inquisitorial authority, which regulates the publication of all new literary productions, and which is ever on the alert in quashing innovation, and defending their ancient usages, has no doubt prevented the appearance of printed works in favour of the doctrine; but even that tremendous and execrable engine of despotism has not been able to obstruct the diffusion of the new principles, which, for the reasons to be assigned, has become general in Lisbon. The students who, within these last fifteen years, have from time to time been sent, at the expence of the Queen of Portugal, to study medicine at Edinburgh, after some years residence there, have generally returned home fraught with two acquisitions, which neither their government nor medical faculty had designed them ever to learn, namely, a strong tincture of republicanism, and firm belief in the principles of the new doctrine, which, as in other

countries, after sustaining opposition from the older members of the medical faculty in Lisbon, in consequence of the activity and talents of its advocates, has eventually gained the ascendancy in that metropolis *. And, if the intelligence the editor has received be correct, even in Spain, where both the religion and degrading arbitrariness of the government conspire alike to enslave the minds and bodies of the people, and bar the door against improvement, the disrepute and contempt, into which the antiphlogistic system of Sangrado † has begun to fall, and is daily falling, is less to be imputed to the satyrical wit of the humorous Le Sage, than to the introduction of the new doctrine into that country.

To attempt tracing the further progress of the Brunonian principles on the continent of Europe would be altogether unnecessary. An enumeration of the works published on the sub-

* See the note on paragraph 594 of Elements, vol. ii.

† Meaning any or all of the followers of the old school of medicine.

ject in Italy and Germany alone would form a ponderous catalogue. When the doctrine was in its infancy, the plagiarisms from it that appeared every where, were numerous. As these principles, however, became more diffused and better known, the danger of detection restrained individuals from meanly defrauding departed genius of its only reward, the merit of its discoveries. The most conspicuous instance of such ungenerous imposture is exemplified in the conduct of Girtanner, from whose name, so long as it shall continue on record, the disgrace of having endeavoured to attain unmerited celebrity by the publication of the Brunonian principles as his own discovery, will ever remain inseparable *.

If such has been the prevalence of Brunonianism over Europe, its general adoption in the East and West Indies is the less to be wondered at. Many men of talent, now established in practice in these countries, received their educa-

* See *Journal de Physique, Juin.* 1790. *Memoires sur l' irritabilitè, considerèe comme principe de vie dans la nature organisée. Par Mr Girtanner.*

tion in Edinburgh, and were the intimate friends and pupils of the author of the doctrine. Being for the most part the sons of men of consequence, on returning to their native country, their exertions in establishing the Brunonian doctrine were seconded by the influence of their respective families, nor did the opposition of constituted authorities operate as elsewhere in frustrating the designs of the friends of truth. The success of the new practice in the treatment of the diseases, particularly tetanic affections, of warm latitudes, has already been detailed in several publications; but in no instance has it been more signal than in the hands of Dr James Campbell, a former pupil of Dr Brown's, now established at Bengal, who, in a very dirty vessel, the Dutton, in the latitude of Rio Janeiro, and bound for the East Indies, on board of which was a whole regiment, and their colonel, while a very bad fever was proving fatal to numbers around them daily, by his strict adherence to the new practice, for five weeks did not lose a single man; a broad and incontestible fact, not paralleled in the records

of medical practice on shipboard in these climates.

In America the works of the much and justly celebrated Rush, by far the most eminent physician there, as well as many of the published medical dissertations of the students, evince beyond a doubt the estimation in which the new doctrine is held on that continent: while the *duodecimo* of Mr Phineas Hedges (an anti-Brunonian production of the new world, which, in point of orthography, grammar, and *reasoning*, may be considered as intirely *unique* and *sui generis*, and is manifestly the effort of no *common* head), evidently shews the immense disparity of intellect between this harmless assailant and the author whose work he attacks, and at the same time how much more profitably he might have been employed, both to himself and others, than in the very unpromising, though certainly bold, attempt to overthrow such a fabric as he has assaulted. But this gentleman's conduct is not quite unprecedented, since even Homer himself had his Zoilus, and the

councils of the Greeks at times were molested by the loquacity and petulance of Thersites; the editor, however, does not consider that he altogether deserves to expiate his crime by a fate similar to that of either of his predecessors, the former of whom is said to have been burnt alive at Smyrna, and the other crushed by a blow from the hand of Achilles.

BEFORE dismissing this part of the subject, it may be proper to observe, that even at Edinburgh, where the doctrine was first opposed with such violence, now that the heat and animosity of party spirit have subsided, the practice has undergone a material change, though the medical men seldom have the candour to acknowledge how far they allow themselves to be influenced in the treatment of their patients by the principles of this doctrine. That in diseases of debility they have become much more liberal of their port wine and other diffusible stimuli, and less profuse in the drawing of blood, is indisputable; and that possibly twenty times as much laudanum is made use of than formerly, may be ascertained by applying for information to the

most intelligent apothecaries, whose means of knowing the circumstance must be the surest. Even the *name* of Brown and his doctrine, the bare mention of which used formerly to be cautiously avoided, has of late years been pronounced from the chair, at least by one of the professors, much to his credit, with becoming respect; and possibly the succeeding generation of them may not think it derogatory to their dignity, to canvass the doctrine itself with that impartiality, which their duty as public teachers and the cause of truth and science demand.

EVERY proposition of the doctrine, when duly investigated, appears so plain, and the reasoning so forcible and conclusive, that while it bids defiance to refutation, it scarcely requires the aid of illustration. To render these preliminary observations, however, still more complete, and convey to those not of the profession a general

idea of the principles of a doctrine, in which all who devote themselves to the pursuit of science must feel an interest, the editor has thought proper to conclude with a summary exposition of the system, drawn up by Monsieur Bertin, an ingenious French physician, intimately acquainted with the subject. It is prefixed to his translation of the work of Weikard, from the Italian of Frank, and in few words exhibits the most comprehensive view of the doctrine that has yet appeared. It will likewise serve to confirm the account already given of the universal diffusion and adoption of the new principles of medicine.

EXPLANATION

OF SOME OF THE

FUNDAMENTAL PRINCIPLES

OF THE

NEW DOCTRINE.

"ANIMALS and vegetables are endowed with a principle, the nature of which is unknown. This principle, which is named *excitability*, distinguishes living beings from inanimate matter; and Dr Brown regards it as *one and indivisible.*

"HE has studiously avoided all inquiry concerning the *nature* of excitability; but supposes that it may be *accumulated*, or *diminished* in quantity; that it may become *more* or *less abundant;* and, in that point of view, he considers it as *matter.*

"He calls the *agents*, which support life, *exciting powers*, and distinguishes them into *external* and *internal*. These powers acting upon the excitability maintain life; or, in the language of the Brunonian doctrine, produce *excitement*.

"He also gives the name of *stimulant powers* to whatever can modify the excitability, and produce a *greater* or *lesser* degree of *excitement*.

"When the exciting or stimulant powers exert a moderate action on the excitability, they consume a suitable quantity of it, and produce the degree of excitement in which health consists. Thus the *moderate action of the exciting powers*, the *due exhaustion of the excitability*, and *proper limitation of the excitement*, are synonymous phrases.

"But when the exciting powers act with too great energy, the excitability is too speedily *wasted*, and the excitement proportionably *in-*

creased; in which case the body is said to be in that state to which he gives the name of *sthenic diathesis:* it does not yet, however, labour under *sthenic disease*, being only *predisposed to it.* It is that intermediate state between health and disease, which is named *predisposition*, and which is sooner or latter changed into that of disease, according to the greater or lesser energy of the stimulant powers. The sthenic diathesis may be gradually increased from the slightest sthenic disease,—as the sthenic catarrh, small-pox, the benign measles,—to the highest inflammatory pneumonia, and the excitement is then raised to the highest degree of which it is susceptible. It cannot remain long in this state without becoming languid. The physician has then two difficulties to encounter. If he employ too debilitating a treatment, he will reduce the excitement too much, and induce a state of great weakness; he will occasion those diseases which supervene on inflammatory affections, when sufficient caution has not been employed in the use of the antiphlogistic plan of cure, or when bleeding has been pushed too far. On

the other hand, if he be too timid in the use of the debilitating method, or employ too powerful stimuli, he will give rise to a different kind of debility.

"IT is very essential, according to this doctrine, to distinguish these two kinds of debility: for, though they be intrinsically the same, they require a different kind of treatment.

"THAT debility, which is produced by too debilitating a method, or, in general, by the deficiency of exciting powers, or by their too feeble action, is named *direct debility*. In such a case, the excitability is supposed to be accumulated. Thus, the *too feeble action of the exciting powers*, the *accumulation of the excitability*, and *the direct diminution of the excitement*, are synonymous expressions.

"THERE is another kind of debility, occasioned by the excessive action of the exciting powers, or by intensely strong stimuli, or by

the too long continued action of these powers, even though their energy be not too great.

"THE excitability is then exhausted by the excess of stimuli; and this species of debility is called *indirect*. Thus the *long-continued action of stimuli*, or *their most intense action*, or *exhaustion of the excitability*, and *indirect debility*, are equivalent terms.

"HE distinguishes, with great discernment, the apparent debility accompanying inflammatory diseases, which it is of such importance to ascertain. The proof, says he, that this debility is not real, is, that it yields to debilitating remedies, while the employment of stimulants would be death. He supposes that both *direct* and *indirect debility* may be present at the same time, in the same subject; and this he names *mixt debility*. It requires a treatment adapted to the predominance of either.

"THESE two kinds of debility have been considered as they exist in disease; but they are

also present in the healthy state; *direct debility* being the lot of infancy, and *indirect* that of old age.

"SLEEP, in a state of health, is only the result of *direct* or *indirect* debility, and sometimes of both united, but in a moderate degree: for, if they be excessive, they will produce morbid sleep, or the watching which occurs in asthenic diseases.

"EVERY thing which, in a state of health, does not sufficiently exhaust the excitability, and make it incline, in a due degree, toward indirect debility,—as cold, spare diet, the cessation of customary intellectual or corporeal exertion, fear, despondency, &c.—will be able to repel sleep.

"THE same effect will likewise be produced by whatever can occasion excessive indirect debility, as intoxication, extreme heat, violent passions, &c.

"I HAVE thought proper to dwell on the ap-

plication which Dr Brown has made of direct and indirect debility to the different periods of life, whether in health or disease, in natural or morbid sleep, or in natural and morbid watching.

"It is in removing this debility, whether direct or indirect, that opium, given in doses proportioned to the different states, procures sleep; but, according to Dr Brown, it produces this effect, not by a *sedative*, but *stimulant* operation. For this reason, therefore, it is hurtful in inflammatory diseases.

"In explaining his system, Dr Brown employed two scales, of which the first, divided into 80 degrees, shews the quantity of excitability given to a being at the commencement of existence.

"The second points out the ascending and descending progression, which the exciting powers observe in acting on the excitability.

"The excitement will be at 0, and the excita-

bility at 80, instantly previous to the exciting powers beginning to act. Life, or excitement, will only take place at the moment the exciting powers begin to act on the excitability. The exciting powers, in consuming the excitability from 80 degrees to 40, will increase the excitement or life to 40, which corresponds with the fortieth degree of the excitability. The excitability wasted to the fortieth degree, and excitement increased in the same proportion, constitute the most powerful degree of life compatible with health. (See paragraph 25th of the *Elements of Medicine*). But the excitement, when pushed beyond this degree, tends only to weaken itself, and decreases with the excitability from 40 to 0, which marks the period of life.

"THIS scale may afford a sufficiently accurate idea of the progress of the excitability and excitement in a person who leads a temperate life, on whom the exciting powers constantly exert a suitable degree of action.

"HENCE it appears, that the excitement of a

being, at the commencement of life, is yet feeble, and that his excitability is accumulated, or not sufficiently wasted by the action of exciting powers; or, in short, that he is in a state of direct debility, which requires only slight stimuli: while the old man, or he who has brought on premature old age by excesses, has arrived at that exhaustion of the excitability and diminution of excitement, which characterise indirect debility, and require powerful stimuli, as spiritous liquors, succulent food proportioned to the digestive powers, wine, &c.

"It will readily be perceived from what has been said, that moderate stimuli produce a suitable degree of excitement: that, when too feeble for the support of life, they allow the excitability to accumulate, and produce asthenic diathesis, *predisposition* to asthenic diseases, and, in short, all the diseases which depend on direct debility. When the exciting powers, called *hurtful exciting powers*, are too great, they produce, as has been already observed, *sthenic predisposition*, and all the diseases of that class. Lastly, these same powers, after they have oc-

casioned the highest excitement, of which the system is susceptible, end in indirect debility, and give rise to the asthenic diseases, which depend upon it. It is this transition from the highest excitement to indirect debility, which it is of such importance to prevent, by proper management, in inflammatory diseases, which, from the violence of the inflammation alone, are about to degenerate into asthenic diseases.

"THE same asthenic powers, which contribute to health, produce sthenic or asthenic diseases, according as they stimulate *more* or *less*. The same hurtful powers, capable of producing asthenic diseases, may be employed as remedies in sthenic diseases, and *vice versa*.

"DR BROWN allows only two diatheses, *sthenic* and *asthenic*. He divides diseases into *sthenic* and *asthenic*, and these into *universal* and *local*. Universal diseases are always preceded by that intermediate state, already mentioned, called *predisposition*. This state depends on the same causes which give rise to the subsequent disease.

"THE sthenic or asthenic local diseases are never preceded by predisposition.

"UNIVERSAL diseases at first attack the whole system, but may direct their principal effect upon one part, as in peripneumony, &c. Such a local affection, however, is merely a consequence of the disease; whereas in the diseases, which he names local, the injury of a part, or organ, always precedes the affection of the whole system, which is proportioned to the sensibility of the part primarily attacked.

"INFLAMMATION is also distinguished into sthenic universal and sthenic local, into asthenic universal and asthenic local.

"IN his work he explains the causes of these different diseases, their distinguishing symptoms, and the remedies adapted to their cure.

"DR BROWN, far from considering fever as an effort of nature to free herself from some noxious cause, regards it as a disease intirely depending on debility, in which it is always

necessary to employ stimulant remedies. He ranks among the pyrexiæ the diseases called *inflammatory fevers*, and excludes them altogether from the class of fevers.

"He concludes the reasoning part of his work with the following words (par. 327): "As all the motions of the planets, which latter were formed to remain and continue their courses for ever, depend on this principle,—to proceed straight forward, in the manner all projectiles move, and then by the influence of gravity, which affects them all, to be pulled downward, and, thereby, upon the whole, thrown all into circular motions;—so, in the lesser and living bodies, with which those greater bodies are filled, that is, animals and plants, of which the whole species remain, though the individuals of each species die; whatever is the cause of their functions, whatever gives commencement and perfection to these, the same weakens and at last extinguishes them. It is not, therefore, true, that some powers are contrived by nature for the preservation of life and health, others to bring on diseases and death. The tendency of

them all indeed is to support life, but in a forced way, and then to bring on death, but by a spontaneous operation."

"THE following ingenious illustration of the Brunonian doctrine by Mr Christie, and the subjoined scale drawn up by Dr Lynch, both formerly Dr Brown's pupils, as likely to facilitate the comprehending of this doctrine, have been introduced here.

"Suppose a fire to be made in a grate, filled with a kind of fuel not very combustible, and which could only be kept burning by means of a machine containing several tubes, placed before it, and constantly pouring streams of air into it. Suppose also a pipe to be placed in the back of the chimney, through which a constant supply of fresh fuel was gradually let down into the grate, to repair the waste occasioned by the flame, kept up by the air machine.

"THE *grate* will represent the *human frame*; the *fuel* in it, the *matter of life*, the *excitability* of Dr Brown, and the *sensorial power* of Dr

Darwin; the *tube* behind supplying fresh fuel, will denote the power of all living systems, constantly to regenerate or reproduce excitability; while the *air machine*, of several tubes, denotes the various *stimuli* applied to the excitability of the body; and the *flame* drawn forth in consequence of that application represents *life*, the product of the exciting powers acting upon the excitability.

"As Dr Brown has defined *life* to be a *forced state*, it is fitly represented by a flame, *forcibly* drawn forth from fuel little disposed to combustion, by the constant application of streams of air poured into it from the different tubes of a machine. If some of these tubes are supposed to convey *pure*, or dephlogisticated air, they will denote the highest class of exciting powers, opium, musk, camphor, spirits, wine, tobacco, &c. the diffusible stimuli of Dr Brown, which bring forth for a time a greater quantity of life than usual, as the blowing in of pure air into a fire will temporarily draw forth an uncommon quantity of flame. If others of the tubes be supposed to convey common or atmospheric

air, they will represent the ordinary exciting powers, or stimuli, applied to the human frame, such as heat, light, air, food, drink, &c. while such as convey impure or inflammable air, may be used to denote what have formerly been termed sedative powers, such as poisons, contagious miasmata, foul air, &c.

" THE reader will now probably be at no loss to understand the seeming paradox of the Brunonian system; that food, drink, and all the powers applied to the body, though they support life, yet consume it; for he will see, that the application of these powers, though it brings forth *life*, yet at the same time wastes the excitability, or *matter of life*, just as the air blown into the fire brings forth more *flame*, but wastes the *fuel*, or *matter of life*. This is conformable to the common saying, " the more a spark is blown, the brighter it burns, and the sooner it is spent." A Roman poet has given us, without intending it, an excellent illustration of the Brunonian system, when he says,

" Balnea, Vina, Venus, consumunt corpora nostra,
" Sed vitam faciunt Balnea, Vina, Venus."

"Wine, warmth, and love, our vigour drain;
"Yet wine, warmth, love, our life sustain."

"EQUALLY easy will it be to illustrate the two kinds of *debility*, termed *direct* and *indirect*, which, according to Brown, are the cause of all diseases. If the quantity of stimulus, or exciting power, is proportioned to the quantity of the excitability, that is, if no more excitement is drawn forth than is equal to the quantity of excitability produced, the human frame will be in a state of health, just as the fire will be in a vigorous state, when no more air is blown in, than is sufficient to consume the fresh supply of fuel constantly poured down by the tube behind. If a sufficient quantity of stimulus is not applied, or air not blown in, the excitability in the man, and the fuel in the fire will accumulate, producing *direct debility*, for the man will become *weak*, and the fire *low*. Carried to a certain degree, they will occasion death to the first, and extinction to the last. If again, an over-proportion of stimulus be applied, or too much air blown in, the excitability will soon

be exhausted, and the matter of fuel almost spent. Hence will arise *indirect debility*, producing the same weakness in the man, and lowness in the fire as before, and equally terminating, when carried to a certain degree, in death and extinction.

" As all the diseases of the body, according to Dr Brown, are occasioned by direct or indirect debility, in consequence of too much or too little stimuli, so all the defects of the fire must arise from direct or indirect lowness, in consequence of too much or too little air blown into it. As Brown taught that one debility was never to be cured by another, but both by the more judicious application of stimuli, so will be found the case in treating the defects of the fire. If the fire has become so low, or the man weak, by the want of the needful quantity of stimulus, more must be applied, but very gently at first, and increased by degrees, lest a strong stimulus applied to the accumulated excitability should produce death, as in the case of a limb benumbed by cold, (that is, weakened by the accumulation of

its excitability, in consequence of the abstraction of the usual stimulus heat,) and suddenly held to the fire, which we know from experience is in danger of mortification ; or as in the case of the fire, become very low by the accumulation of the matter of fuel, when the feeble flame, assailed by a sudden and strong blast of air, would be overpowered and put out, instead of being nourished and increased. Again, if the man or the fire have been rendered *indirectly* weak, by the application of too much stimulus, we are not suddenly to withdraw the whole, or even a great quantity of the exciting powers, or air, for then the weakened life and diminished flame might sink intirely ; but we are by little and little to diminish the overplus of stimulus, so as to enable the excitability, or matter of fuel, gradually to recover its proper proportion. Thus a man, who has injured his constitution by the abuse of spirituous liquors, is not suddenly to be reduced to water alone, as is the practice of some physicians ; but he is to be treated, as the judicious Dr Pitcairn of Edinburgh is said to have treated a Highland chieftain, who

applied for advice in this situation. The Doctor gave him no medicines, and only exacted a promise of him, that he would every day put in as much wax into the wooden *queich*, out of which he drank his whisky, as would receive the impression of his arms. The wax thus gradually accumulating, diminished daily the quantity of whisky, till the whole *queich* was filled with wax, and the chieftain was thus gradually, and without injury to his constitution, cured of the habit of drinking spirits." These analogies might be pursued further; but my object is solely to furnish some general ideas, to prepare the reader for entering more easily into the Brunonian theory, which I think he will be enabled to do after perusing what I have said.

"THE great excellence of that theory, as applied not only to the practice of physic, but to *the general conduct of the health*, is, that it impresses on the mind a sense of the impropriety and danger of going from one extreme to another. The human frame is capable of enduring great varieties, if time be given it, to accommodate it to different states. All the mischief is done in

the transition from one state to another. In a state of low excitement, we are not rashly to induce a state of high excitement, nor when elevated to the latter, are we suddenly to descend to the former, but step by step, and as one who from the top of a high tower descends to the ground. From hasty and violent changes, the human frame always suffers, its particles are torn asunder, its organs injured, the vital principle impaired, and disease, often death, is the inevitable consequence."

"I have only to add, that though in this illustration of the Brunonian system (written several years ago), I have spoken of a tube constantly pouring in fresh fuel, because I could not otherwise convey to the reader a familiar idea of the power possessed by all living systems to renew their excitability when exhausted, yet it may be proper to inform the student, that Dr Brown supposed every living system to have

received, at the beginning, its determinate portion of excitability, and, therefore, although he spoke of the exhaustion, augmentation, and even *renewal* of the excitability, I do not think it was his intention to induce his pupils to think of it, as a kind of fluid substance, existing in the animal, and subject to the law, by which such substances are governed. According to him, excitability was an unknown *somewhat*, subject to peculiar laws of its own, and whose different states we were obliged to describe (though inaccurately) by terms borrowed from the qualities of material substances."

T. C.

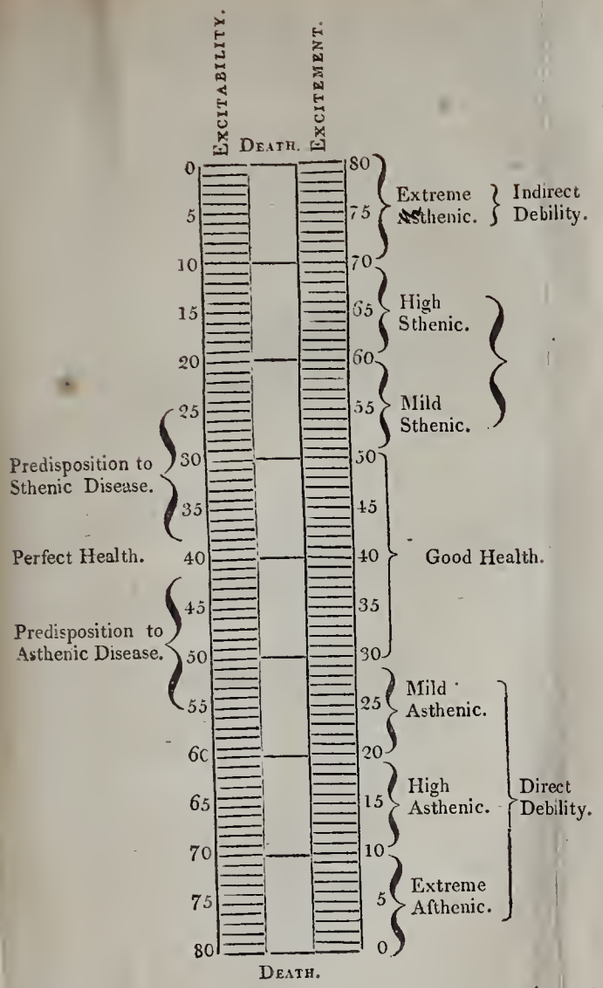

TABLE OF EXCITEMENT AND EXCITABILITY.

	DISEASES.		CAUSES. NOXIOUS.	CAUSES. IMMEDIATE.	CURE.
Sthenic Diathesis.	Apoplexy. Palsy. Plague. Malignant Fever. Gangrenous Cynanche.	Confluent Small-pox Hydrothorax. Phthisis. Contagious Dysentery. &c.	Excessive action of powerful stimuli; as heat, exercise, food, abundance of blood, violent passions of the mind, contagion, and the like.	Indirect debility.	The indication of cure is to support the excitement. The remedies are powerful stimuli; as electricity, opium, æther, spiritous liquors, wine, musk, cinchona bark, snake root, camphor, rich soups, and the like.
	Synocha. Phrenitis. Inflammatory Cynanche. Mild Small-pox.	Measles. Peripneumony. Dysentery. Mania, &c.	The same as above; but not to that excess which induces indirect debility; yet acting with greater force than in the next range of disease.	Greatly increased excitement.	The indication of cure is to diminish the excitement; which is to be effected by avoiding powerful stimuli, and employing slight or defective stimuli; as lying cool in bed, tranquillity of mind, bleeding, purging, spare diet, and the like.
	Synochus. Rheumatism. Catarrh. Scarlet Pyrexia.	Miliary Fever. Chicken-pox. Ophthalmia, &c.	The same as above, but not acting with that force which induces high sthenic diathesis; yet greater than in the state of health.	Less increased excitement.	The indication of cure is, as above, to diminish the excitement, but with more moderation.
	The range of good health is, with propriety, ranked from thirty to fifty degrees in the scale: for perfect health, which consists in the middle point solely, or forty degrees, rarely occurs; in consequence of the variation of the stimuli to which man is continually exposed; as meat, drink, and the passions of the mind; which sometimes act with more power, sometimes with less; so that the excitement commonly fluctuates between thirty and fifty degrees.				
Asthenic Diathesis.	Intermittent Fevers. Mild Colic. Dyspepsy. Hypochondriasis.	Hysteria. Epistaxis. Menorrhœa. Amenorrhœa, &c.	A deficiency of the stimuli necessary to the maintenance of good health; and an improper application of powers, which, though stimulant, do not stimulate in a sufficient degree.	Diminished excitement,	The indication of cure is to increase the excitement. The remedies are powerful stimuli, such as are exhibited for the cure of indirect debility; but with this difference, that here it is necessary to begin with a small degree of stimulus, and increase it gradually.
	Rheumatalgia. Cholera. Epilepsy. St. Vitus's Dance.	Rickets. Hæmoptysis. Scrofula, &c.	Defective stimuli alone; as cold, diet sparing, and not of good quality, fear, and the like.	or	The indication of cure is here the same as above; but stimuli must be applied somewhat more cautiously.
	Typhus. Colica Pictonum. Gout. Tetanus.	Scurvy. Diabetes. Dropsy. Jaundice, &c.	Defective stimuli alone.	Direct debility.	The indication of cure is the same here also; but still greater caution is necessary in the application of stimuli.

TO

JOHN BROWN, M. D.

THIS TABLE IS DEDICATED, AS A TESTIMONY OF RESPECT,

BY HIS FRIEND AND PUPIL

SAMUEL LINCH.

OBSERVATIONS

ON

FORMER SYSTEMS OF MEDICINE,

AND

OUTLINES

OF

THE NEW DOCTRINE.

INTRODUCTION.

THE several departments of human knowledge, in all ages and countries, have undergone a strange, but uniform fate; in their outset, wide deviation from truth, and, in the result of their progress, accumulation of error. The causes of this seem to be, 1*st*, that keen desire implanted in the mind of man to know, as if by intuition, all that can be discovered, either with regard to himself, or the objects around him; and, 2*dly*, his impatience of success.

THE mischiefs arising from these two sources greatly extend their influence, and spread in every possible direction, when error acquires the patronage of authority, and the protection of dignified names. It then takes its chair in the schools, and assumes the pompous titles of profound, refined, or liberal knowledge. Raised to this eminence, the

industry of a single teacher, or author, may corrupt thousands; that of a few, whole nations; and the addition of a proportional number, ruin the education of a world.

THIS universal diffusion of error receives sanction and establishment from the progress of time. It becomes venerable: And every attempt to detect it is branded with the name of profanity, or madness. Error triumphs in the smiles and countenance of the great, is distinguished by titles and rank, and enjoys the solid support of emolument: And truth, which had all along been the pretended object of pursuit, is first thrust down to the bottom of the pit, and then buried deeper and deeper under the successive strata of false knowledge. Genius is disgraced, discovery assassinated, and dulness established in all the pride of eminent station.

MANKIND have ever been vain of their knowledge; a vanity which might be excused, were the knowledge, to which they commonly aspire, of any use, or value. The elements of Mathematics are indeed scientific knowledge. The system of the planets, discovered by Sir Isaac Newton, is applicative science. The doctrine of the mechanical powers is respectable for its utility, and as being the off-

spring of principle. But chemistry, whatever it may be at a future period, is still * only little more than a mass of deductions drawn from random experiments, a group of phenomena, the mutual connection of which to one another, or their general relation to a common cause, is by no means traced, and their application to use left equally limited and doubtful. The light which has been thrown on electricity by a great philosopher, does him honour, and will ensure him the gratitude and esteem of posterity: But that branch of knowledge is still in its infancy; and, if greater judgment and caution, than we are able to discern in the many volumes of its late cultivators, be not exercised, it requires not the gift of prophecy to foretell, that it will prove a fertile source of sophistry and splendid error. The same observations extend themselves to magnetism, to ethics, to politics, and so forth: In all which, attempts have already been made to assign causes, before a sufficient number of facts have been collected, and to reason from phenomena not sufficiently understood, to others equally unknown. Illustrations of this, and every other particular, will occur in the course of this work.

THERE is something which passes in the mind of a great philosopher, even when he expresses him-

* Anno 1787.

self with reserve, which, while it merits the deepest attention, is, however, never comprehended, often not even attended to, by the commentators, explanators, and pretended cultivators, of his work. Sir Isaac Newton used the word attraction as a term which he did not pretend to explain, and never meant that his followers should engage in the attempt. His reason for this was well-founded. No person knew better than he did the bent of the human mind to invert the order of nature in philosophising; and, instead of observing and studying phenomena, laboriously and patiently collecting facts, and gradually tracing these to more general facts, till at last they arrive at one which serves for a common connecting cause—he, on the contrary, knew the common practice was to begin with the assumption of a fancied cause, and afterwards, by explanations, to force the facts to an agreement with the cause so assumed.

The sound philosopher begins with laying in his stock of facts. With these, by repeated and accurate observation, he acquires a familiarity, guards against the deception of appearances, studies and contemplates the subject in all its various forms and modifications, traces every relation, and marks every difference, till at last, by a solid, cautious, and broad

induction, he ascends to a fact which unites them all, and which itself receives illustration and confirmation from each of them: For, when any one thing in nature is fully understood, it leads to the discovery of something next and most intimately connected with it. From this the philosopher is led to a similar consideration of a third; and so on proceeds, as it were, from link to link in a common chain, till he reach the highest: Or, he goes on, as it were, from the several points in the circumference of a circle where the radii terminate, along each radius, till he arrive at the point in which they all meet, constituting the centre. This ultimate fact, at which he at length arrives, is his common cause, the fundamental proposition to, or from, which all his reasonings flow, the basis on which the whole superstructure of his doctrine rests.

STILL, however, he regards this as a fact only; universal, indeed, with respect to his subject, but subordinate to other facts in the great chain of which it is only a link, and which, according as they stand higher or lower in the series, act as cause or effect to each other. Finding that this fact connects all the rest, and explains all the phenomena, he admits it as the only cause which a philosopher ought to regard. Far from bewildering himself in vain

and fruitless speculations with respect to the nature of this common cause, considered abstractly, and, as it were, in itself in its mode of acting, and so forth, his great care and attention is to ascertain its existence, and to get a full and complete acquaintance with the mutual and permanent relations which subsist between it and the effects. Thus far he treads on known and firm ground. Here he stops, and keeps himself on sure guard against the wanderings of fanciful explanation.

WIDELY different from this is the mode of inquiry which the philosophers of another description pursue. Superficially surveying, or totally neglecting, the investigation of particular facts, they begin with an inquiry into their ultimate cause, and, after tedious and fruitless attempts to define, describe, and explain to others, a proposition of which they themselves have no adequate idea, their whole after aim is to reconcile it to the detail of facts. But in this preposterous occupation, they sow the wind, and reap the whirlwind: For they not only find a perpetual repugnance between the phenomena of nature and their imaginary cause, but even, when, by much art and labour, they at any time seem to succeed in forcing a connection between their fundamental proposition and a few of the phenomena,

still the far greatest part of these reject reconciliation.

To conceal this incongruity from the discernment of mankind, and, as it were, from themselves, comes to be their next laborious and hopeful task. Some facts they falsify, others they omit, promise explanations of others, which they never mean to give, and, whenever difficulties present themselves, they either postpone the consideration of them to some more convenient opportunity, or presume upon an agreement in them with their fundamental principle, either as a point granted, or formerly proved.

For the sake of accommodating their imaginary cause to the various purposes of explanation, nothing is more common with them, than to vary its original statement; a practice, which its falsity and unfitness, even for their deceitful applications, renders unavoidable.

When they find all this labour to disguise and dissemble insufficient, and see, that the discordance and incongruity of their systems are too glaring to escape even common observation, their next shift is to conceal themselves behind the veil of a false candour. They acknowledge the many imperfections

of their work; but, at the same time, do their best to secure a decent retreat, and to come off with as little loss as their situation will permit. They extenuate their blunders, and contrast their confessed defects with many pretended excellencies; they magnify the faults, and depreciate the merits, of other doctrines; and, by every such artifice, struggle hard to detain, if not an absolute, at least a comparative pre-eminence. In all the pride of ungenerous emulation, they expose to full view whatever they wish to appear best in themselves, and worst in their rivals. When the truth is unknown, these arts, dexterously played off, and nicely accommodated to times and circumstances, have often met with surprising success: But when the standard of truth is once erected, when its genuine colours are displayed to full view, nothing is more easy than the detection, nothing more humiliating to the detected. Still, however, previous to this, and while there yet remains a prospect of advantage, from the softened acknowledgments of mistake and imperfection, these, after all, are not more frequent than sincere. As it is not the love of truth that calls them forth, but anxiety to support, as well as possible, an undermined and sinking reputation, the practice is not more frequent than the impulse of necessity which produces it. Ever ashamed of taking blame to them-

selves, it is more frequent, with such persons, to impute their own false conceptions, and erroneous modes of reasoning, to the imperfect state of the art in general, or to the obscure nature of the particular subject.

This is an impression very natural to a mind bewildered in error, and in total ignorance of the truth. The study of nature is always simple, clear, and satisfactory; while every deviation rom it leads into inextricable perplexity. The light arising from the former, and the darkness from the latter, are in exact proportion to their respective progresses. The advances of the student of nature are like those of a traveller, who begins his journey with the earliest dawn of day. He moves at first with caution, slowness, and circumspection; proceeding afterwards with freedom, firmness, and ease, in proportion to the illumination increasing all around.

The deviations of the false reasoner, and fanciful systematic, from truth, resemble the wandering of a rash traveller, who sets out on a dangerous journey through an unknown country, with the doubtful gleam of a departing twilight. The first part of his progress is bold and adventurous; but fear, horror, and despondence, soon take place of

confidence, and become more and more the attendants of his after steps. The former traveller, pursuing a straight, easy, and safe course, soon arrives at his destination *. The distance of the latter from his destination increases with his painful progress.

As the wanderings of the benighted traveller cannot fail to impress him with a due sense of his state; so neither is it in nature, that the ravings of misguided speculation, however fanciful, or perhaps in some respects, ingenious, should infuse into the mind that most pure and exquisite satisfaction which arises from the discovery of truth. The flights of an imagination unrestrained by reflection, and unfettered by strict regard to fact, may beget an evanescent, temporary gratification; but it is the certain discovery of useful and important truth alone, which can yield real and permanent pleasure. The

* The Author of the Elementa Medecinæ, after giving a very short and comprehensive description of his progress in the studies of physic, concludes with a clymax, which logicians may perhaps think worthy of their notice, as an instance of that sort of rhetorical figure. It is in the following words: "Solo quarto lustro, veluti viatori, ignota "regione, perditis viæ vestigiis, in umbra noctis erranti, "perobscura quædam, quasi prima diurna, lux demum ad-"fulsit."

former is intoxication and enchantment; the latter is rational and real delight. The systems of the motions of the planets founded upon the hypothetical principle of vortices, when executed with all the pomp of mathematical demonstration, and accommodated to the explanation of the detail of particulars; the fancy of a minute intertexture of vessels, composing the solid mass of animal bodies; and the supposed balance between the arterial and venous systems, with the divisions of these, and inferences and distinctions drawn from them, in explanation of the noted doctrine of plethora, undoubtedly gave a certain kind of joy to De Cartes, Dr Boerhaave, and Sir Clifton Wintringham. But it was a shadowy, unsubstantial joy, a mental titillation, a paroxysm of exultation, to give way, upon the first discovery of its delusive cause, to dismay and regret. Widely different from this must have been the pleasure that arose in the mind of Pythagoras, from the discovery of the 47th proposition in the first book of Euclid; or that of Lord Napier upon his discovery of the logarithms; or the serene and solid satisfaction of mind, which Sir Isaac Newton experienced on finding his fundamental principle apply to the whole phenomena of his great and extensive subject, and produce a scientific body of knowledge, which might be entitled, The Science

of the Motions of all the great Bodies in the Solar System, and probably in all the systems of the universe.

The cause of the common complaint among system-makers, that the difficulty of their subject prevents the application of their principles to use, and presents insuperable obstacles and embarrassments, is easily accounted for. It may be pointed out in a few noted instances, taken from some of the most prevailing systems of pathology. If it be assumed as a fundamental principle, that a certain tenacity and spissitude of the blood is the cause of diseases; the application of that principle must fail in all the cases, where the very contrary consistence is the faulty state of that fluid. If an acrimony in the fluids is laid hold of as the proximate cause of diseases; that hypothesis must fall to the ground in all the diseases where there is no acrimony, or where a contrary state can be demonstrated. If the acrimony is supposed to be an acid; its futility must appear from the insignificancy of employing only alkaline substances for the cure of diseases: And the equal insignificancy of an acid plan of cure, upon the supposition of the cause being the alkaline state of the fluids, makes the same conclusion unavoidable. There has been no end of the suppositions

employed by physicians, even as fundamental principles. Among others, one of this kind lately advanced, was, that the blood had a power of directing its course in the vessels, and of flowing into one part of the arterial system in too great, into another in too small, a proportion. When that was admitted as a fundamental cause of diseases, how was it possible to carry it into application without embarrassment in every step? Where are the remedies endowed with a power of altering such morbid directions of the blood, even in any, much less in every, case? Spasm is the last of the erroneous fundamental hypotheses respecting the cause of diseases. But how many diseases are there where there is no spasm, and where its absence its demonstrable? And even in some cases, as in fevers, in the beginning of which certain appearances seem to favour the notion of spasm: All these cease before the end of the disease, and a set of phenomena succeed, which exhibit demonstration of the very reverse of such a state. Now, since the effect, that is, the disease, still remains, its cause, whatever that be, must also remain; but that cause is demonstrably not spasm. Admitting, however, for the sake of following out the argument, that there is a spasm, and that it is so far the granted cause; when the physician sets about the cure, where will he find antispasmodics,

or remedies endowed with a power of removing the morbid state by resolving the spasm? There is not one. There are powers that relax the system; but, in so far as they produce that effect in fevers, they do not remove, but increase, the cause of the disease. Now, what is the conclusion arising from this view of the conduct of system-makers, whether medical or not, in forming their several doctrines? Is it not, what has all along been pointed out, that it is not the difficult nature of the subject, but their fundamental and complete misconception of it, which produces all their embarrassments, and gives birth to labours, which are not explanations of the just phenomena of nature, but the hideous caricaturas of a disordered imagination?

It is next to be observed, that after all their artful evasions and false colouring, there never was an erroneous system (such as those to which we have been alluding), the author of which, perplexed and lost in the mazes of his false reasoning, did not find himself obliged to give up by far the greater part of the detail of facts, as inexplicable upon his assumed fundamental hypothesis, and to have recourse to other causes, likewise of limited extent, and of equal falsity, as so many expletives to fill up defects, so many additional links, to help to bind

together the incoherent parts, and give seeming union to the truly heterogeneous mass.

While such is the employment of system-makers, that of other refiners in knowledge, other pretenders to a name and estimation for their philosophical labours, is to corrupt and misrepresent writings and doctrines of a purer kind, which they effect in a variety of ways.

One of which, and the most generally practised, is to begin where the author of better judgment had thought prudent to end, shewing thereby a merit, only equalled by their demerit in following the contrary practice. The great business of a true philosopher is, to increase the number, and improve the knowledge, of useful facts, and render their application to use more and more subservient to human happiness. But, disdaining this employment as below his attention, or discouraged with a labour too tedious and arduous for his stock of patience and industry, or perhaps perfectly ignorant of the only proper method of prosecuting philosophical inquiry, the false philosopher rushes straight onward to the end of his aim, little studious of the best means of attaining it. Instead, therefore, of labouring by observation and experiment, to enlarge the number

of solid and useful facts, from which alone, by a just and careful induction, the laws of nature, in any of her departments, can be ascertained; his vain attempt is to discover the abstract nature, the mode of operation, the hidden cause of the fact, which his author had taken for his common connecting cause, and which, from the limited nature of the human faculties, he had been obliged to consider as an ultimate fact, or as a law of nature, of which no cause, more general than itself, could be assigned. Finding, therefore, in the great chain of cause and effect, nothing more general, and impelled by an avidity inherent in the human mind, of pressing forward to the attainment of knowledge beyond its power, he at once plunges himself into an ocean of endless conjecture and hypothesis, and thereby brings reproach, in the very principles upon which he rests it, on the doctrine, or branch, of knowledge which he means to improve.

THE several explanations of the cause of attraction, since Sir Isaac Newton delivered his venerable system to the world, are so many examples, directly in point, of this false mode of improving, or, to speak more properly, of corrupting, a true doctrine. But while this practice, of poisoning in their source the fountains of truth, is too glaring to be called in

question, and too bad to find a single advocate to defend it; it has, at the same time, been so universal, that we do not recollect a single system of any value that has escaped so hard a fate. The abuses, which have been made of the system of the motions of the planets, we have just now spoken of: And, though the great author of that system certainly could not but foresee, that his work might not altogether escape the common fate, it is with regret, however, that we find even this great man was a little off his guard: He himself, though with modesty and diffidence, put the fatal question, which opened a wide door to all the abuses which have since disgraced so great a department of human knowledge. His query about a subtile elastic ether pervading the universe, and giving motion and activity to another supposed part of nature, an inert and inactive part, and thereby proving the cause of attraction, gravitation, and indeed of all the active phenomena of nature, was immediately laid hold of by his followers, as a fact sufficiently supported, because it seemed to have the sanction of so great an authority, and therefore well accommodated to the purposes of a fundamental principle, and that also to the infinite extent of application, to which it has been variously strained and perverted.

THE unphilosophical practice of neglecting all inquiry into the simple phenomena of nature, and of prosecuting the scrutiny into abstract causes through all its boundless fairy regions, had always been too prevalent in every department of knowledge; as is sufficiently proved by the abuse of Epicurus's System of Morals, in the explanations and disorderly lives and principles of his followers; by the misrepresentation of the doctrines of Socrates, in the mysterious enthusiasm of even the celebrated Plato; by the systems of false physiology and pathology, which derived their unnatural birth from the very respectable discovery of the circulation of the blood; by the extension of the antiphlogistic regimen to all diseases, in consequence of the discovery of its utility in a very few, by Dr Sydenham; and by the wild and mistaken applications, which have been made in every part of the study of nature, but especially in medicine, of the practice of reasoning by induction, substituted by Lord Verulam in the place of that by syllogism, according to the old logic of Aristotle—All these, as well as many other instances which might be adduced, but too clearly prove the pernicious effects which abstract reasoning had introduced into every part of knowledge.

But instead of the better philosophy that might have been expected from the august directions in the Novum Organum, as well as from the execution of these in the principles of Newton; no sooner was the query about ether, which we mentioned, assumed as a fact, than the avidity of this sort of false reasoning broke out into downright rage. Every thing was now explained by an ether. Not contented to confine their hypothesis to the explanation of attraction, connecting the system of the planets, and sustaining the harmony of their motions; the chemists took hold of it, and applied it in explanation of the attraction between the constituent particles of small masses of matter, and made it the cause of the mutual cohesion of these, as well as of all their other properties.

This new principle, so assumed, and so extended in its applications, was yet further extended, so as to be made the cause of repulsion as well as attraction: And now attraction, not as Sir Isaac Newton seriously conceived it; that is, independent of all explanation, as a something that connected the energy to which the planetary system owed its regular and uniform motions; but as depending upon the cause and mode of operation, which they had fancifully attributed to the supposed universal ether,

was fixed upon as the cause, not only of the properties of the dead, but of the functions of living matter, over all nature, dead or alive, animated or inanimate, throughout the universe. It was not only the cause of the motion towards a level, which distinguishes the flow of water and other inelastic fluids, but of the seeming recess of the particles of matter from each other, which occurs in vapour and other elastic fluids. It was the cause of diffusion, as in the loose mixture which takes place between water and oil; it was the cause of solution, as in the closer and homogeneous mixture which takes place between water and salt, water and alkahol; it was the cause of that mixture, where the ingredients lose their distinguishing properties, and produce a body distinguished by properties quite different from both, as in the union of an acid with an alkali; it was the cause of fermentation, or that process of the action of bodies upon one another, where a small particle of matter, imperceptible to our senses, assimilates a large mass of a given fluid into its own nature, or multiplies itself *ad infinitum*. The universal ether, regulating and modifying attraction through all the modifications of its processes, varied without end, at one time produces acetous, at another vinous, or saccharine, at another putrid, fermentation. The same over-ruling power

was now supposed to produce the fermentation peculiar to the small-pox; now, that accompanying the measles; now, the further modification of the process, as it distinguishes either the plague by boils, buboes, and carbuncles, or the putrid typhus fever by spots, petechiæ, and vibices. It was the cause of the symptoms of disease both in their morbid and convalescent tendency. It was the cause of the healthy functions of animals, either in sense, motion, intellectual operation, or passion and emotion. Nay, such was the maniacal influence of this vague and ridiculous hypothesis, that the ultimate explanation of every question, in every part of natural knowledge, which had been given up upon every other hypothesis, was referred to it, and thought happily explained by it. Let any question, for example, be put; as, What is the cause that sheep have sometimes horns? The answer is ready: It is because the ether is sometimes so modified in its operation as to produce that effect. Why have other sheep no horns? It is owing to another modification of the ether. The same is the answer why a crow is commonly black; a swan white, with black feet; why fishes have scales; birds wings; some animals two feet; others four; others more; others none. The application of the same handy and pliable proposition, to the explanation of mus-

cular motion, is truly diverting. To explain the contractions which take place in this sort of living matter, it was said, that the ether, accumulating around, and without the ultimate particles, of which the gross mass of this sort of matter is composed, so affected these as to make them approach closer to each other. Approximation, therefore, of the ultimate particles, or of the atoms of Epicurus (for we have here hypothesis upon hypothesis), being admitted as a very ingenious account of a phenomenon in living matter, which no man in his senses would, or does, pretend to explain; the next question was, How was the relaxation of the same living fibres to be explained? Here there could be no difficulty: For, as the problem about contraction was so easily made out, and as that was owing to the energy of the ether acting from without, and driving or impelling the particles into closer contact with each other; so it followed, of course, that the same wonderful subtile fluid, now changing its place, and flowing into the pores, and between the particles, or atoms, pushed the latter asunder, and increasing the spatiola of the pores, or little spaces that they were supposed to occupy, gave the whole gross mass of each fibre an enlargement of dimension, whether in a longitudinal or circular direction.

THE functions of the nervous system of man as well as other animals, exercised in sense, motion, intellectual operation, passion and motion *, had, at different times, in the annals of medicine, undergone different explanations. Most of these, as well as that which makes our present subject, were purely hypothetical, and destitute of all support either from fact or argument. The hypothesis, immediately preceding the present one, was, that a fluid was secreted in the brain, and from thence by the nerves propagated to all the parts of the system, where there were either organs of sense, or motion. The nerves were first supposed to be hollow, as any other part of the vascular system; and the fluid contained in them was therefore understood to be inelastic, like all the other grosser fluids, from which it was supposed to be an ultimate secretion. This theory, elegantly executed by the learned and ingenious Dr Boerhaave, in his once much admired system of an intertexture of vessels, held its place in the medical creed so long as the living authority of that great professor, and the belief in an assertion of Leuenhoek, that he had discovered, by microscopical observation, that the nerves were hollow tubes, remained to give it support: But, when repeated observations of this sort, both by Leuen-

* Elem. Medicin. XV.

hoek and others, brought no confirmation of the hollow structure of nervous matter; when the fallacy of microscopical observation came to be coolly considered, and the death of Dr Boerhaave, soon after succeeded by the adoption of the spasmodic system of Dr Hoffman in the young medical university of Edinburgh, was followed by a gradual declension of the eclectic system of that great man; Among other insignificant and frivolous alterations in physiology and pathology which now took place in medical doctrine, the substitution of an elastic for an inelastic fluid in the nerves; and the rejection of their hollow vascular structure, was one.

The doctrine of spasm, started by an original very worthy of it, the fanatic and visionary Van Helmont, and heavily wrought up into a confused and perplexed system by the painful and verbose labour of the truly Germanic Hoffman, after having been, by the superior name and authority of Dr Boerhaave, suppressed, and banished from the country which gave it birth, found at last, amidst a new persecution raised against it by the pupils of Boerhaave (then in possession of the medical chairs at Edinburgh), a friend and protector in Dr Cullen, who had lately become one of the number of those professors.

This brat, the feeble, half-vital, semiproduction of phrenzy, the starveling of strained systematic dulness, the forlorn out-cast of the fostering care to which it owed its insect vitality, was now to be pampered by a crude and indigestible nutriment, collected from all the materials which had composed the several fabrications of former erroneous systems; was to be decorated with every foreign plumage, and in this its totally borrowed and heterogeneous form, instead of the hideous caricatura (which it was), contrived to excite the derision of mankind, it was ostentatiously obtruded upon the world as a new and respectable doctrine, and held up, forsooth, as the formidable rival of a splendid system. Among other parts of this patched-up fabric, the ether was laid hold of.

From a manuscript dissertation on ether, first read before a literary medical society in Glasgow, and afterwards translated into Latin, and published by authority, in Edinburgh *; the complete system-

* This made its appearance about fifteen years ago, and was refuted, in a masterly and philosophical manner, by a person whose name we forbear to mention, because we have not his permission for it. That paper constitutes the article *Ether* in the first edition of the Encyclopædia Britannica. But the professorial influence of the original au-

atic application of ether to the doctrine of medicine was attempted. The notion of the hollow structure of nervous matter, and of an inelastic fluid secreted in them, was refuted, and the supposition of a solid structure of the nerves, with a subtile elastic fluid moving in their particles, on these, and around them, was adopted. Sense, motion, and betwixt these, the exercise of the intellectual function, as well as that of passion and emotion, were explained. To illustrate this by an example: Suppose an impression made upon any part of the external surface of a man's body, let that be either heat or cold, or any mechanical impulse: The ether in the extremities of the nerves, as organs of sense, is immediately set in motion. This motion, from the energy of the ether, is communicated along the nerves to the brain: The effect of the operation of the ether, on the nervous system of the brain, is to produce such a change of motion, as occasions a consciousness of the original impression, and a reference in the mind to the place where it was made. Next, if the impression was of a violent kind, as in the case of the application of a red hot iron, of an extreme degree of cold, or of an impression made

thor of this stuff has excluded all mention of it, as well as this criticism upon it, from the new edition of the work we have mentioned.

by any sharp-pointed, or otherwise wounding instrument; the motion of the ether is instantaneously propagated along the nerves which terminate in the fibres of muscles, called therefore motory nerves, and the whole limb, in any part of which the hurting impulse had been received, is thrown into action, whereby it is withdrawn from the offensive power. But a fuller account, than it is necessary here to give, will be afforded by inserting, in the author's own words, an extract of the dissertation lately mentioned.

"ETHER, the name of an imaginary fluid, supposed by several authors, both ancient and modern, to be the cause of gravity, heat, light, muscular motion, sensation, and, in a word, of every phenomenon in nature. Anaxagoras maintained that ether was of a similar nature with fire; Perrault represents it as 7200 times more rare than air; and Hook makes it more dense than gold itself. Whoever has an inclination to know the various hypotheses concerning ether, may consult Shebbere, Perrault, Hook's posthumous works *.

"BEFORE the method of philosophising by in-

* Act. Erud. Lips. 1716, Bernoulli's Cogitat. de gravitate ætheris, &c. &c.

duction was known, the hypotheses of philosophers were wild, fanciful, ridiculous. They had recourse to ether, occult qualities, and other imaginary causes, in order to explain the various phenomena of nature: But since the days of the great Lord Verulam, who may be styled the parent of genuine philosophy, a contrary course has happily been followed. He convinced the world, that all knowledge must be derived from experiment and observation; and that every attempt to investigate causes by any other means must be unsuccessful. Since his time, the best philosophers have followed the tract which he pointed out. Boyle, Locke, Newton, Hales, and a few others, in little more than one century, have improved and extended science far beyond what the accumulated force of all the philosophers since the creation had been able to effectuate: A striking proof both of the comprehensive genius of Bacon, and of the solidity of his plan of investigation *.

"NOTWITHSTANDING the reputation of Sir Isaac, philosophers have generally looked upon this attempt as the foible of a great man, or, at least, as the most useless part of his works; and according-

* Our critic is rather too partial to modern science.

ly peruse it rather as a dream or romance, than as having any connection with science. But we are sorry to find, that some late attempts have been made to revive the doctrine of ether, particularly in a dissertation *De ortu Animalium Caloris*, published in May last.

" As the revival of an old doctrine becomes in some measure a new one, we shall plead no other apology for inserting a specimen of the method of reasoning employed in this dissertation.

" THE author makes frequent use of a species of argument termed *dilemma* by logicians. For example, in the first part of the work, after endeavouring to prove that animal heat cannot be owing to fermentation, the motion of the fluids, and other causes that have usually been assigned, he draws this conclusion :—" If none of these causes are suf-" ficient to produce the effect ; therefore, by di-" lemma," says he, " it must be sought for in the " nature and action of the nerves."—This is a new species of dilemma :—If the author had proved, that the cause of heat in animals could not possibly exist *any where*, but *either* in fermentation, the motion of the fluids, &c. *or* in the nerves, after having disproved its existence in all the rest, his conclusion

in favour of the nerves would have been just; but, as he has not so much as attempted this, the conclusion is not only false, but ridiculous.

"HOWEVER, upon the authority of this dilemma, the author first gives what he calls a Compend of a *new* doctrine concerning the nerves, and then proceeds to inquire in what manner the nerves produce animal heat. He tells us, "That *thought (cogitatio)* and sensation depend upon impulses either on the extremities of the nerves, or the sensorium commune, and the consequent motions produced by these impulses: That these motions are so quick, as to be almost instantaneous: That as all motion is mechanical; therefore *thought*, sensation, and muscular motion, must likewise be mechanical: That such quick motions cannot be produced without the intervention of some extremely elastic power; and, as Sir Isaac Newton has shewn, that the impulses which occasion the different sensations must be owing to an elastic power; therefore the muscular motions of animals must be occasioned by the oscillations of some elastic power."—"But," says he, "as this elastic power cannot exist in the solid nervous fibres, nor in any inelastic fluid; therefore, by *dilemma*, it must exit in an elastic fluid; and

" hence, also, by the former *dilemma*, this elastic " fluid must be seated, either in the nerves, or in " the medullary substance."

" HERE, again, the author calls Sir Isaac into his assistance *. " What confirms this opinion," says he, " is the Newtonian ether, which pervades all " nature, and which, with a few variations in its " modification, Sir Isaac has shewn to be the cause " of cohesion, elasticity, gravity, electricity, mag- " netism, &c. in the following manner : 1*st*, As the " rays of light, when reflected, do not touch the " solid parts of bodies, but are reflected a little be- " fore they reach them, it is plain that the ether " not only fills the pores of bodies, but likewise " floats upon their surfaces ; and hence it becomes " the cause of attraction and repulsion.—2*d*, All " metals, and inelastic fluids, are non-electrics ; on " the other hand, all solid bodies, metals excepted, " are electrics. *i. e.* proper for accumulating ether. " But ether, thus accumulated in such a variety of " bodies, may produce various motions in the parts " of these bodies, without inducing any change in " the bodies themselves. Hence ether, with some

* Wherever either our critic, or his author, mentions the word Sir Isaac, read for it, " the followers of Sir Isaac."

" variations in its modification, is sufficient to ac-
" count for the phenomena of electricity.—*3d*, As
" iron, by accumulating ether around it, exhibits
" all the wonders of magnetism; so this magneti-
" cal ether is more analogous to the nervous ether
" of animals than any other kind of it. For, as
" the magnetical ether passes along iron without
" changing any part of the iron; so the nervous
" ether, in like manner, passes along the medullary
" substance of the nerves, and excites motion in
" any part that is contiguous with them, without
" inducing any change in the nerves.—*4th*, The
" irritability and life of plants, which very much re-
" semble those in animals, cannot be explained by
" any inelastic cause; and must therefore be attri-
" buted to an etherial one.—*Lastly*, As the com-
" mon ether is differently modified in each of the
" substances above taken notice of, and also pro-
" duces various motions, or effects, peculiar to
" each, it likewise varies, and has some peculiar
" qualities, when residing in animal bodies; so that
" the nervous or animal ether is not exactly the
" same, but differs, in some respects, from those
" species of ether which give rise to cohesion, gra-
" vity, magnetism, electricity," &c.

"HAVING thus explained the nature and qualities of ether, our author starts a very important question, *viz.* "Whence is ether derived? and "whether does it leave any body after having got "possession of it?" In answer to this, he observes, "That certain bodies have the power of collecting "the electrical matter from every circumjacent "body, and of accumulating it in their pores and "on their surfaces, but do not suffer it again to "transmigrate into any other body. There are "other substances of an opposite nature, which do "not accumulate the electric matter, but instantly "allow it to pass into others, unless prohibited by "an electric. Hence," says he, "nothing more "is necessary for substances of the former kind, "but to be in such circumstances as allow them to "accumulate the electric matter. In the same man-"ner," proceeds our author, "the nervous ether, "which is diffused through every part of nature, "flows copiously into the medullary part of the "nerves, when no obstacle stands in its way; but, "when once it has got there, it keeps firm posses-"sion, and never afterwards leaves it. Now," says he, "a quantity of ether probably constitutes one "of the staminal parts of animal bodies, and in-"creases in proportion to their age and growth: "For nothing is more *ridiculous* than to suppose,

" that what is commonly called *the nervous fluid* " can be daily wasted by labour and exercise, and " daily repaired by a new secretion from the brain. " To refute this *vulgar* notion, nothing more is ne- " cessary than to say, that it is *one of Boerhaave's* " *theories*, and *must be false*, as all Boerhaave's other " theories have been proved to be ill-founded! But " ether is of a more fixed and determinate nature; " whenever *it* gets possession of any substance, it " never forsakes it, unless the texture and consti- " tution of the body itself be changed. Hence," continues our author, " the ether of an acid body " remains as long as the body continues to be acid; " the same observation holds with regard to the " ether of an alkaline body: But, if these two be " blended together into a neutral salt, the ether " must likewise be changed into a *neutral;* and, " therefore, in the formation of the medullary or " staminal part of animals, the ether which belong- " ed to, or had the properties of, some other sub- " stance, is instantaneously changed into animal " ether, and remains so till the dissolution of that " animal."

" Our author next observes, " That bodies re- " quire to be in a certain state, or condition, in or- " der to the formation of an ether that is proper

" for them. This condition of bodies is called an " *excited state:* Thus, as sulphur, when fluid, does " not receive the electric matter, but, when solid, " instantly receives it; in the same manner, the " nerves, though properly formed, do not admit an " ether adapted to their nature, unless they be in " an excited state. Hence," says he, " the ether " of a *dead*, and that of a *living* person, are very " different, although the texture and figure of the " nerve be the same. The state, necessary for con- " stituting the ether of a living animal, seems to " depend on heat and moisture; because these " things are absolutely necessary in the constitution " of life: And hence," concludes our author, " the " excited state of the nerves depends on heat and " moisture. There are also certain circumstances," says he, " which contribute to render the state of " the nerves more or less apt for accumulating " ether: A spasmodic fever, for example, renders " the nerves of the whole body less pervious to the " motion of the ether; and hence, in cases of this " nature, *health*, and all the *vital functions*, must be " injured.

" THESE," our author observes, " are the out- " lines of a *new* doctrine concerning the nature and

" functions of the nerves;" and upon this *foundation*, proceeds to give his *new theory* of animal heat.

" FROM the foregoing *reasoning*," says he, " the " heat, as well as all the functions of animals, seem " to be occasioned by the oscillations of the nervous " ether, betwixt the extremities of the sentient " nerves and the brain, or, more properly, betwixt " the brain and muscles. But electrical ether, as " above observed, varies a little from common " ether; all inelastic fluids, as was likewise formerly " remarked, are non-electrics; and all solid bodies, " metals excepted, are electrics: These circumstan- " ces," says our author, " seem to be owing to the " oscillations of the electric matter in bodies. In " the same manner," says he, " the nature of ani- " mals may be such, and the nerves may be so con- " stituted, as to form an ether adapted to their na- " ture, and to excite those oscillations which occa- " sion heat. The wonderful effects of heat and cold " upon the nerves," continues our author, " con- " firm this theory: Every action, and even life it- " self, requires a certain degree of heat; for, as " the heat of the external air is so variable, it was " absolutely necessary that animal bodies should be " endowed with the faculty of producing a degree " of heat suited to their nature, independent of ex-

" ternal circumstances: Hence we see the reason " why the degree of heat so seldom varies in the " same species of animal. However, although the " nervous ether is always ready for exciting heat " by its oscillations; yet, in order to bring about " this effect successfully, external *stimuli* are ne- " cessary, otherwise the ether would be in danger " of *stagnating*, which would occasion sleep, a palsy, " and, last of all, death. The most permanent of " these *stimuli* is the pulsation of the arteries; which " is the reason why heat is so connected with the " circulation of the blood, and why many authors " have mistaken it for the true cause of animal " heat."

" Our author now concludes with observing, " That, by his theory, the varieties of heat in dif- " ferent parts of the body, the heat and flushing of " the face from shame, and all the other phenome- " na of heat in animal bodies, admit of a better " explanation, than by any other theory hitherto " invented."

" Having thus given a pretty full account of an attempt to explain the most abstruse operations of nature, as nearly as possible, in the very words of

the author, we cannot deny ourselves the liberty of making a few observations.

" To give a formal refutation of this author's reasoning, is no part of our plan. It is, perhaps, wrong to say that he has *reasoned;* for the whole hypothetical part of his essay is a mere farrago of vague assertions, non-entities, illogical conclusions, and extravagant fancies. His ether seems to be an exceedingly tractable sort of substance: Whenever the qualities of one body differ from those of another, a *different modification of ether* at once solves the phenomenon. The ether of iron must not, to be sure, be exactly the same with the nervous ether, otherwise it would be in danger of producing sensation in place of magnetism. It would likewise have been very improper to give the vegetable ether exactly the same qualities with those of animal ether; for, in such a case, men would run great risk of striking root in the soil, and trees and hedges might eradicate, and run about the fields. Nothing can be more ludicrous than to see a writer treating a mere *ens rationis* as familiarly as if it were an object of our senses: The notion of compounding the ether of an *acid* and that of an *alkali*, in order to make a *neutral* of it, is completely ridiculous. But if men take the liberty of substituting *names* in place

of *facts* and *experiments*, it is an easy matter to account for any thing.

" By this method of philosophising, obscurity is for ever banished from the works of nature. It is impossible to gravel an etherial philosopher. Ask him what questions you please, his answer is ready: " As we cannot find the cause *any where* else; " *ergo*, by dilemma, it must be owing to ether!" For example, ask one of those sages, What is the cause of gravity? he will answer, 'Tis *ether!* Ask him the cause of *thought*—he will gravely reply, " The solution of this question was once universal- " ly allowed to exceed the limits of human genius: " But now, by the grand *discoveries* we have lately " made, it is as plain, as that three and two make " five: *Thought* is a mere *mechanical* thing, an evi- " dent effect of certain motions in the brain, produ- " ced by the *oscillations* of a subtile elastic fluid, call- " ed *ether!*" This is indeed astonishing!

" Such jargon, however, affords an excellent lesson to the true philosopher. It shews to what folly and extravagance mankind are led, whenever they deviate from experiment and observation in their inquiries into nature. No sooner do we leave these only faithful guides to science, than we in-

stantly land in a labyrinth of nonsense and obscurity, the natural punishment of folly and presumption.

"When endeavouring to account for that propensity in the human mind, which prompts us to attempt the solution of things evidently beyond our reach, we recollect a passage in Swift's works, which explains it in the most satisfactory manner.

"Let us next examine," says the Dean, "the "great introducers of new schemes in philosophy, "and search till we can find from what faculty of "the soul the disposition arises in mortal man, of "taking it into his head to advance new systems, "with such an eager zeal, in things agreed, on all "hands, *impossible to be known;* from what seeds this "disposition springs, and to what quality of human "nature these grand innovators have been indebted "for their number of disciples; because it is plain, "that several of the chief among them, both *an-* "*cient* and *modern*, were usually mistaken by their "adversaries, and indeed by all except their own "followers, to have been persons crazed, or out of "their wits; having generally proceeded, in the "common course of their words and actions, by a "method very different from the vulgar dictates of

" *unrefined* reason, agreeing, for the most part, in " their several models, with their present undoubt- " ed successors in the *Academy* of *modern Bedlam.* " Of this kind were *Epicurus*, *Diogenes*, *Apollonius*, " *Lucretius*, *Paracelsus*, *De Cartes*, and others; " who, if they were now in the world, tied fast, " and separated from their followers, would, in this " *undistinguishing* age, incur manifest danger of " *phlebotomy*, and *whips*, and *chains*, and *dark cham-* " *bers*, and *straw.* For what man, in the natural " state or course of thinking, did ever conceive it " in his power to reduce the notions of all mankind " exactly to the same length, and breadth, and " height, with his own? Yet this is the first *humble* " and *civil* design of all innovators in the empire of " reason.—Now, I would gladly be informed, how " it is possible to account for such imaginations as " these in particular men, without recourse to my " *phenomenon* of vapours (*i. e.* ether), ascending from " the lower faculties to overshadow the brain, and " there distilling into conceptions, for which the " narrowness of our mother-tongue has not yet as- " signed any other name besides that of *madness* or " *phrenzy.* Let us, therefore, now conjecture how " it comes to pass, that none of these great projec- " tors do ever fail providing themselves, and their " notions, with a number of *implicit disciples;* and

" I think the reason is easy to be assigned.—For " there is a peculiar string in the harmony of hu- " man understanding, which in several individuals " is exactly of the same tuning. This, if you can " dexterously *screw* up to its right key, and then " *strike gently* upon it, whenever you have the good " fortune to light among those of the *same pitch*, " they will, by a secret, necessary sympathy, strike " exactly at the same time. And in this one cir- " cumstance lies all the *skill*, or *luck*, of the mat- " ter: For if you chance to jar the string, among " those who are either above or below your own " height, instead of subscribing to your doctrine, " they will *tie you fast*, call you *mad*, and *feed* you " with *bread* and *water*. It is, therefore, a point of " the nicest conduct, to distinguish and adapt this " noble talent with respect to the difference of *per-* " *sons* and of *times*.—For, to speak a bold truth, it " is a fatal miscarriage so ill to order affairs, as to " pass for a *fool* in one company, when in another " you might be treated as a *philosopher*: Which I " desire *some certain gentlemen of my acquaintance* to " lay up in their hearts as a very *seasonable innu-* " *endo*."

" We would not have dwelt so long upon this article, had it not been to guard, as far as our in-

fluence extends, the minds of those who may be unacquainted with the genuine principles of philosophy, from being led into a wrong tract of investigation."

It was the full conviction of the necessity of stopping our inquiries where our knowledge ends, and of acquiring a thorough acquaintance with the particular phenomena, before making any attempt to generalize and reduce the whole to a common head, together with a deep sense of the pernicious consequences of the contrary method of philosophising—that of neglecting the detail of facts, and almost only indulging in vain speculation, and idle inquiry into abstract causes—that gave occasion to the 17th paragraph in the second edition of the Elementa Medicinæ; a paragraph not so much as thought of in any part of the first edition, as being then supposed unnecessary. From the recollection of what had happened to other departments of science, which has now been so fully pointed out; as also from the importunity of his pupils, not yet sufficiently apprised of the danger they were pressing upon, to know something about the cause of excitability—the author found himself obliged to set the marks and fix the boundaries of inquiry. His words are as follow: "We know not what excitability is, or

" in what manner it is operated upon by the exci-
" ting powers: But, whatever it be, either a cer-
" tain quantity, or a certain energy of it, is assign-
" ed to every individual system upon the com-
" mencement of its living state. The measure of
" the energy, or quantity, is different in different
" animals, and in the same animal at different times,
" and under different circumstances." In the mar-
gin he makes an apology for these terms of quanti-
ty, energy, and measure of either, as also of over-
proportion, under-proportion, &c. as being less eli-
gible on account of their propriety, than the ne-
cessity for their use. And then he adds, " There-
" fore, partly on account of the uncertain nature
" of the thing, partly from the poverty of common
" language, as well as the novelty of this doctrine,
" the occurrence of the expressions of over-abun-
" dant, excessive, or accumulated excitability—
" when enough of stimulant power has not been
" applied—as well as the opposite, deficient, ex-
" hausted, or wasted excitability—when too much
" stimulant power has been applied—will be fre-
" quent through the subsequent work. Both upon
" this, as well as every other occasion of philoso-
" phic inquiry, we must abide by facts. The slip-
" pery question about causes, as being generally
" above the reach of our powers, that poisoned

"snake to philosophy, must be carefully shunned. "Let no one, therefore, think himself at liberty to "explain the terms, that we have just now men- "tioned, as glancing at the nature of excitability; "or as implying a decision of the question, whe- "ther it be material, and, as such, one while in- "creased, another while diminished, in quantity; "or only a quality inherent in matter, and some- "times in a vigorous, sometimes in a languid, state. "On the contrary, let every person be assured, "that the abstract question is in no shape attempt- "ed; a practice that has been too common, nay, "almost constant, in other systems, to the great de- "triment of science *."

It is not our business, in this part of our work, to enter into a minute detail of particulars, or even to delineate all the modes of corrupting otherwise meritorious doctrines. They are numerous, almost innumerable. As many of them, however, as shall seem worthy of any notice, will be the subject of inquiry in the after part of this work, where they are to be treated in the order already mentioned. In the ether, of which we have been speaking, we have given sufficient exemplification of the bad ef-

* Elem. Med. Alter. Edit. 17.

fects of the practice; and it will easily occur to the reader how frequent and baneful to science it has been. It had been long known, that bodies, heavier than the medium in which they are placed, descend with a velocity equally accelerated: But the cause was unknown, till Galileo discovered it; in finding that all bodies, once put in motion, continue that motion with the same velocity, and in the same direction, till they be retarded, or brought to rest, or have the direction of their motion altered, by a corresponding force impressed; and, that gravity acts constantly and equally, and therefore adds equal degrees of velocity in equal times. The most sound philosophers, since his time, have not only allowed these facts to be real causes, but adequate to produce all the effects ascribed to them: And, though others, unwilling to consider them as ultimate facts, or limits of human knowledge, have exhausted much useless learning and ingenuity to discover their cause; their success has been such as we have pointed out. And the cause of gravitation is still unknown, and, we have no doubt, will remain unknown, so long as conjectures continue to be admitted for facts, and hypotheses for arguments.

As the ensuing part of this work is meant for an exposition and refutation of the several erroneous

systems that have at any time appeared in the profession of medicine; therefore, before entering upon it, and dismissing the present introductional part, it will, we apprehend, be productive of some use, to give a general account of a doctrine, which we consider, and hope the readers will receive, as a just one. It will answer the purpose of a standard, by which the several systems that are about to be disproved, may be severally compared and examined.

But, previous to that, that some notion may, in the mean time, be formed of the most interesting and important difference betwixt the old doctrines and the new, we shall, to the account of the new doctrine just now mentioned, prefix an outline of the old, especially in the practice, in so far as that can be brought to a general view.

A SHORT ACCOUNT

OF THE

OLD METHOD OF CURE.

If the erroneous systems of medicine, that have hitherto appeared in the world, could be reduced to any general point of agreement, it would be in the general view that physicians, however different their theories were, have entertained of the method of cure. In that respect, nothing can be more uniform than they, in placing their practice in bleeding, other evacuations, starving, and cold. This is the noted, or rather notorious, doctrine of antiphlogistic regimen, or antiphlogistic plan of cure: Which, without exception, scarcely that of the physicians who opposed the practice of Dr Sydenham, commonly known by the appellation of the Alexipharmac physicians, has been nearly universal from the first accounts we have of the profession, in the works of Hippocrates, to the present time. For, however widely physicians have differed in their

anatomical, physiological, and pathological, opinions, which were their theoretical department; or, however much some of them have differed from the rest in decrying all theories, there is, with the exception we just now hinted, and not with that completely, scarcely a practitioner upon the records of the profession, who has not prescribed bleeding, vomiting, purging, sweating, glistering, blistering, issues, tents, perpetual blisters, abstinence from every nourishing article of food, from every sort of invigorating drink, from all condiment; substituting, in place of the latter articles, vegetable stuff in a fluid form, as water-gruel, grot-gruel, panado, acidulated, or not acidulated; obstinately denying the use of all animal matter, even in a fluid form, excepting, and that only of late, and yet sometimes only, beef-tea, consisting of water poured boiling upon beef, and strained off again. In a word, there is not a mode of evacuation, or of impoverishing the several parts of the vascular system of their respective fluids, that the brains of practitioners have not been tortured to contrive and employ. Hence, besides large bleedings from the great red vessels, and the great evacuations of all the several colourless fluids, secreted from the blood, every species, every mode of bleeding, every diminution of the mass of the other fluids, as leeching, cupping, scarifying,

expectorating, sternutation, rubefaction, have been constantly employed.

From this uniformity among physicians, in their practice for the cure of all general diseases, independent of their pathologies; from this gross rule of practice, independent of their numerous proximate causes, as well as their more numerous indications of cure, both equally jarring and varying without end, we can form a tolerable estimate of their notion of the nature of diseases in general, and, without doing them the least injustice, conclude, that hitherto physicians have, in fact, had no idea of any other morbid state but a phlogistic one, or one depending upon excessive vigour; and no conception of any other mode of cure, but an antiphlogistic, or evacuant, debilitating, one: A notion repugnant to all human experience; which infallibly teaches us, that our tendency is to disease and death, while our living and healthy states are effected and continued by powers foreign to our natures *. Our very food

* Elem. Med. 72. "From all that has been hitherto delivered, it follows, as a demonstrated fact, that life is a forced state; that animals, every instant of time, tend to death, and are kept from it difficultly, and only for a little, by foreign powers, and then give way to death from the necessity of their fate."

and drink, and other supports of life, after producing that effect, for a certain period of our living state, come at last gradually to operate more and more weakly, and at last to fail altogether, and allow death to finish our decaying state in a total extinction of it *. If, therefore, there were any foundation for the supposition, that the supports of life sometimes over-do their part, which is certainly the case, especially when the growth is finished, and the powers are so applied, as to produce a high luxuriance of health ; at other times, however, especially in the decline of life, and at every period of it, when the powers are applied in an under-proportion, it required no extraordinary judgment to discern a very opposite state of the system, a state of debility, and that the diseases, arising upon such occasions, could arise from no source but debility. Nay, while the fact is ascertained beyond a doubt, that there

* " What, during the first part of life, is the effect of food, drink, and other similar supports of life ? It is to give strength. What is their effect after ? To give less and less strength. What is their effect towards the end of life ? It is so far from being productive of strength, that it manifestly is debilitating. Nay, while the same means, by which life was formerly supported, are not withheld, life, notwithstanding, and for the most part, through the intervention of diseases, is at last brought to an end."—Elem. Med. Præf. p. 2. ima.

are two sources of debility, one, the consequence of an under-proportion, and the other, of an over-proportion of stimulus, the latter going beyond that more moderate proportion, which constitutes the diseases of a high luxuriance of health; and, while it is also demonstrated, that the diseases from the latter source equally depend upon debility, as those originating from the former *, it certainly might have been expected, that, in the course of more than two thousand years, both those sources of debility should have been marked, as constituting a set of diseases, not depending upon causes of excessive vigour, and therefore not to be cured by remedies which diminish inordinate vigour; but depending upon a morbid diminution of vigour, and therefore to be removed by powers which increase the deficient vigour †. But, though the diseases of debility from either of these sources, are, in the catalogue of the sum total of universal diseases, in the proportion of ninety-seven out of the hundred, to the diseases that are properly treated upon the commonly received

* See No. 23. and 28. to 38. where the debility depending upon over-proportion is mentioned; and 38. to 47. where the full account of that debility, which depends upon under-proportion, is explained; and both upon the proper principle.

† Elem. Med. 23. 62. 66. 67. 68. 90. 91.

plan of cure; yet, as if the latter were the only object of the physician's practice, and the former non-existents in nature; till a certain doctrine appeared, no other cause of disease had been looked for, but plethora and vigour, and no other cure employed, but bleeding, and other evacuant, debilitating powers, without end. The fair and obvious inference against physicians to be drawn from all this is, that, according to their creed, notwithstanding the fall of man, the tendency of mankind is not to death, but immortality, and the only use of medicine is to counteract that tendency, and, by ensuring our mortal state, to enforce the curse denounced against the common parents of mankind and their offspring. Henceforth, at least, the bad effect of the ordinary practice, in the far greater number of diseases, will not be doubted; as it already is not, wherever it has been properly inquired into, and compared with that, which, happily for mankind, is now taking place of it. If, however, it should be said in favour of some one or other of the systems, the falsity of which has been unreservedly announced, that, since they are so different from each other in their theoretical part, one or more of them has a chance of being nearer to the truth in practice, in proportion to their difference from those, which are the most remote from that standard: The short answer to

that allegation is, that their theoretical differences are only nominal, while the sameness of practice, which distinguishes them all, is real. The practice asserted to be in common to them all has been described; and the only question, therefore, which remains to prove them all to be essentially on the same footing of practice, resolves itself into this: Is there any one system, I will require but one, distinguished for greater justness in its practical part, than the rest?

Hierophilus and Erasistratus are said to have improved upon the doctrine of their master Hippocrates; the one by enlarging the anatomical part, the other that of the materia medica. But, who is so learned, or so much more fortunate than his neighbours, in lighting upon the proper vouchers of the fact, as to decide in favour either of that assertion, or the contrary? It would seem rather, that, as the fame of the Coan father remained undiminished by the labours of these his immediate followers, they left the practical part much as they found it. Next, though we have the works of the celebrated Galen, a leader in the profession of medicine, very complete, and, in which considerable alterations are made in the theoretical part; does it appear, from the face of his system, that any difference of conse-

quence was introduced into the practice? This system, on the contrary, with the alterations of which we speak, in the theoretical part, continued, as it had been handed down from the time of Hippocrates, in all the hands into which it fell, Saracens or Europeans, and in all the languages in which it was perused, whether the original, or the Arabic, or Latin translations, through all the dark ages, precisely the same. Nay, the opposition at last made to it by the chemical system of medicine, keen and acrimonious as that was, was followed with no material innovation in the kind of remedies. When the violence of party-spirit abated, and the torrent of mutual rage subsided into the more gentle stream of a temperate and calm opposition; not only the more tractable and moderate chemical physicians, but even their outrageous leader Paracelsus, soon began to see the necessity of confining their new system to the speculative part of the art, and of leaving no further alteration in the practice, but the nominal one of changing the forms of some of the evacuant remedies, while their qualities remained the same. If the chemists found this a necessary compromise, and readily perceived the inefficacy of relying on acid remedies, to remove an alkaline cause of disease, or of trusting to powers of an alkaline kind, as remedies of an acid acrimony, constituting the

morbid state: It was not to be expected, that the practitioners of a kindred sect, the Corpuscularian Doctors, would, from a feeling of the same necessity to enlarge their basis of cure, hesitate in making similar terms with the Galenists. Accordingly, though their pathology taught, that the morbid state depended upon a sharp-pointed or angular form of the extreme particles of the blood and other fluids; and their indication of cure was, to restore to them that rotundity, which was supposed to constitute their healthy state; and though the practice of evacuation could only be supposed to dislodge a small portion of such morbific matter, without having any effect at all in giving the part, which remained in the system, the sphericity or rotundity of the ultimate particles, supposed to be requisite to the return of health; they did not, however, dispute the matter with the Galenists, but allowed themselves to be swept down the torrent of an undistinguishing method of cure, which, for so many ages, had carried all before it.

It was predicted by a great man, who lived to see the discovery of the circulation of the blood, that the explanation of medical doctrine would, for the future, turn upon that discovery. As his merit or demerit in that prediction, could only be deter-

mined, by knowing what use he expected should be made of that piece of knowledge, added to what knowledge had been acquired before; we therefore pretend not to make him the subject either of eulogy or censure on that account. But we are confident, that, if Hervey were to return to the earth, and observe what state of medicine had taken place ever since his discovery, he would be much more provoked by the abuse which had been made of that discovery, than he had been exasperated by the persecution raised against himself for making it. The volumes which have been written upon the absolute power of the heart and vessels; the effects attributed to the blood as a cause of disease, while the states of that fluid are always the effect of the true cause, a cause not thought of by them, not even in a dream; the downright nonsense of assigning a projectility to the blood, *i. e.* a power of directing its own motion, independent of the influence of the vessels, which, while it is they which regulate its motion, are, at the same time, themselves governed by a power, which is one and the same over all, and the sole over-ruling principle *; all these erroneous

* The excitement of the system produced by the exciting powers, operating upon the excitability, is the principle here alluded to. See Elem. Med. 16, 32.

doctrines, and their consequences, though introduced by great names, and credulously, from the inchantment of mere authority, swallowed by a world of implicit believers, would afford that great man little occasion for glorying in the beneficial effects which his discovery had brought to mankind; on the contrary, he could not fail to be highly mortified by the abuses, which the ignorance and perversity of human nature had made of it.

Be the causes, however, what they may, the discovery of the circulation made no compensation, by its good effects upon the practice of medicine, for the evils which the abuses of it introduced into the theory.

Dr Sydenham himself, notwithstanding the reformation, in other respects, which he made in the gross cures of some of the few phlogistic diseases, still knew only the evacuant plan of cure. And as Dr Boerhaave's system was eclectic, that is, selected from both ancient and modern writings, and particularly from those of Dr Sydenham; so the practice, which was the same in all the authorities he followed, remained the same with him and all his followers. And so little was there any variation in the curative part, as executed upon the spasmo-

dic system, that any person, who hears or reads, without looking at the title or form of the book, any practical prescription in Hoffman, would not be able to distinguish it from one in the style of Boerhaave. The very doctrine of Stahl, which pretended to rely, almost intirely, upon the power and wisdom of nature in the cure of diseases *, whenever the interference of the physician was allowed, pointed out no other remedies, but the ordinary evacuant ones, while their doctrine of plethora led them to encourage bleeding even more than others. And though Hippocrates, the author of that doctrine, in some puzzling cases, as bad fevers, often lay by, depending on an effort of nature; yet he often also lay to, as we equally know, from his writings. Their practice, therefore, whenever they engaged in it, consisted of the usual evacuant remedies. Indeed, Hippocrates, from whose writings this, as well as almost all the errors of medicine are derived, knew no other mode of cure but the one so generally followed ever since his time.

After thus pointing out the sameness of the method of cure of diseases among physicians, however

* This is what is commonly called the *vis medicatrix naturæ*, or that power in the constitution, by which it is supposed to remove the morbid tendency of the symptoms.

different their theories and systems were, it might seem but reasonable, and a part of the task we have undertaken, to take some notice of the medical practice, as that was conducted by two sets of practitioners, the Empirics and the Alexipharmac regulars.

When we consider the heating stimulant articles, which distinguished the Alexipharmac practice, we would be disposed to think, that they had in view the cure of diseases, which depended upon a different cause from that of repletion and vigour. But we are soon set right in our judgment of this matter, by this single consideration, that their remedies, though drastic, and such as we have described, were both evacuant, and meant for such, as well as those employed by others. If the intention, or, as it is commonly called, the indication, of cure, which other systematics followed, was to throw out of the system certain humours, hurtful either by their quality or quantity; that of Dr Morten, and his Alexipharmac brethren, was also to expel humours of a hurtful quality, in so far as they were supposed to contain a morbific matter. Only, in the latter case, the force of the means often defeated the end; it being certain, that the stimulus, combined with their evacuants, often produced and increased the morbid state, which, as evacuant, they were intended to re-

move. This effect, however, of their remedies, hurtful indeed in phlogistic diseases, and justly as such rejected by Dr Sydenham and his followers, administered in any of the numerous diseases depending upon debility, was so far suited to be of service. Nor is it improbable, that, contrary to their intention, which was to dislodge a morbific matter, they sometimes, upon a very different principle, gave relief to patients. But that would be too often frustrated, by their general view of promoting evacuation. Upon the whole, as the diseases in which stimulants are of service, are ninety-seven out of the hundred, to those that require evacuation, it is very possible that the Alexipharmac plan of cure, though randomly conducted, and contrary to right principle, in general did more service than the antiphlogistic evacuant one *. The intention, therefore, of the Alexipharmac practice was the same with that of the greatest part of the practice that either preceded or followed it, that is, to evacuate. And, if the articles they employed were more active and stimulant, the only difference which that made was, that the practice was so much

* This distinction between the Sydenhamian, or the present, and the Alexipharmac practice, is pointed out in the Elem. Med. from 400. to 407. vol. 2.

worse in a few diseases, and might, according to its management, be so much better in many others.

From this account of the practice of the art of medicine, we can perceive, that hitherto it has been altogether imitative, and considered as founded on fact, and sacred, without knowing the reasons why. For want of which knowledge, it neither has been, nor can be, better in the hands of the Empirics, than in those of the regular physicians. The enterprising genius of empiricism might now and then stumble upon a more successful cure than the regular practice suggested; and it was so far in its favour, that ignorance could not mislead it more, than the false knowledge of its rival dogmatism. As the greatest distance from any point in a circle is one half the diameter, and as such was the deviation from truth of the dogmatic practice, with the exception only of their gross method of cure of the small-pox, and peripneumony, and one or two diseases beside; consequently, in all diseases except these, the Empirics had every chance of doing better than the dogmatists. But still, as ignorance, and want of right principle, is no security for the attainment of solid knowledge in other cases; that it also is not in this, is proved, by the history of empiricism, from its first leader with whom we are acquainted, the

Egyptian Serapion, down to Dr Graham * ; where we find the only result of the means they pretended to employ, to attain the knowledge of diseases, and of their causes, that is, observation, history, and analogy, was vulgar and doubtful attestation; empty boasting; abuse of all other practice, not excepting that of their brethren in the same line; extreme narrowness of mind; contempt of candour and decency of character; no written records of what they did; the acquisition of not one person of learning, sense, or judgment, to their party; no united body in support of a common cause; no fixed plan but that of a plot upon the purses of their patients; no patients without purses; a judicious confinement of their depredations to the rich, credulous, vulgar. From such disqualifications, little improvement could be expected in any branch of medical knowledge, and as little in the great end of all such knowledge, the prevention and cure of diseases. The obstacles to improvement in the regular practice have been pointed out in general, and will be more particularly detailed hereafter. But if the profession is a gainful trade among the Empirics, it is not less so, though better gilded over, among the regulars. The accomplishments of the

* The prince of modern quacks.

regulars have been learning and ingenuity in a few *, not directed to improvement in their own profession, a mere shadow of learning, or the study of a bad kind of it †, in the greatest number; sly attention to reputation for skill; intriguing with their brethren for countenance; opposition to improvement; persecution of discovery; narrowness of mind, under the thin veil of a false pretension to liberality; affectation of decency; simulation of candour, all for the purposes of trade; silence, from a consciousness of inability to speak so as to gain by it; formality, pomp, stateliness, gravity, all making a motely group of absurdities in manner, which prove wonderful exciters of the risible muscles in men of sense; invincible attachment to the errors of their education; aversion to improvement; ready upon every the slightest occasion to break out into rage and transport; invincible bigotry and prejudice ‡; an over-value of the learning to which they have any pretensions; an under-value of all which they are conscious they want ‡.

* As in a Pitcairn, a Boerhaave, a Morgagni.

† As Botany, and the other branches of natural history, the infinite multiplication of articles of the Materia Medica, endless modifications of their composition in pharmacy, &c. &c.

‡ "Seniorum confirmatam ætatè et usu pervicaciam,

As every country, in proportion as it is distinguished by riches and openness of manners, for that very reason, becomes the emporium, the scene of action, for highway-men, foot-pads, pick-pockets, swindlers, sharpers, gipsies, regular practitioners in law, regular practitioners in physic, quacks in both these professions; so England has long held, and still holds, the pre-eminence over all her neighbour countries, in being, for the reason assigned, the place of common resort, in which a comfortable subsistence is afforded to all those different denominations of purse-takers.

Exilis domus est, ubi non et multa supersunt,
Et fallunt dominos, et prosunt furibus.——

HORAT.

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nulla ratione, nullo veri pondere, vix numinis vi, flectendam, vinctum præjudiciis animum, cave; totum medicorum seculum, præter unum, erravisse, in errore obstinatis animis perseverasse, in Alexipharmacorum exemplo recordare; et, an præsentes, qui receptas scholis disciplinas sequuntur, rectius videant, et non contrario extremo desipiant,—reputa."

OUTLINES

OF THE

NEW DOCTRINE.

1. The fundamental part of this new doctrine is, That "there is a certain property in man and other animals," (and the author afterwards extends the proposition to the whole vegetable creation) "by which they are distinguished from themselves in their dead state, and from every other part of inanimate matter, in such a manner, that the application of certain external powers, and of certain functions peculiar to themselves, so affects them, as to produce the phenomena peculiar to their living state, that is, their own functions *.

2. "The external powers, producing this effect, are heat in different degrees; the articles of diet," in food, drink, condiment, and other matters taken into the stomach; "the blood; the fluids secreted

* Elem. Med. 10.

from the blood; and air." These are the external powers commonly applied. The effect of the application of "poisons and contagions is considered a little after *.

3. "THE functions of the system itself (1.) producing the same effect, are muscular contraction; the exercise of sense; the energy of the brain, in thinking, and in passion and emotion. While these produce the same effect as the external powers (2.), so, when they are considered in their origin, this is found to be partly themselves, partly the external powers *.

4. "THE result of either the property distinguishing living from dead matter (1.), or of the operation of either of the two sets of powers, being withheld, is no life †.

5. "THE property (4.) is named excitability; the powers (2. 3.), exciting powers ‡. The common effect produced by the exciting powers, is sense, motion, the mental function, and the different

* Elem. Med 11.

† The 13th paragraph is thus corrected on the margin of the 2d edition. "Earum rerum et actionum 10. 11. 12. sive dempto opere, sive dempta proprietate, vita nulla."

‡ Elem. Med. 14.

degrees of passion and emotion *." As this effect, "from whichsoever of the powers it arises, is always the same;" that is, since "sense, motion, mental function, and passion," are the only, and a constant, effect of the exciting powers acting upon the excitability; and that, whether one, or more, or all, or whichsoever, of the powers act—the irresistible conclusion that arises in the mind, is, that "the effect of the powers being the same, the mode of operation of them all must be the same." Indeed, it is a mode of reasoning frequently employed through this whole work, that identity of known effect always proves identity of cause, though unknown; a mode of reasoning, which, however much it be opposed by ignorance, and the effect of habits of false logic, will certainly stand the test of every criticism, while there is uncorrupted judgment in the breast of man to appeal to.

6. In the 26th proposition, the author uses the term excitement to express the effect of the exciting powers (5.) upon the excitability, in producing the living functions, now explained. In the 27th paragraph, finding "that some of the powers operate by evident impulses;" as the impulses of touch upon the organs of sense; those of the blood, and

* Elem. Med. 15.

other fluids, on their respective vessels; the contents of the stomach upon that organ; the contents of the intestines upon that part of the same canal; the air upon the external surface; and the contraction of muscular fibres upon the vessels: and, that "the effect of the others," which do not operate by impulses, as being immaterial; such as temperature upon the surface of the body; the intellectual function, passion and emotion, upon the brain; are, however, precisely the same (5); and consequently, according to his usual rule of reasoning from effect to cause, concluding the "cause also to be the same;" and, perceiving "a certain activity in" the effect of all "their operations;" to express this, he employs the term of "stimulus, or stimulant powers."

7. In the 19th, he demonstrates, that all the ordinary "exciting powers" (2. 3.), that act upon living systems, "are stimulant;" and therefore, with respect to them, that an old distinction of them into stimulant and sedative, is false; in place of which, whenever debility arises from them, "that debility is owing to a deficiency in the degree of stimulus," not to a positive power of diminishing excitement; and that debility is so far the effect of the privation or want of something, which, when

added, would give vigour or excitement, not the effect of the addition of any thing endowed with a positive power to diminish or destroy excitement, or the state of living systems. This he exemplifies by the blood: "An over-proportion," says he, "of blood stimulates in excess, and therefore induces the diseases that depend upon excessive stimulus; but an under-proportion of the same fluid, though debilitating, and bringing on the diseases of which debility is the cause, is also understood to stimulate, only in a degree less, in proportion to its deficient quantity." And he next observes, that "this proposition applies to all the other exciting (2. 3.) or stimulant (6.) powers." Thus, if a person either eats, or drinks, or exerts himself in either corporeal or mental exercise, or is exposed to the stimulus of heat, or passion, either in excess, or in a deficient degree—in all these cases, he is stimulated; in the former to excess, in the latter insufficiently; and, in both, may be subjected to diseases, and that in proportion to the morbid excess, or under-proportion, of stimulant power. But still the operation that takes place is stimulant. There is not the shadow of any positively debilitating, that is, sedative, power, in all this. It is, in its most debilitating degree, only a diminution, and, in death itself, only a total subduction, of stimulant power.

8. The author is unwilling to admit a sedative in nature * ; for these good reasons, that the far greatest number of the known powers, and all those that are commonly applied to living systems, are evidently stimulant; that an analogy, so extensive, should have its weight in the cases, where the fact is not so demonstrable; that, as there is no where any proof of the existence of sedatives, the weight in the opposite scale is next to nothing, amounting to no more than a mere possibility of the existence of such powers in nature: Lastly, though, in some rare and singular cases, the possibility of such a positive and mischievous operation should be converted into a certainty; the admission of such a fact could make nothing against the fundamental principle of his doctrine, or any of its applications; it would only add a positive to the known negative debility. In the mean time, till proof is brought of that very doubtful mode of action upon living systems, he goes on to unfold his fundamental principle by other propositions. And,

9. Therefore, in the 22d, "Since," continues he, "the exciting powers, possessing the common

* For further information about this matter, see the 20th and 21st No. of Elem Med where is also a manuscript addition, too long to be inserted here.

operation" formerly mentioned, (5.) "produce all the phenomena of life, and their only operation is stimulant *; the whole phenomena of life, health, as well as disease, consist in stimulus, and nothing else."

10. "EXCITEMENT, the effect of the exciting powers," and "the cause of life within certain boundaries, beyond which it is destroyed, is produced in a degree proportioned to the degree of stimulus. A moderate degree" of it "produces health; a greater than that" excites "diseases of excessive stimulus; a lesser, or ultimately excessive degree," gives occasion to "diseases depending on deficiency of stimulus, or debility †."

11. NEXT, he adds, in manuscript, that "the same excitement is the cause of the restoration of the morbid, to the healthy state, producing that effect in diseases of excessive stimulus, by its diminution, and in those of debility, by its increase ‡."

* Elem. Med. 19. to 22. † Elem. Med. 23.

‡ Elem. Med. 23. MS. "Utque causa causa relata tam morborum, quam secundæ valetudinis, subest, sic ea, quæ illos in hanc restituit, est imminuta, adversus nimii stimuli morbos, aucta, contra debilitate natos, incitatio, quæ utraque medendi consilium est."

12. This idea is further unfolded in the 24th paragraph, the words of which are: "This is the relation of excitability and excitement to each other; that the more weakly the powers," giving excitement, "have acted, or the less stimulus has been applied, the more abundant" and languid is the excitability; and the more powerfully the stimulus has acted, the excitability is more exhausted." In the next paragraph he goes on to observe—that

13. "The proportion betwixt the stimulus," or effect of the exciting powers, "and the excitability, is found" to be such, that "a middle stimulus, acting likewise upon a middle, or half wasted excitability, produces the highest excitement" of which any given system is capable; and that "the excitement arises always in a lesser and lesser degree, in proportion as either the stimulus is greater, or the excitability more accumulated *;" and, as he adds in manuscript, "that is, in the proportion in which the excitement either falls short of, or exceeds, the middle line of health. Hence, the vigour of the middle age of life, and the infirmity of childhood and old age. Hence," also, to take "a shorter space of time, for an example, "vigour is the ef-

* Or less vigorous.

fect of living" between the extremes, "and debility the consequence of either excess or deficiency." He next goes on to add, in the 26th paragraph, that,

14. "WHILE that is the case, every age," however, "and every habit, has its respective vigour, if the excitement be properly managed. Childhood, and that weakness which is occasioned by an over-proportion of excitability, admits of little stimulus, becomes languid upon less, is overpowered by more." He next proceeds, in manuscript, to give the reason: Which is, that,

15. "IN the latter case, the excitability, without which no vital function is produced, (4.) does not subsist in the degree sufficient to produce a vigorous state of the functions." Again, youth is a "period of" weakness; because the exciting or stimulant power, without which the excitability is of no effect, has not yet been applied in the degree sufficient to give the highest vigour. Hence, the more abundant or languid the excitability is, the more easily it is saturated, and the less stimulus does it admit; and the incapacity for stimulus may go so far, as that the smallest portion of stimulus will put an end to life: And, "on the contrary,

the more the excitability has been worn out, the less stimulus does it bear, till" again "the smallest portion will produce death."

16. The purport of all that has been said amounts to this, That, as excitement is the cause of life (5.), and as it is produced by an operation of the exciting powers (1.) upon the excitability (4.), the effect of which operation is, to wear out the property, to which it owes its effect of producing excitement; the more excitement, therefore, is produced, the more the excitability is understood to be wasted; and, therefore, the increase of excitement is in an inverse proportion to the waste of excitability; consequently, increase of excitement, and diminution of excitability, are terms, though none of them have ever been thought of, either in common life, or in any department of knowledge, that may be interchanged for one another, signifying increase of vigour. Again, as the operation of the exciting powers upon the excitability wastes the latter, in proportion to the degree of excitement which it produces; it follows, that the less the exciting powers have been applied, the less, in proportion, will either the excitability be wasted, or the excitement increased; consequently, an under-proportioned application of the exciting powers, and an over-pro-

portion of languid excitability, are terms, though hitherto unthought of, which may be used indiscriminately, to signify a state of debility.

17. The excitement, he next observes, is bounded by two circumstances * : the one of which is excess of exciting power, exhausting the excitability; and the other want of exciting power, to prevent the accumulation of excitability. The former "is owing to the body, for want of excitability, being no longer susceptible of stimulus †; the latter, to want of stimulant power ‡ to occasion the proper waste, or proper vigour, of excitability, allowing this, therefore, to follow its natural tendency to accumulate and languish §.

18. With respect to the first; "the excess of stimulant power exhausting the excitability, may be either temporary," as in sleep, in diseases of increased excitement, "or irreparable," as in death ‖.

19. "The consequence of the latter, sudden death," is exemplified in the death which happens

* Elem Med. 27.
† Elem. Med. 28.
‡ Elem. Med. 39.
§ Elem. Med. 39.
‖ Elem. Med. 29.

from intemperance in eating and drinking, from violent gusts of passion, from the *coup de soleil* after great labour under heat, and from high excess in any other exciting power; while "the approach of death, preceded by diseases, is the slower," but equally certain, "effect of the former:" Nay, "death at last is the" inevitable "effect" of the waste of excitability, though all excesses should be avoided, and "the most exact proportion of excitement kept up;" and upon this principle, that "the high degree of stimulus compensates for the shortness of its application, and the long continuance of it, for a more moderate excess *." Take, for an example of the latter, the gout, asthma, the indigestion arising after a life of luxury. More examples will be found in the 30th paragraph of the Elementa.

20. "When the excitability" continues the author, "is worn out by any one stimulus, there is still a reserve of it for any other" that has not been applied: "So, when a person has dined fully, or is fatigued with either corporeal or mental exertion, and consequently disposed to sleep—he will be recruited by strong drink. When this at last produces

* Elem. Med. 29.

the same disposition, a more diffusible stimulus will have the same effect. And, upon the latter at last overpowering him, a still more diffusible stimulus will recover him" to vigilance. "A man, fatigued with a journey, will be roused to dancing by music, and impelled to run after a flying beauty by the hopes of overtaking her. The languor arising from reading a difficult subject will be taken off by the perusal of a more agreeable one *.

21. NEXT, he observes, that "the waste of excitability, produced by all these means of exhausting and recruiting it, is difficult to repair; because the access to the means of further recruit, is lessened in proportion to the number of" stimuli "that have already been employed." And he gives for an example, "any person who has half worn out his excitability by a course of ebriety, and any one who has wholly worn it out †."

22. "THE excitability thus wasted by stimulus, is debility, to be called indirect; because it arises, not from deficiency, but from over-proportion of stimulus ‡. During the progress to indirect debi-

* Elem. Med. 31. † Elem. Med. 32.
‡ Elem. Med. 35.

lity, the second impression of every stimulus has less effect than the first; the third less than the second; and" each succeeding one "less and less, in proportion to its degree or duration, till the last; which produces no further excitement, though" every impression "always adds something to the sum total *."

23. "The same progress to indirect debility is retarded, by increasing the excitability from time to time, and giving occasion to greater force in the action of the stimulus, to produce a more salutary stimulant effect. For examples of which, take cold bathing, "lowering of diet after a debauch in eating and drinking, and a similar abatement in the whole circle of stimuli †." "But if," says he, in a manuscript addition to this part, "cold sometimes seems to stimulate, it does not produce that effect as cold, acting by its own" proper "energy; but either by diminishing the excess of heat, and reducing it within its stimulant range of temperature, or by rendering the body more accessible to air, or by allowing an accumulation of excitability diminished by excessive stimulus, and thereby giving more force to the stimulus, now acting feebly. The operation of the other powers, in producing the same effect, is

* Elem. Med. 37. † Elem. Med. ibid.

to be explained in the same way. Take, for an example of this operation of cold, the use of refrigerants in fevers of the torrid zone, where actual cold is hardly to be had; and the bracing, by means of cold, of a scrotum relaxed by heat. Nay, this effect," so clearly now explained, and so mistaken upon every theory that has hitherto appeared, "may go so far, as to occasion the production of sthenic diseases, more certainly from cold alternating with heat, or preceding, or following it, than from heat alone *."

24. In the 39th paragraph, proceeding to explain the other boundary of excitement, he says, "the other circumstance limiting excitement, is a degree of exciting power, too small, and consequently less fit for exciting operation. This case, which depends upon deficient stimulus, and upon abundant excitability," but languid from not being sufficiently acted upon †, "is to be distinguish-

* Elem. Med. 37. MS.

† The author is just now revolving in his mind an alteration in some of the terms of the fundamental proposition, which may, in time, end in a different mode of expressing it. But not being yet ready to give it all that exactness, which its several applications require, he is obliged to defer any alteration, till a future opportunity of making it with advantage.

ed from the other, which implies an over-proportion of stimulus, and waste of excitability. All the exciting powers may be so deficient in stimulus," or the under-proportion of their stimulus may be such, "as to produce this effect. The consideration, therefore, of them all, serves both to illustrate and confirm this proposition."

25. "In this case the excitability is abundant *; because, in consequence of the stimuli being withheld, it is not exhausted †." Thus, "In the cold bath, where the stimulus of heat, and therefore the sum total of stimulus," applied to the system, "is deficient, the excitement is diminished," and "the excitability, as being less wasted by stimulus, is increased. The same is the fact in famished persons, in water-drinkers, in persons exposed to any other form of cold," as well as the cold bath, "in those who have undergone evacuations, in persons addicted to corporeal or mental inaction, and those who are under dejection of mind." "The subduction of every stimulus, is more liable to produce direct debility, in proportion to the stronger opera-

* Or languid, from not being acted upon by the exciting powers.

† And consequently not fitted for a strong action upon it.

tion of stimulus to which any one has been accustomed. Take, for example, the gout, and many other diseases, which seize some persons, and not others, in a similar state of all other circumstances*." Not only the gout†, but the indigestion so liable to happen to persons who have lived fully, as well as apoplexy, and a number of other affections, hasten their accessions in consequence of a lowering of stimulant operation, which would be innocent in persons accustomed to a lower degree of stimulant operation.

26. "THIS diminution of excitement from accumulation‡ of excitability, may go to death §," as human experience sufficiently shews, whenever any one or more stimuli are withdrawn.

27. "THE deficiency of any one stimulus, and the proportional abundance § of excitability, is, for the time, compensated by" the application of "any other" stimulus, "and often with great advantage to the system. In this way it is, that a person"

* See the Manuscript following paragraph 39, in the Elem. Med.

† Preface to the Elem. Med. p. 1 2. 3.

‡ or languor, § Elem. Med. 40.

languid "for want of his dinner, is invigorated by a piece of good news. And when any one, in the course of the day, has not had his usual exercise either of body or mind, and is therefore likely to pass a sleepless night, a cheerful glass will compose him to sleep. The debility, which want of strong drink occasions, is removed by an opiate. The languor, arising from disappointed love, is relieved by wine; and that, arising from the want of the latter, is relieved by the former. The same conclusion applies to the use of stimuli, the appetite for which is produced by art, rather than by nature. The longing desire for snuff is repelled by chewing tobacco; and, when a person is languid for want of the latter, he will be relieved by smoking a pipe. "Nay, when the functions are hurt for a time, as they often are, and, on that account, access cannot be had to certain usual and natural stimuli; the substitution of others, less usual and less natural, in their place, has the effect of supporting life; till, by the due reparation of the functions, by the restoration of the natural stimuli, and these being now also in a condition to support the natural vigour as usual, a confirmation of health takes place."

28. "As the excitability abounding * in the

* or languishing,

way which has been explained (24.), in proportion to the deficiency of stimulus, from its smallest to its highest degree *, may, to a certain extent, be more wore down † by one stimulus than by another, and the danger" of its over-proportion ‡ "awarded, till its sum total be reduced to that which is accommodated to health (13.); so, the more abundant it is, that is, the more stimuli have been withheld, or the greater the want of every most powerful stimulus has been, there is left the less recourse to that mediocrity § of excitability, on which the vigour of life depends; and the weakness may rise to that degree, and the excitability become so abundant, that the excitement," proportionally impaired, "may at last become irreparable. All the exciting powers," applied in an under-proportion, "serve both to illustrate and establish this proposition; as cold, famine, thirst, and the phenomena of fevers (24.) ‖."

29. "THE debility, arising from deficiency of stimulus, should be denominated direct; because it arises from no positive hurtful power, but from a subduction of the necessary supports of life ¶."

* from its most vigorous to its most languid state,
† more invigorated,
‡ of its excessive languor,
§ to that vigorous state,
‖ Elem. Med. 42.
¶ Elem. Med. 45.

30. Having laid down his fundamental principle; which is, that the living state, over all nature, is the effect of the exciting powers acting upon the excitability, and producing the cause of the living state, the excitement, under the circumstances, and within the limits, which had been marked out (19. to 30.); and that, in proportion to the degree of their application, still within the same limits: He proceeds, in the fourth chapter of his original work, to answer a question, which would naturally arise in the mind of his readers—Where is this excitability, and what are its effects? In the 47th paragraph, therefore, the title of which is,

Of Excitability and its Effects,

31. "THE seat," says he, "of excitability in living * systems, is medullary, nervous matter, and muscular solid, which should be called nervous system. Inherent in which, the excitability is not different in different parts of its seat, nor does it consist of parts; but it is one" uniform "undivided property, over the whole system. Which" is a fact, "that is proved by sense, motion, intellectual ope-

* For "animato" read "vivo" in the original.

ration, and passion and emotion, arising immediately, instantly, and in no succession of operation, in consequence of the action of the exciting powers." Next, proceeds he,

"DIFFERENT exciting powers are applied to different parts of the nervous system, none, at the same time, to all the parts, but each of them in such a manner, as immediately to affect the whole system."

32. "EVERY one of the exciting powers always affects some part more than any other equal one, and different powers, in that way, affect different parts. The affected part is commonly that, to which each power is directly applied," coming into immediate contact with it, if the power be material, or immediately acting on it, if it be immaterial. "And besides that," he continues in manuscript, "the more excitability, from the beginning, has been assigned to each part, that is, the more lively and sensible each part is, the more powerful the operation of each power, whether acting in proper proportion, or in excess, or in defect, becomes, and that through all the intermediate degrees" of its effects. Accordingly, the brain, and the alimentary canal, possess more excitability, that is,

more life, than the other internal parts; and the parts" immediately "under the nails, more than the other external parts *." But, while such is the effect, partly of the first impulse of each power upon any part, and partly of the degree of excitability in the part, "the affection" arising from it, "as diffused over the whole system, exceeds the affection of the part in a prodigious proportion †." Proceeding to point out the proportion,

33. In the 50th paragraph he says, "any one may estimate the proportion of affection, in the part particularly affected, to that of all the rest of the system, by comparing the affection of the former, with as many lesser affections taken together, as there are parts of the rest of the system. Suppose the greater affection of a part to be as six, the lesser one of every other part as three, and the number of the parts, less affected, to be one thousand; then the ratio of the affection, confined to the part" chiefly affected, "to the affection of all the rest of the body, will be as six to three thousand. This fact, or something very near to it, is established by" the consideration of "the exciting

* Elem. Med 48 49.

† The original words are, "toto cœlo superat." Elem. Med. 49.

powers, which" never " act" upon a part alone, but " always upon the whole body; and, by the remedies removing their effect," never from a part alone, but " always from the whole body." Peripneumony is a disease depending upon an excess of excitement over the whole body, with an inflammation in a small superficial portion in the lungs. The common idea of the disease is, that the inflammation is the primary affection, and that all the general symptoms are the effect of it, once produced. But, supposing the inflammation to be the cause; the question is, What are the hurtful powers, or, as they are commonly called, the remote causes, that produce it? There is not a physician upon earth, who can point out one. On the contrary, the hurtful powers, acknowledged to produce the disease, are excess in eating, in drinking, in the quantity of blood, in corporeal exertion, in labour under heat, or this followed by, or alternated with, cold, and every other stimulant power. But who will presume to say, that any, or all these, can have any effect upon a small superficial portion in the lungs, more than upon any other part, equal in size and nervous importance, and equally remote from the parts of the system, to which they, as hurtful powers, were immediately applied? Again, the known remedies are those of large bleeding and the anti-

phlogistic regimen ; in short, every other evacuant, as well as bleeding, and every other debilitating power. But who will say, that these, as if by a sort of charm, without affecting any other part of the nervous system, can convey their energy, whatever that is supposed to be, immediately to the lungs, and, by removing the inflammation there, also remove the disease ? Whatever has been said, no body in his senses either will, or dare, say so now. The plain fact is, that all the exciting powers operate by increasing excitement over the whole body, and all the remedies, by diminishing it to the same extent. The formidable symptom in the gout is the inflammation of the joint ; the powers, which produce both that and the other symptoms, are debilitating ; and those that remove it, are stimulant, and invigorating in general ; in particular, one is a very powerful and diffusible stimulus : The last, as a late discovery has shown, taken into the stomach, has, in a few hours, not only removed all the other symptoms, but the inflammation itself, though seated in a part of the system, the most remote from the part first acted upon by the remedy. In like manner, the operation of our food and drink is not confined to the stomach, but evidently acts in producing excitement over all. Neither is the stimulating influence of heat confined to the surface of

the body, the temperature of which alone it affects, but is extended over the system, exciting every part. In a word, every power by which we are excited in health, every power producing, and every power removing, morbid state, those powers only excepted, which either induce or remove local affection, all operate upon the excitability of the whole system (31.), and produce excitement over all, in the great proportion, to that arising in a part, which has been pointed out.

34. "In that way it is, that," as it is observed in the 51st paragraph, "the stomach and the rest of the same canal are affected by temperature *; the vessels, by the blood and the rest of the fluids; the vessels and muscular fibres, by labour and rest; the brain, by passion and emotion, and the exercise of the mental faculty; each of them more than any other equal part †." In the same proportion the following affections "show," each of them, "a greater excitement in a part," than in any other equal part; "sweat, in health, flowing first from the brow of a person under exercise; checked perspiration; inflammation in diseases, or an affection

* Elem Med. 51. Read "temperies" for "frigus."

† The last line in the Elem. Med. at the head of p. 24. should be erased.

analogous" to it; "headach *; delirium: Proofs of a lower" degree of "excitement" in some one, than in any other equal part, "are excessive perspiration; sweat, without labour" to account for it, especially if "cold and clammy; a great increase of other excretions; spasm; convulsion; palsy; weakness" and "confusion of mind; delirium." "While" the extent of this proposition is universal, and its truth unquestionable, and while "the operation of the general powers, whether in excess, in just proportion, or in defect, is always exerted on some one part, in a somewhat higher degree, than on any other; it must also be of the same kind in that part, as in the others, and equally with the general" operation, "be either in excess, in just proportion, or in defect; but it can never take place in an opposite and contrary degree. For, as the exciting powers," which have been applied, "are the same, and the excitability over the whole system the same, the effect must also be the same;" that is to say, "either excessive, in just proportion, or in defect, according to the degree of the powers which have operated (31.)." Contrary, "therefore," to a proposition, which has been universal in medical practice, which supposes such a jarring state of

* In the original, "Capitis dolor" should be added.

the system, as that one part might be so affected as to need bleeding; others, to require remedies of a contrary operation; and, in other cases, that the state of a part might require a different remedy from bleeding, while all or most of the other parts required, or, according to medical language, indicated, bleeding; which is what they call cases of indication and contraindication: contrary to this, says he, "the excitement of a part cannot be increased, while the general excitement is diminished, nor diminished, while the general excitement is increased *.

35. Nor can it be otherwise. Suppose, for example, that a set of powers operate a degree of excitement, as any given number, let that be sixty, instead of forty, which last take for the healthy point of excitement, and thereby produces the disease called peripneumony; it is not in the nature of things, that, while this excess of stimulant operation is still continued over the system, there should be a part of the system under such a diminution of excitement, as to fall down to twenty degrees in the scale of excitement, or as much below the standard of forty, as sixty is above it, and thereby con-

* Elem. Med. 31.

stitute a dropsy in that part. For, since the "excitability is the same" uniform, "undivided property over all *," and the force of the powers has been such, as to operate a degree of excitement as twenty above forty; in this state of the cause, it is not to be supposed, that any part of the system is in a state of diminished excitement, as twenty below forty, while all the rest is raised twenty degrees above forty. It cannot be accounted for from the powers, the only, and granted, effect of which is excess of excitement; neither can it be explained in any consistency with the nature of excitability, the degree of excitement, arising from an operation upon which, being always in proportion to the degree of exciting power which has been applied †.

36. If it should be said, that, while the fact is such as has just now been stated, still, according to a late proposition (32.), there is an inequality in the effect of the exciting powers, and that it may produce the affection supposed to take place in a part, different from the affection arising over the whole body; the answer to such an objection is given at the end of the 53d paragraph in the Elementa; where the only instance of seeming approach to

* Elem. Med. 47. † Elem. Med. 10.

such incoherence in the excitement, is accounted for upon the proper principle. Accordingly, after premising, that "there is no difference" in the kind of excitement, "but a difference of degree, and" that "different effects cannot flow from the same cause," he goes on, in manuscript, to add, that, "upon account of the great sensibility of certain parts; for instance, the stomach, and a prevalent energy there of the exciting powers, acting in a high degree, whether in stimulating or debilitating; though those parts may sooner, than most others, pass either into debility of the direct, as well as of the indirect kind, or into a great increase of excitement; yet that," he says, "only happens for a little, and the rest of the functions are quickly hurried into the same state. Accordingly, nausea, vomiting, loose belly, and similar affections, produced by strong drink and opiates; and the same affections in appearance," though different in reality; "as also the gout, colic, gripes, and similar others, occasioned by abstinence from food, and watery drink; likewise a return of appetite, and the cessation of all the symptoms of the stomach, and of the rest of the same canal; which" last "is a convalescent state of the first passages *, produced by the

* The stomach and intestines.

proper administration of food, drink, and diffusible stimuli, in the foregoing part of the cure;" all these, "are soon succeeded by a similar state of the rest of the system; and they are followed, the first case by indirect, the next by direct, debility, and the last by the full establishment of health over all. From all this arises the fact, mentioned in the 54th paragraph: Which is, that

37. "No universal affection has its seat in a part; they all occupy the whole system; because, with the inequality mentioned (32.), the excitability is affected in them all." This is a proposition diametrically opposite to a notion which has possessed the minds of all physicians.

38. "Nor does the affection of the part, which more especially suffers, take place first," as upon the supposition of peripneumony arising from the inflammation in the lungs (33.), and is then propagated over the rest of the system; because, as soon as the excitability is affected anywhere in the system, "it is also affected every where," and "immediately, because it is one" uniform "undivided property" over all *.

* Elem. Med. 55.

39. "Both facts (37. 38.)" he next adds, "are confirmed by" this universal fact, that "all the exciting powers affect the whole body as quickly as they do any part;" and by another fact, likewise universal, that "universal diseases make their appearance over the whole system as early as in any part, and, for the most part, more early *." His conclusion from this, respecting the practice, is therefore unavoidable; which is, that "every affection of a part, however formidable," such as that of the lungs in peripneumony; of the head in phrenitis; of the brain in typhus fever; of the foot in the gout; of the lungs again in asthma, and so forth, "in universal diseases; is only to be considered as a part of the affection of the whole system, and the action of the remedies is not to be directed to the part," even where that is accessible, "but to the whole system †."

40. THERE has been no end of the errors in our profession, all arising from suppositions, which are the reverse of the propositions laid down in this chapter of the Elementa. Wherever the predominant symptom in any case of disease appeared, there they supposed the whole morbid state to centre,

* Elem. Med. 55. † Elem. Med. 56.

and the whole cause to act. Hence, a number of diseases, in which inflammation commonly appears, have been distinguished into a set or order, as if the inflammation were the sole primary affection, and all the other symptoms depending upon it. Others have been arranged into an order of spasmodic; others into one under the denomination of convulsive; others into an order distinguished by hydropic affection; others into bleeding diseases, called, from a false conception of the common cause, hemorrhages; others, also separately arranged, from a discharge of colourless fluids occurring in them, have been denominated fluxes or profluvia: But these conspicuous symptoms, though they have been considered as marking the complete character of each concourse of symptoms to which they belonged, only made, each of them, one of the number, and had no greater share in the sum total of morbid affection, than the proportion of six to three thousand. Instead, therefore, of their meriting to be considered as the whole disease, and the powers producing them as the whole morbific powers, and those removing them as the whole and sole remedies; their cause, as well as their cure, was no other than the common one of all the symptoms; nor did the cure of the symptoms depend on the removal of their cause, any farther than the

latter was the common cause. All this, upon the strictest inquiry into the phenomena of universal diseases, will come out an exact demonstration.

41. The author of the Elementa, after finishing this chapter, in a lecture makes some remarks upon symptoms. With respect to these, he observes, that the corruption of other departments in philosophy had not been more owing to neglect of inquiry into the real phenomena of nature, and to the practice of drawing hasty and rash conclusions from mere appearances, than that of medicine had been, to the pursuit of no other means of attaining the knowledge of diseases, but the study of the symptoms. These also, however, afford only appearances, and equally deceitful as the others; which is sufficiently proved by the symptomatologies, or explanations of symptoms; by the voluminous dissertations on diagnostics * and prognostics; the tedious and fruitless search after pathognomonics; and, last of all,

* Diagnostics are symptoms, the explanations of which are supposed to furnish the distinction of diseases from each other. Prognostics are symptoms, from the consideration of which, the future event of diseases is learned. A pathognomonic is a single symptom, so explained, as to be supposed of itself to furnish the distinction of the disease, to which it belongs, from every other.

by the lately invented department of nosology; which are so many monuments of the depravity of medical doctrine. For, instead of leading to any real and solid knowledge, they unavoidably mislead from it; instead of establishing the distinctions so eagerly desired, they carry confusion, intricacy, and distraction, into every part of the art. And the last of them, nosology, has laid the cope-stone of accumulated absurdity, and inextricable perplexity upon the whole *.

42. As the first edition of the Elementa is not to be found in the shops, it may not be unacceptable to the readers to insert here a character of nosology in the following words: "Nay, nosology, which admits diseases in place of symptoms, and symptoms in place of diseases; which confounds universal with local affections; which unites phenomena, the most distant in nature from each other, and disjoins those that are naturally allied; which takes uncertainties for certainties, and the latter for the former, and misleads from the proper business of the art, into trifling" refinements, "blundering" conceits, fictitious distinctions, neglect of those which are just, and a downright ruin of the method

* See the Introduction, p. 21.

of cure, should be strangled in its cradle. If diseases have been properly reduced to two forms *, there cannot be a thousand of them †.

43. So little is to be known about symptoms, when judged of from their appearances, and not from the effect of the powers, which on the one hand produce them, and on the other remove them; that those, which have appeared to physicians as most different from each other, are often intirely of the same nature; and those, which have passed for the same, are often essentially different. Thus, horror, sense of cold, and dryness of the skin ‡, frequency of pulse §, paleness ‖, head-ach and delirium ¶, thirst and heat *, hoarseness, cough and expectoration †, inflammation ‡, which have universal-

* Read "formas" for species.

† The words in the original are the following: "Quin nosologia, morbos pro symptomatis, et hæc pro illis, recipiens, communes adfectus cum localibus permiscens, distantia natura conjungens, affinia dissocians, incerta pro certis habens, atque a proprio artis negotio in nugas, errores, discrimina ficta, verorum neglectum, & rectam medendi usus perniciem, sine fine modoque seducens, in cunis elidenda"

‡ 154. 178. 181. where, after "idem" read "et siccitatem."

§ 155. 156. 179.

‖ 157. 181.

¶ 157. 158. 182. 183.

* 159. 184.

† 160. 233. ad cap. vii.

‡ 168. ad 170. 204. ad 206.

ly been supposed by physicians, in their diagnostic, pathognomonic, prognostic, and, last of all, in their nosological dissertations, to be always the same, and always such as were to be removed by an antiphlogistic plan of cure, are, however, in reality, as opposite affections as ever occur in the living system. Nay, so far are they from being always of a phlogistic nature, and to be removed by antiphlogistic regimen and remedies, that, on the contrary, they are, for the most part, of the asthenic kind, depending on debility, and to be removed by the most stimulant and invigorating powers.

44. On the other hand, the symptoms, which physicians have considered as different, though they partake of a common nature, are innumerable. Examples of this sort we have in catarrhal, exanthematic, and other phlogistic cases, unaccompanied with phlegmonic inflammation, which are supposed to be different from the cases accompanied with inflammation, which are, however, essentially and fundamentally the same. Thus, the concourses of symptoms which constitute peripneumony, the common inflammatory sore throat, and rheumatism, are supposed to constitute a different order of diseases, from catarrh, the common inflammatory fever, called by Nosologists synocha, and the scarlet fever;

for no other reason, but that inflammation of a part arises in the course of the former, and does not appear in the latter. Nay, erysipelas, though attended with inflammation in a part, is considered as different from the other cases, in which inflammation also is a symptom, for no better reason, but because the inflammation in it is not so deeply seated as in the others. Nor is it ever once recollected, that all these diseases must be of the same kind, since they all arise from the same set of powers, those which stimulate, and are all removed by the same set of remedies, such as debilitate and evacuate.

45. AGAIN, spasms, convulsions, whether of the organs of voluntary, or involuntary, motion; disposition to sweat, without the ordinary causes of it, as occurring in health; loss of appetite, loathing of food *; thirst, nausea, vomiting †; internal pain, particularly in the stomach and intestines ‡; external pain §; violent painful affections of the head, of the breast or thorax, of the stomach, belly, or the alimentary canal ‖; all these, unconnected with phlogistic origin, and many others from the same common source, have been considered as so many

* Elem. Med. 186. † Elem. Med. 187. 188.
‡ 189. 191. ad 194. § 190. 194. 195. 196.
‖ Elem. Med. 198. 199. ad 202.

different affections; and, upon that supposition, different heads of diseases have been marked out, as proceeding from the peculiar influence of each. So we have a set of diseases, in which spasm is considered as the governing symptom, called spasmodic; another, where convulsive state furnishes the mark of distinction, denominated, therefore, convulsive; and these, again, have been subdivided according as they affected the organs of either voluntary, or involuntary, motion: Others have been arranged as they were distinguished by an evacuation of different fluids. Hence, when the morbid discharge was blood, the set of diseases, so arranged, have been called hemorrhages; when the fluid, so discharged, was colourless, the set, taking their characteristic distinction from that mark, have been called fluxes or profluvia: Others have been arranged by negative characteristics, such as their being without any discharge, or without spasmodic or convulsive motion. Instances of the former we have in that morbid state of the system, in which the menses do not occur at the usual time of life, or when this natural discharge is diminished or suppressed at any after period. Palsy, and the several atonic affections, as they are commonly called, which are distinguished by a morbid diminution, or cessation, of motion, are examples of the latter.

But the true state of the fact, with respect to all these distinctions taken from conspicuous symptoms, is, that each of those symptoms holds no other rank in the measure of morbid affection, than that which we have pointed out. They are not the only, or even a principal, part of the disease, but mere symptoms, like every other, depending upon the common cause, which is debility, bearing no greater proportion to the degree of morbid state over all, than that which has been assigned (40.). Every arrangement, therefore, of diseases, taken from such symptoms, is false *, in point of pathology, and of pernicious effect on the practice of cure; the only rule for a proper arrangement, being that which fundamentally regards the cause, and the several degrees of its force.

46. The author of the Elementa, in arranging the sthenic or phlogistic diseases, as they stood in the first edition of that work, deviated somewhat from that rule, in making these diseases, which are the diseases of increased excitement, a genus, and subdividing the genus into species: Which last were

* For an example of a proper arrangement, look into the Elem. Med. 447. to 453. where the sthenic diseases are arranged; and 505. to 508 where the arrangement of the asthenic is made out, and the reasons for both assigned.

four in number, the phlegmasiæ, or sthenic diseases, accompanied with inflammation of a part, commonly an external part; the exanthemata, or diseases in which a contagious matter has some concern in the cause, and of which the external appearance is varied by an eruption on the surface; the hemorrhages, or diseases attended with bleeding discharge; and, lastly, the sthenic apyrexies, or sthenic diseases without pyrexial, or feverish state, as the latter is most improperly called here. After going so far, when he came to the distribution of the asthenic diseases, upon his attempting, in pursuance of the same idea, to subdivide this genus also into species; so as that there should be one to comprehend spasmodic diseases; another convulsive; another atonic, or such as approach to paralytic state; another the several bleeding disorders; (for he now found, that these, contrary to former theories, were to be ranked here, and not among the sthenic affections of the system); another the diseases, the conspicuous symptom of which was a discharge of serous fluid, commonly called profluvia or fluxes; another fevers, and so forth: He at last found, that this was an attempt which led to nothing but confusion; that its execution, even with all that confusion, was impossible. In short, he found, that his subdivision of even the first genus was erroneous.

For, besides the fundamental mistake of placing the hemorrhages among them, which he now found indisputably belonged to the asthenic division of diseases; the cutting off the small-pox and measles, when these appear in a high violent state (which, without great care and skill to prevent it, is a state neither unnatural nor unusual to them), was evidently taking them from the place they naturally claimed in the scale, that is, near the head of it, and ranking them below the mildest of the phlegmasiæ, or diseases, the inflammation of which arises from the general cause. He now perceived, that even this distribution of sthenic diseases, however simple in appearance, especially when compared with nosological perplexed refinement, was still a relick of his nosological and systematic education. Regarding, therefore, nothing but morbid increase or diminution of excitement, and the degrees of that, as the cause of the several cases of either sthenic or asthenic diseases; instead of making two genera of disease, and subdividing those into species, he found there was only room for the institution of two general forms of morbid state, a sthenic and an asthenic one: And he arranged, under each of these, the different degrees of morbid state; giving thereby a scale, not of different diseases, but of a number of cases belonging to one or other of

two diseases, each set the same in kind, and varying only in degree. He has therefore marked out the two parts of this scale in the Elementa, and treated the diseases of each in the same order.

47. The proposition, showing that all the functions of living systems, sense, motion, intellectual operation, passion and emotion, are the effect of the exciting powers acting upon the excitability, and that that effect is excitement, had early * been laid down in the original work. It had soon after also been demonstrated, that these functions, which comprehend the whole phenomena peculiar to the most perfect living systems, arise in proportion to the degree of their cause, the excitement (10.). To state that comprehensive fact as exactly as possible, with respect to excitement, and to remove some errors of long standing, of universal reception, and of extensive and hurtful application to practice; he allots a chapter, entitled,

Of Contraction, and its Effects,

48. Where "the intire and vigorous power of contraction," says he, "with which muscular fibres

* Elem. Med. 15. 16.

are endowed, while it depends upon excitement, is in proportion to the degree of the excitement." "This is proved by all the phenomena of health and disease, and by every operation of the exciting powers and remedies." And to refute an error respecting morbid contraction, which supposed that there was a disposition or proneness to the performance of motion, under a diminution of the power of performing motion; he briefly observes, that "the force and facility" in the performance "of motion is the same. We must judge from certain facts, not appearances: Consequently, tremor, convulsion, and every affection comprehended under the latter, are to be referred to debility as the cause. The exciting power in this" morbid "case is a stimulus operating rudely upon the part *."

49. "THE degree of contraction producing spasm, is no exception" from the above-mentioned fact; spasm being a continued and deficient function, rather than a great and justly proportioned one; and, in so far as it is a great contraction, it depends upon the local stimulus of distention," as in the cramp of the stomach, and spasmodic affection of the intestinal canal; "or" upon that of "something re-

* Elem. Med. 57.

sembling" distention, as the effort of the will in moving a limb ; " it consists in a diminution of excitement ; is devoid of force, and removed by stimulant remedies. There," says he, " is both the fact, and its explanation *."

50. " As the degree of contraction, in so far as it is a sound function, is conjoined with strength : Hence the conclusion, that the density of the contracting fibres, considered as simple solids, is in proportion to the degree of contraction, is a certain fact. Excitement, therefore, must be admitted as the cause of density, which increases in proportion to the increase of its cause ; a fact, which it is easy to perceive, from the strength which takes place in madness, with a density proportioned to it, to that" degree of " debility that takes place in the article of death, in death itself, and after death, with proportional relaxation, through all the intermediate degrees. And its proof is the weakness of the same fibres in their dead state, and their strength in their living state, the sole cause of which difference is the excitement," operating density in proportion to its degree, " till in death, with the cause, the effect ceases altogether †."

* Elem. Med. 58.

† Elem. Med. 60.

51. "HENCE" it follows, that "the cavity of the vessels, through their whole tracts, over the whole body, are increased in" a state of "strength," of the body, "and diminished in" a state of its "weakness." And "this," without having recourse to a spasm, or constriction from cold, we can discern to be the sole and simple "cause of diminished perspiration," as often as this takes place in sthenic diseases *. In the 4th chapter, the title of which is,

The Forms of Diseases and Predispositions,

52. "THE excitement," as he goes on to observe, "the effect of the exciting powers (10.), when of a proper degree, produces health, and, previous to it, predisposition to disease. No other condition is necessary to the living system, either in good or bad health, there is no other origin of diseases †: For both the state of the simple solids, and of the fluids, follow that of health, as constituted by excitement, and a given state."

* See the application of this in the propositions of the Elem. Med. 113. 122. 159. 160. 163. 259. 291. 337. 338. 339. 340. 341. 363. 370. 371. 380. 390. 409.

† *Universal* is always, in this part of our subject, understood before the word *disease*.

53. "THE simple solids," according to an addition in the margin, "as well as the fluids, are at first formed, and afterwards variously supported, by the excitement. It is, therefore, to the excitement that the sound, as well as morbid state of both, is owing; and disease is not, as has been the common opinion, occasioned by powers foreign to those which regulate health. Nay, as in local affections themselves, disease consists not in the lesion of the solids, but in a change of excitement in consequence of their lesion; so the cure does not consist in healing the solids, but in directing their excitement. The same conclusion is to be drawn with respect to the fluids, and their fountain, the blood. The affections of neither are changed by the causes of disease any otherwise, than by a change of their excitement; and the remedies restore the healthy state of either, only by curing the excitement. Affections peculiar to parts, or organic ailments, are foreign from this place" of the work, "where the general state of the body only is the subject, and" therefore "they must be passed over at present."

54. "THAT excitement, in this way, governs all life, is proved by the exciting powers always acting by stimulating, and therefore giving excitement (7.); as also by the remedies, which always bring

back the healthy state, by opposing deficient stimulus to excessive, and excessive to deficient *."

55. "The notion of the sound and morbid state being different," a notion hitherto universal, "is refuted by this fact, that the operation of the powers," either "producing or removing both" those states, "is the same †."

56. "The universal diseases arising from excessive excitement, are named sthenic, those produced by deficient excitement should be denominated asthenic. Hence" there are only "two forms of disease, each of which is always preceded by predisposition ‡."

57. "That the origin," just now "mentioned, of universal diseases, and the predispositions" leading to each, "is the only just one, is proved by the same powers, which produce any particular disease, any predisposition, also producing the whole form to which it belongs: and by the same remedies, which cure any particular disease or predisposition, also curing all the diseases of its respective form (55.). Perfect health is a middle state

* Elem. Med 64. † Elem. Med. 65.
‡ Elem. Med. 66.

betwixt the opposite" extremes of "diseases and predispositions, without deviation to either side *." In the next paragraph, he goes on to explain his principal terms, in the following manner:

58. "THE exciting powers which produce" either "the predisposition to sthenic diseases †, or those diseases, should be denominated sthenic, or, in a restricted sense, stimulant: Those which pave the way to asthenic diseases, or actually produce these diseases, should be called asthenic, or debilitating, powers. The state of the body, constituting the former, or the predisposition to them, should be named sthenic diathesis; that which produces the latter, with the predisposition peculiar to them, should be named asthenic. Each diathesis is a state of the body in common to predisposition and disease, varying only in degree. The powers

* Elem. Med 67.

† Wherever the word phlogistic occurs through the whole Elementa, read for it sthenic. The author found, after he came to the place in his work where he extends the doctrine to vegetables (cap xii. 317 to 326), that the old metaphorical term, borrowed from a false theory of the mode of operation of the powers so named, would not apply to them without absurdity; and that the term sthenic, as pointing out the proper mode of operation, and as being a good contrast to asthenic, was the only eligible one.

which raise both the diatheses to the morbid state, should be distinguished by the title of exciting, hurtful powers *." Summing up, at last,

The Effects of both the Diatheses, and of the most perfect Health,

59 In the 7th chapter: "The effect," continues he, "in common to all the sthenic, hurtful powers, in producing morbid affection of the functions, is, first to increase these, then to diminish some of them, but never by a debilitating" operation, "and to throw others into a state of disturbance." The effect, in common to all "the asthenic, hurtful powers, is always to diminish the same" functions, "in such a manner, as to give an appearance, which is always a false one, of sometimes increasing them †."

60. "If the exact degree of excitement could always be kept up, mankind would enjoy eternal health; which is prevented, however, by two circumstances:" The one of which is, that "such is the effect of sthenic diathesis (56. 58.), that it too soon wears out the sum total of excitement, allotted

* Elem. Med. 68. † Elem. Med. 69.

to every system upon its commencing its living state; that it shortens life, often through the intervention of diseases, and, sooner or later, according to its degree, induces death. This is one cause of mortal state *. Again,

61. Though it might be thought, that the best preventative of that effect would be avoiding sthenic, and inducing asthenic diathesis; neither would that answer: For "the asthenic diathesis proves hurtful, by not supplying that degree of excitement, which is necessary to health (4.), and thereby allowing the state of life to approach more nearly to that, in which death consists: A circumstance which throws open another gate of death to mankind †:" But,

62. While diseases and death arise from either of these causes, he next observes, that "they also arise from a change of either of the diatheses into the other. Either diathesis, whether from accident, ignorance, or design, may be converted into the other, by means of the powers, which produce the other, being employed as remedies; and, when that

* Elem. Med. 70.

† And understand to every living system; at least animal and vegetable in the creation. Elem. Med. 71.

has been done, and contrary remedies employed, the same diathesis may be turned back to the state from which it set out." The proper means of curing a peripneumony, or an asthma, may be pushed to such excess, as to convert either disease into the other. "Hydrothorax, so often supervening upon the cure of peripneumony, is an example of the conversion of the sthenic into the asthenic diathesis; and the conversion of the gout into a violent cough, an inflammatory sore throat, or catarrhal affection, is an equally clear instance of the use of stimulants converting an asthenic into a sthenic diathesis. The preparatory practice to render the small-pox a mild and safe disease, is nothing more but removing sthenic diathesis, and inducing some degree of asthenic. But proceeding too far in that way, will induce an asthenic disease of dangerous tendency *. In the margin before 72, he observes, that,

63. "THOUGH excitement governs all the phenomena of life (54.) yet the symptoms of diseases, arising from either an over-proportion or defect of it, lead not to any proper judgment concerning it; and, on the contrary, that the fallacy," arising from making it a source of judgment, has given birth to

* See in Elem. Med. an example of this, 220.

infinite errors. We cannot help repeating, here, the purport of what has been alluded to before in the introductory part, and more particularly pointed out afterwards: That, as the inquiry into abstract causes has been the ruin of the other departments of philosophy; so, the unbounded explanation of symptoms, independent of all knowledge of the powers which either produce or remove them (41.), has been the most fertile source of error in medical philosophy. Whenever we push our researches into the most trifling phenomenon of nature beyond our ken, that is, beyond a distinct knowledge of the facts relating to it, our distance from the truth, and from all possibility of a return to useful and solid knowledge, increases with our progress (p. 12.). To give an example of the effect of judging from the superficial appearance of symptoms: When either a seemingly strong and robust, or evidently weakly girl, in an epileptic fit, a disease commonly known by the appellation of the falling sickness, beats her breast with her hands, exhibiting an appearance of force greatly above her ordinary powers, and strikes the ground with her feet in the same violent manner; nothing is more natural to a mind, unexercised in sound philosophical observation, than a notion, which has accordingly been an universal one in physic, that all this exertion is an increase of

the power of voluntary motion. And hence physicians, going no further than the impression made upon their senses, have assigned, for the cause of this convulsive motion, an increased influx of the nervous power into the muscular fibres so affected. But, that all this is a deception, is proved by a great induction of facts, which shows, that this phenomenon, as well as those of ninety-seven diseases out of the hundred, incident to mankind, is occasioned by none but debilitating powers, and removed by no remedies but such as increase vigour. The same reasoning applies to the explanation of every symptom. We know nothing about any one, unless in so far as we have entered into a careful and cautious investigation of all the certain facts, the knowledge of which is necessary to the developement of their true nature. The author concludes this chapter in the following words * :

64. "From all which has been hitherto said, this certain fact follows, that life is a forced state," &c. †. In the 7th chapter, where he treats

* Elem. Med. 62. † See note p. 64.

Of Predisposition,

65. "PREDISPOSITION," he says, "is a middle state between perfect health and disease; the powers producing which are the same with those which produce disease (52.), acting with a slighter degree of force, or for a shorter space of time *. The" period of "predisposition is shorter or longer, in proportion to the greater or smaller force of the powers" producing it; "and the interval of time betwixt perfect health and disease is," in the same proportion, "sooner or later finished †."

66. "THAT predisposition necessarily," as had been already said, "precedes disease, is evident from this fact, that it arises from the same exciting powers, acting upon the same excitability which produce both health and disease (31.) ‡, and is a state of excitement," holding a "middle" rank "betwixt these two. As the excitement of health is much removed from the morbid" excitement; "it is not, therefore, to be thought, that the former mounts up at once to the latter, and skips over the

* What follows is erased, as being a repetition of what had been said before.

† Elem. Med. 74.

‡ Elem. Med. 66. 67.

boundary of predisposition; which is also a sure and certain fact. No body" enjoying " complete health, is all at once affected with an universal disease *."

67. " CONTAGIOUS diseases are not exceptions from this observation; because, whether the matter of contagion acts by stimulating, or debilitating, its operation is the same with that of the ordinary hurtful powers; that is, its cause is the same†, and the effect arising from it must also be the same ‡. Since, therefore, universal diseases are the consequence of contagion, as well as of the ordinary powers; neither," therefore, " differ in any respect of consequence, their sole difference consisting only in degree §. When the hurtful effect of the ordinary powers is guarded against, the histories of contagious diseases show, that that of the contagious mat-

* Elem. Med. 75.

† Through the whole of this work, whatever the author calls noxæ excitantes, or the translator, hurtful, exciting powers, the meaning of that, in common medical language, is remote cause; and whatever he calls cause, that is to be understood as conveying the same meaning with the proximate cause of medical writers.

‡ For this fact, he refers to the 21st paragraph of the Elementa.

§ What follows in the next sentence is erased, as somewhat obscure. See also 21st of the Elem. Med.

ter amounts, at most, to a very mild disease; often so mild, as to exhibit no symptom but a slight eruption, without any affection of the excitement, entitling it to the appellation of universal disease, as defined in the beginning of the Elementa *. And, even allowing the contagion to have some share in the production of the disease as universal, since that effect of its operation is the same with the effect arising from the ordinary powers; all the inferences from the latter must equally flow from the former. If, therefore, it is a fact, that the operation of the ordinary powers is, first to produce predisposition, and, when longer continued or increased in force, to excite disease; it must be equally a fact with respect to the operation of contagions: For their operation, in producing eruption, independent of their effect upon the excitement, is altogether out of the question; it being merely local, and therefore belonging to the consideration of local diseases; which is properly expressed in the end of the 76th paragraph of the Elementa. "If, which sometimes happens, no universal affection follows the application of contagion, no undue increase or defect of excitement; the affection," in that case, "is altogether local, and foreign from this part" of the

* Elem. Med. 4.

work. Of this he gives an illustration in manuscript, in the following words: "Take, for an example, the pustules frequently appearing about the nipples of nurses, who have already had the smallpox, or a slight eruption in many persons, under the infection, without the universal disease. The same conclusion applies to the buboes in the plague," when that peculiar eruption is "accompanied with no diminution," as the other is with no increase, "of excitement *."

68. Upon this subject of inquiry, whether there be any exceptions to the proposition, which makes predisposition necessary to universal diseases, the

* The shortest and most simple account of local disease, in so far as it applies to this place, is, that it is an affection of a part which does not affect the general functions. For a further account, consult the Elementa 5. 6. as also the MS. following the 17th paragraph, where the definitions are given, first of universal, and next of local stimuli, in these words: "Stimuli sunt potestates incitantes (14), ita in incitabilitatem agentes, ut incitationis toto corpore semper aliquid efficiant, *communes*, quo commodius a localibus internoscantur, adpellandi."—"Locales stimuli in partem tantum, cui admoventur, agunt; nec, nisi parto jam illic adfectu, reliquum corpus, ac sæpe ne sic quidem, adficiunt." See also 53, as also the fifth and last part of the Elementa on local diseases, from 690 to the end of the book.

translation of a paragraph in the Elementa seems to be very much to the point. Its words are these: "Poisons either do not produce the universal diseases, which are our present subject; or, if they do produce them, their effect being the same with that of the ordinary powers, their" mode of "operation," that is their cause, "must be the same *." Without settling the point, whether the obscure operation of those bodies in nature, which are called poisons, be productive of universal disease, as physicians have commonly made it †, or, whether it only induces local diseases; he fails not, however, to make good his conclusion, that if, as it is supposed, they produce universal disease, their operation must be the same with the operation of the ordinary powers: And, as the operation of the ordinary powers had been demonstrated to be stimulant; therefore, that of poisons, however little we know of it, must also be stimulant. We can also, in this place, take advantage of the same dilemma, and conclude with all the force of both the old and new logic on our side, that if poisons, either alone, or in co-operation with the ordinary powers, produce universal diseases, they must also, either alone, or as-

* Elem. Med. 20.

† It is formally enumerated among the remote causes of epilepsy, &c.

sisted by the other powers, also produce predisposition to universal disease. "If" they produce not universal disease, but "bring into morbid state persons altogether free of predisposition; for that very reason, the disease," so produced, "is not to be considered as universal; and for this further reason, that it is neither removed nor relieved by the usual mode of cure," which "shows the effect to be different;" and that again "shows, that the cause, as well as the hurtful power," the poison, "is different *." He clenches the argument with this conclusion, "since predisposition and disease are the same, only varying in degree, whatever, therefore," acting "by a given force, produces the latter, that," acting "with a proportional force, must produce the former †." In the end of the same paragraph he steps a little out of his way, to give an idea of the certain effect of some poisons in producing local affection; and to show the difference betwixt that and their operation in the production of universal disease, if ever it occurs there. "The only cure," says he, "of most poisons, is

* Elem. Med. 77.

† *Ibid.* MS. The words are, Uno verbo, quoniam opportunitas et morbus idem est (52.), magnitudine tantum differens, quicquid igitur hunc data vi facit, illam quoque vi minore faciat, necesse est.

their early rejection" from the system. But if they are, from their wounding an organ necessary to life, often * not curable, but fatal; both that "effect" and "the one" formerly mentioned, of their inducing disease independent of predisposition, "are foreign from the present subject, and to be referred to" the consideration of "local disease †." Next, as he adds,

69. "NOTHING is to be regarded in the hurtful powers, producing either predisposition or disease, but the degree of the former compared with the latter, or of every one compared with every other, with the view of knowing the hurtful force of each, and therefore the proportion of curative power, to remove the morbid state ‡."

70. "THE knowledge of predisposition is of great importance; as enabling the physician, to prevent diseases, to comprehend their cause," which is "founded on predisposition, and to discern" universal "from local affections," which are "very different §."

* Read *sæpe* in the original.
† Elem. Med. 77.
‡ Elem. Med. 78.
§ Elem. Med. 79.

71. "SINCE predisposition to universal diseases, and these diseases are the same state (65.) *; a great mark of distinction between universal and local diseases will be this, that universal diseases are always, local never, preceded by predisposition †."

72. "As an affection of a part is always the origin of local diseases, and the distinctions which have been made (65. to 70.) ‡ are good; therefore, all the diseases which arise from any state of a part; from stimulants, from debilitating powers, neither of which affect the whole system, or affect it only in consequence of the local cause §; from wounds; from compression of a part; from obstruction; from organic affections; from other diseases; and not from the ordinary hurtful powers of universal operation over the system;" all these "must be rejected from the number of universal diseases, however much they resemble them, and dissemble their real nature;" and for the following good reasons; "that they neither agree with them in the hurtful powers," producing them; "nor in their cause; nor in their

* Elem. Med. 23. 62. 65. 66 68.

† Elem. Med. 6 ‡ Elem. Med. 6. 7. 75. to 81.

§ After "*neutra*," in the original, there is interlined, in MS. "vel tantummodo ex localis causæ vi commovent."

cure; nor in any one circumstance, but in a fallacious and deceptious appearance."

73. "THE local diseases which physicians have mistaken for universal, notwithstanding this (72.), their complete and diametrical opposition to each other, are numerous. Not to go much out of our way at present for examples, the whole order of the phlegmasiæ in the Edinburgh nosology, with the exception of those which are admitted in the Elementa, is such. All the diseases of that description, ending in *itis*, as gastritis, enteritis, splenitis, nephritis, cystitis, usteritis, hepatitis, peritonitis; or the inflammations of the several organs, from which these have received their several appellations; in plain English, the inflammations of the stomach, of the intestines, of the spleen, of the kidney, of the bladder of urine, of the womb, of the liver, of the peritoneum; all these are local diseases, differing, by the certain marks which we have given, from universal diseases. Nay, dropsy, as supposed to arise from a number of remote causes, the very enumeration of which fills a folio page, in a print of very moderate types, is, after all, only a local affection, not so much as entitled to the appellation of disease; being only a symptom of so many other affections, most of them local, and therefore, in every respect,

different from that affection of the whole system, that universal disease, which has the only proper title to the name of dropsy. The same observation applies to the several concourses of symptoms, resembling epilepsy, apoplexy, palsy, and other universal diseases, which have been considered, in diagnostic and nosological treatises, as the very diseases to which they bore a resemblance. The endless instances of this kind must be deferred; as this is not the place for giving them that full consideration, which propriety will require in an after part of the work.

74. If our readers, who are not initiated in the jargon of medical terms and distinctions, would, however, wish to have some idea of the amount of the distinction here pointed at; we have only to turn back their attention to what has been already said upon the subject: Which is, that the universal diseases, the great object of a physician's practice, differ from the local therefore rejected from their number, in the hurtful powers producing them, commonly called remote causes; in their cause; in their cure; and in every respect, excepting the misleading resemblance of symptoms; which has furnished hitherto almost the only marks of distinction; and of the fallacy and futility of which, we have so

fully treated in our (43. to 46.) late observations upon symptoms.

75. To illustrate this distinction in a few words; the exciting powers of universal diseases are those which operate over the whole system, by increasing or diminishing its excitement; the operation of those, which produce local affection, is confined to the part which they affect; or, if symptoms of more general disorder arise after their operation, the cause of these is no alteration either in the increase or diminution of excitement, but the mere local affection once established: The cause of universal diseases, is increase of excitement, as in sthenic, and diminution of it, as in asthenic diseases (10. 52. 65.); the cause of local affections are certain powers, which produce a division of intire parts, or an alteration of their texture, as in cutting, pricking, bruising, compressing, or eroding them *: The cure of universal diseases, is to restore the healthy measure of excitement, by increasing it when too low, and diminishing it when in excess †. It must, therefore, be plain to every reader, that the confounding morbid affections of such opposite characters, cannot

* Elem Med. Par. V. cap. ii. 615. ad cap. iii. 702.
† Elem. Med. 88.

fail, in every instance of its application to the practice of cure, to be of pernicious tendency.

76. The gross mistake, just now mentioned, of confounding universal and local diseases, is not the only one suggested by this subject of predisposition. The confusion of multiplication and distinction of causes, which all systematic writers, from Galen to those of the present times, have so much laboured, has been another source of error in the reasoning part of the art, and of false views in the practice. Accordingly, there has scarcely been a paper written, even upon a single disease, where it has not been thought essentially necessary, to run through the whole rotine of the remote causes of which we speak. They have supposed, that there is one set of powers which have no tendency to produce diseases, and only produce predisposition. Predisposition, so produced, is, according to them, not an insidious state *, differing only in degree from disease; but quite a safe state, unless another set of powers, called occasional, or procatarctic, causes, supervene; in which case the diseased state is supposed to take place. Again, though the latter set of hurtful powers were applied where there is no predisposition,

* Elem. Med. 8.

they are also supposed to be innocent. Upon a review, however, of either the predisponent or occasional causes, finding that they could not make their hypothesis universal, they were obliged to contrive another distinction, and to admit, that sometimes the predisponent causes might rise, either in number or force, to the degree of producing actual disease; as also, that the occasional causes, though they did not fall in with predisposition, might be so increased in number or force, as to have the same effect. In the former case, they were understood to be co-relative powers; in this, they were considered as absolute, and received a specific appellation, that of principia *, or of simply remote causes in English. Again, because some of the same powers, whether considered in their co-relative or absolute view, acted from within the system which they affected, others from without; they therefore received, from that circumstance, the further appellation of internal or external causes. The predisponent, as well as the occasional causes, the generic name of both which was that of remote causes, were, according to the different view taken of them, named internal or external predisponent, internal or external occasional causes, or, in one general term,

* According to Gaubius in his general patholgy.

internal or external remote causes; and, in their absolute sense, internal or external simply remote causes, or principia.

77. When men once deviate from the truth and simplicity of nature, there is no end of the wanderings of their misguided imaginations, no end of the distinctions of phenomena, which have no where any existence but in the confused conceptions of their brain. The cause of all this confusion, which makes so considerable a part in the folios of all medical systems, is the ignorance which has hitherto prevailed among physicians of the unity, simplicity, and uniformity of nature, in the most important part of her works, the system of life; a department of knowledge which should have fallen into abler hands than theirs. According to them, every thing, even in the most curious and perfect part of living systems, that of man, is complication, both in its structure, in the connection of its functions, and in the operation of the powers acting upon it. According to truth, all is simplicity, all is unity and harmony. The property by which the human, as well as every other living, system is distinguished from the inert and dead part of matter, and upon which all the powers, now so fully explained, act, is one over all (31.). The operation, which the ex-

citing powers produce on it, is also one that is stimulant in one degree or other (5. 6. 7.). The effect arising from that operation is also one, which is the production of the phenomena peculiar to living systems, in the most perfect kind, those of sense, motion, intellectual operation, and passion (5.). In the less perfect living frames, such as those of the lower part of animal nature, and through all the vegetable kingdom, as it is called, the functions compatible to each, all, arise from the same simple energy *. Since sthenic and asthenic diathesis, whether remaining within the latitude of predisposition, or rising to the degree of actual disease, is precisely the same state, varying only in degree (10. 73.); and the operation of the powers producing, and of the remedies removing, both, is likewise the same †; there was, therefore, no foundation for the distraction of view, with respect to the hurtful powers, which has been so universally taken of them. The author proceeds next to his

General Diagnosis.

78. "THE violence," continues he, "and danger of universal diseases, is in proportion to the de-

* Elem. Med. 317. to 326. † Elem. Med. 89.

gree either of increase of excitement, or of diminution of it, whether by indirect or direct means. The proof of which arises from the whole foregoing part of the doctrine; consequently, the chief difference of diseases depends upon this variation in the degree of excitement *. The only diagnosis of any moment, is that by which universal diseases are distinguished from local or symptomatic affections, which latter disturb the whole system with a certain resemblance to the former (72.) In order to execute that distinction, it is to be understood," from what also has gone before, "that every universal disease is discovered by a diathesis preceding it; by a similar one to that following; and by an operation of the remedies opposite to that which proved the hurtful power (54.): While, on the contrary, local affection is distinguished by an affection of a part; by a disturbance of the system, which can be traced back to that affection; "by the absence of the diathesis of the disease which it resembles, or only its accidental accompanyment.

79. "To attain this useful knowledge, one should learn the necessary parts of anatomy, and not waste his time in its superfluous" niceties: "He

* Elem. Med. 82.

should peruse the works of the illustrious Morgagni; he should dissect dead bodies; he should distinguish between effects that remain, and causes that have passed away; he should carefully examine the bodies of hanged persons, and of those who have died of wounds, who may be otherwise sound, and as many of them as he can: These he should attentively compare with the bodies of those who have been cut off by any disease of long standing, or of frequent recurrence; he should compare every phenomenon with every other, and the whole with the whole; he should be on his guard against forming rash opinions" from such phenomena, "which has scarcely once been the case hitherto. Particularly, let him never expect to find the cause of any universal disease in such subjects: Let good sense direct his judgment.

80. The whole written records of physic uniformly tend to show the insignificancy of every medical system, by the constant desertion of every one, whenever the slightest prospect of any thing more satisfactory presented itself. The expectation of great improvement from anatomical researches, is as old as the days of Erasistratus. This auxiliary branch of the medical art was much cultivated in Egypt under the Ptolomies; till both it and its pro-

fessors were ejected from the metropolis of that country, by the hypocrisy and cunning of Serapion, who took advantage of his countrymen's abhorrence of the contact of dead bodies, to get rid of his anatomical rivals in the profession. We find anatomy again revived, and more fully prosecuted, in the writings of the celebrated Galen. Much labour has been bestowed upon it during two centuries past; and the success of that labour, since the discovery of the circulation, has not only far exceeded that of all former times, but has equalled the most sanguine wishes of its cultivators. Bonnetus, Morgagni, and Lieutaod, have attempted a pathology on this ground, and have filled six or seven large folios with the indefatigable labour of dissections. The advantages to be reaped from all that labour, will then only arise, when the boundary of its utility is marked out; that is, when this department of auxiliary knowledge in medicine is considered as only useful, in so far as it discovers the effects, not as it points out the causes, of universal diseases. And hence, in the next paragraph, the author of the Elementa observes,

81. "As internal local affections are often a certain taint, remaining in consequence of previous universal disease;" "our judgment, therefore," of the

presence or absence of local disease must be directed by the consideration of the universal diseases which have preceded them; and "there is more or less reason to suspect the former, in proportion as the latter have oftener or seldomer preceded them*."

82. INDEPENDENT of this rule of judgment, it was exceedingly absurd to look for the cause of universal, or indeed of local, diseases in dead subjects: the cause of the former being excess, or deficiency of excitement; that of the latter, the neglect of the proper, or the employment of an improper, cure of that fault in the degree of excitement." In the 10th chapter, where he delivers his

Prognosis,

83. "SINCE the powers," continues he, "producing either the sthenic or asthenic diathesis, always act upon some part with more force," than upon any other equal part (32.); for that reason, the danger of disease during the predisposition, and the danger of death during the disease, arises in proportion to the degree of the diathesis, or of the

* Elem. Med. 85.

part particularly affected: But, the degree "of diathesis being given, the safety of it is in proportion to its equality; and," on the contrary, "its urgency on an organ necessary to life, is never without instant danger. Hence, the chief fear in peripneumony," where the lungs, "in apoplexy and phrenitis," where the brain is the seat of the urgent symptoms, and in "erysipelas and the gout," when they affect the head with violence. "Local diseases and symptoms should," in forming the prognosis, "be separated from universal ones, and the directions formerly (72.) delivered, transferred to this place." This remark is the more interesting, that the effect of the remedies, prescribed by the new doctrine, is of powerful influence in universal diseases; while the local affections, when they have been allowed to take place, are too often incurable, as treated by any doctrine. Incurable, however, as many local affections are, it may be an inducement to the study of a proper practice to observe, that, when universal diseases are properly managed and removed, as they can be, by such management, the chief, if not the only, source of local affection, is thereby cut off: Neither are the latter of so frequent occurrence as practitioners have commonly believed; the chief cause of that opinion being the too frequent failure of the means commonly used

for their cure. When, however, it is considered, that the pathologies and therapeutics, the theories and methods of cure, in the art, have hitherto been in such a state, as that, whatever physicians have considered as hurtful powers, or what they call remote causes (76.), those are the proper remedies; and, whatever they have employed as remedies, those are the hurtful powers, in the great proportion of ninety-seven out of the hundred: It will hardly be doubted, that the chief source of the unluckiness of the common practice, both in the cure of universal, and in the prevention of local diseases, is fundamental error in the art. And, to bring the matter to full proof, we have only to add, that innumerable cases, and very nearly all those of children, the cure of which had constantly failed upon the common practice, have been both quickly and effectually removed by that of the new doctrine. Often, also, has all this been done, when a fatal prognosis had been denounced. Indeed, the latter circumstance is not to be wondered at: For, as the prognoses hitherto have all related to the ordinary practice; according to that, the denunciation of death might have often been just, and yet belied by the efficacy of the new plan of cure. In the 11th chapter, entitled,

Of the Universal Plan of Cure,

84. "THE indication," says he, "of the cure of sthenic diathesis, is to diminish, that of the asthenic, to increase the excitement; and to go on doing so, till that degree of it, which is a medium betwixt the extremes, and suitable to health, be restored. Universal diseases admit no other indication of cure (10.)."

85. As both diatheses (84.) arise from the same operation of the exciting hurtful powers, varying only in degree; they are also both prevented and removed by an action of the remedies, which is the same, only opposite in degree, to that which produced the disease. Both the cause and plan of cure are confirmed by a proof, which rests upon an induction from every one of the facts," without a single exception (10.). The same debilitating powers, which cure any one sthenic disease, cure every one; the same stimulant powers, which remove any one asthenic disease, remove them all *. Are not palsy, in so far as it is curable, and dropsy, in so far as it is an universal disease (73.); and the gout

* Elem. Med. 67.

and fevers, both relieved and removed by the same remedies? And are not the remedies also "the same, by which peripneumony, the small-pox, the measles, rheumatism, and * catarrh, are cured? All these remedies are such, as in the asthenic case increase, in the sthenic diminish, the powers of life. The operation in both cases is a common one; all the difference is in words, not in the nature of the thing."

86. THE remedies of the sthenic diathesis are powers †, which excite by a stimulus weaker than that which is suitable to health, to be distinguished in the cure, for the sake of shortness of expression, by the appellation of debilitating powers. The remedies of asthenic diathesis, are powers which excite with more force than is requisite to the best state of health; to be denominated stimulants in the practice, for the greater convenience of distinguishing them from the others ‡."

87. "THESE are to be employed with more or less freedom, in proportion to the degree of the diathesis, and of the local affection depending upon it.

* Elem. Med. 453. 454.
† Elem. Med. 90.
‡ Elem. Med. 91.

But the cure of no disease of considerable violence, and scarcely of any disease, is ever to be intrusted to any one" remedy. "In fine, the application of the remedies is never to be directed to any one place in preference to the rest, as if that were the seat of the disease (37.), in the vain expectation of being of service. The use of several remedies is preferable to one, because, in that way, their energy is directly applied to a greater extent of the system, and the excitability is more completely and equally acted upon. The person, who directs the application of his remedies to a part, acts with the same" impropriety, "as one would do, who expected to eradicate a tree by lopping off a twig. An account will be given afterwards of the distinction between universal and local remedies." The next two paragraphs in the Elementa are erased, partly for incorrectness, and partly for want of perspicuity.

88. "SINCE every disease, every predisposition, depends upon increase or diminution of excitement, and is removed by the conversion of that into the middle state betwixt them (10.): To prevent, therefore, as well as cure diseases, we must always practise the indication proposed (84.), we must" always "stimulate or debilitate (86.), never desist

from acting, nor trust to the powers of nature, which, without the external powers, are nothing *."

89. "The only regard, in the indication of cure, to be had to morbific matter, is to allow it time to pass out of the system: For, whether it acts, like the ordinary exciting hurtful powers, by sometimes stimulating, sometimes debilitating; or" only "by giving the particular form of its respective disease, and thereby adding local affection to universal disease; in either case there is no room for a new indication: Since, if the disease be properly managed, as an universal one, every eruption, and its subsequent phenomena, every species of inflammation, every ulceration," as well as all the other symptoms, yield to the successful operation of the ordinary mode of cure. And when, in consequence of an improper method of cure, a contrary event follows, the local symptoms are aggravated," along with the universal ones. "This has been proved long ago in the small-pox, and lately in the measles †,

* There is a complete refutation of Stahlianism, or of the doctrine which intrusts the cure of diseases to the powers of nature, in the first edition of the Elementa; a translation of which will be given in an after part of this work, where it will come in with more propriety. See Elem. Med. 95.

† The proof of catarrh, and therefore of the catarrhal

but with equal certainty; and in the plague, as often as that disease has been treated with any sort of judgment, and with remedies proper in kind and quantity; as also in the gangrenous or malignant sore throat, and other cases of typhus fever, accompanied with similar local affection. In the two latter cases, the danger to life is always in proportion to the degree of universal affection, without which the local affection has nothing formidable in it: The same observation is also so true with respect to the former, that, though a matter has been applied, no universal disease follows, unless the universally operating hurtful powers have preceded; that the danger increases in proportion to their violence, and the whole cure depends upon the universally operating remedies; a fact showing, that no matter, whether contagious, or any other, contributes to the cause of the disease which it accompanies or distinguishes; or, which is more probable *, if it contributes any thing, that it differs not from the usual hurtful powers †."

symptoms in the measles, being sthenic, or depending upon excessive excitement, was among the last parts of discovery which the author made. See Elem. Med. 378. 382. 407. to 412.

* In the original, interline *quod verisimilius est*.

† Elem. Med. 97.

90. "As, both in the case of excess and deficiency of excitement, the sound perspiration is diminished during the period of predisposition, and suppressed after the arrival of the morbid state; which has been already hinted (51.), and will afterwards be more fully explained; for the purpose, therefore, of more certainly dismissing all hurtful matter from the system, great pains should be taken to promote the perspiration, and keep it in that state. But neither does that imply a new indication or intention of cure; since the only means of effecting it are those, which otherwise remove both the diatheses, in proportion to the degree of force with which each of them is employed, and which prove serviceable, not by a local, but universal mode of operation *."

91. "If any one, who, during the former period of his life, had lived luxuriously, after he comes to be advanced in age, has, either from intention or necessity, abated a good deal of his former indulgence, and still preserves an appearance of an overproportion of fluids, and" of an excess of "vigour; we are not immediately, therefore, according to the common supposition, to infer, that he labours un-

* Elem. Med. 98.

der phlethora *, and excessive vigour; but, on the contrary, unless there should be a recent and evident cause for it, which is a possible case, the just conclusion is, that he is affected with indirect debility: The reason for which conclusion will be the stronger, if" it can be perceived, that "directly debilitating powers have succeeded to the powers which formerly proved hurtful, by giving too much vigour. Neither should a debilitating, or asthenic, plan of cure be employed, which would increase the direct debility; nor one too sthenic (86.), which would increase the principal part of the cause, the indirect debility; but a way taken" betwixt these extremes, "which is commonly called the tonic plan."

92. "SINCE the measure of" the remedies employed for the "cure, should be accommodated to the degree of the disease, under which, to avoid circumlocution, predisposition is comprehended; therefore, age, sex, habit, consitution, climate, soil,

* An over-proportion of blood, supposed by physicians to be the cause of most diseases; in every one of which, however, the contrary state, a penury of blood, takes place: And, although there are diseases in which there is too much blood, in no one of these, however, has the supposition been made, that, as such, it is the cause of the morbid state.

in short, the operations of all the exciting powers, of all the hurtful exciting powers, of all the remedies, whether they have formerly been properly or improperly administered;" all these "should be taken into consideration in the indication of cure." After pointing out the principal cases of direct (17. 24. 29.) and indirect (17. 22.) debility in the next two paragraphs *; in the one following them,

93. "For the cure," continues he, "of indirect debility, whatever be its degree, and from whatever kind of excessive stimulus it arose; the quantity of stimulus to be employed, should at first be not much less than that which produced the disease; after which, it should be more and more diminished till the disease is removed †."

94. "The removal of the hurtful effect of every stimulus, should be first attempted by" the use of "the same stimulus in a lesser, then in a lesser degree, and soon after, by" that of "another similar to it; by and by recourse should be had to one similar to the last; and the transition always be made from the" use of "the more violent and

* Elem. Med. 101. 102.

† Elem. Med. 103. The next, or 104th paragraph, is erased as trifling.

more diffusible, which nature in her sound state rejects, to that of the milder, more durable, and more suitable to nature" in the sound state, "till the health can be preserved by its usual supports *."

95. For "such is the nature of the loss of excitability, that it rushes instantly to death, unless life be supported by a degree of stimulus" still "great, though less than that which occasioned the loss, and then gradually diminished, till life can be preserved †, by means of the moderate degree of stimulus which is suitable to nature, or one a little greater. The difficult cure of drunkards and gluttons, when," in consequence of their intemperance, "they have fallen into disease, sufficiently proves this observation; and it holds good with respect to the consideration of all the powers which stimulate in excess." The above direction regards the cure of indirect debility.

96. "In" the same "indirect debility, the debilitating plan of cure," employed "to restore the vigour, should be avoided; neither kind of debility being curable by the other, nor any degree of ei-

* Elem. Med. 105.

† Elem. Med. 34. where, for *succurri vitæ*, read *servari vita*.

ther by any degree of the other. It is only in the progress to indirect debility, that directly debilitating powers give a confirmation of the vigorous state" at a period "when it is in danger of being destroyed." The powers producing that effect "are cold bathing, lowering" the articles of "diet, weak drink, and a similar abatement" in the application "of the other stimulant powers *."

97. For the cure of direct debility, we should begin with the smallest degree of stimulus, and then rise to higher and higher degrees, till the morbid over-abundance † is gradually worn away ‡, and the healthy state at last restored §.

98. Here, again, every sort of "debility, both of the indirect and direct kind, must be avoided; and that both for the reason" just now "assigned, and because the stimulant plan of cure, when pushed to excess, converts sthenic into asthenic diathesis; the latter into indirect debility, and the indirect debility into death. While, therefore, on the one hand, the directly debilitating powers, mention-

* Elem. Med 34. † languor,

‡ removed by the substitution of a vigorous state of it,

§ Elem. Med. 107. The next paragraph is erased for the same reason as the last mentioned.

ed above (96.), are to be avoided; on the other hand, it must not be forgot, that the measure of curative means must be accommodated to the measure of morbid state *. The direction respecting this, with its proper explanation, is as follows: "As all life depends upon stimulus (9. 10.), and as both the over-proportion and defect of stimulus produces disease, and that in proportion to the degree of either its over-proportion or defect; so, the remedies of both deviations from the proper standard must be accommodated to the degree of deviation," &c. Again, proceeding to exemplify this curative direction, "the thirst," he adds, "which proceeds from debility as its cause, is increased by a draught of cold water, is hurried on to nausea and vomiting, and quenched by pure wine or spirit; and the troublesome symptoms which would otherwise arise, are prevented. The thirst, the cause of which is sthenic, is increased by strong drink, which produces nearly the same tumult of symptoms, as water does in the other case; cold water sates it, and prevents the future tumult †." In a former part of the Elementa ‡, he is still more particular upon this important subject, where he lays down the principle upon which it turns. There,

* Elem. Med. 44. † Elem. Med. 109.

‡ 43.

99. "THE career," as he observes, "of this abundant excitability to death, is so precipitate, that the only means of restoring health, is first to oppose the debility with a very small quantity of high stimulus, scarcely exceeding the small degree of stimulus which occasioned it; then, after a part of the abundant excitability is worn off *, to use more force of stimulus; after that, in proportion as more excitability is worn off †, to go on with a still greater proportion of the stimulus, and to proceed constantly in taking off every degree of superfluity of the excitability ‡, till the salutary mediocrity § of it is attained (13.). This state is directly opposite to" the "debility" occasioned by a "waste of excitability ||, and to the danger of death from that" source. Accordingly, "a famished person ought not forthwith to be treated with a full meal" for his cure, nor a person long afflicted with thirst, with a plentiful draught; but" the food should be administered "bit by bit;" the drink, "drop by drop;" and then both given by degrees more plentifully. A person torpid with cold should gradually receive the cherishment of heat; to a person in deep afflic-

* of the languid excitability is roused to vigour.
† as the languor of excitability is removed.
‡ of languor of the excitability.
§ vigour, || languor.

tion from grief, joyful news should gradually be communicated. The safety of the young Roman, who survived the fatal overthrow at Cannæ, should have been told the mother in a round-about way; first, as a doubtful report, then, as more certain, after that, as still more so; finally, as admitting of no sort of doubt; and, last of all, he should have been presented to his mother, after she had been also supported by other stimuli, and recruited with a bumper of something strong *.

100. "When the direct debility (97.) is so exquisite, as not to yield to the same diffusible stimulus, though the highest of the order; in that case, it must not be forgot, that other stimuli, also of the diffusible kind, must be used in rotine with that which has failed. There have been cases, where, after an opiate itself had failed, musk, volatile alkali, camphor, and ether, have all had their turn to effect the purpose of wearing out † the morbid accumulation ‡ of excitability; and the cure made out, partly by that succession of their operation, partly by a renewal of that of the opiate." His

* Elem. Med. 43. The remaining part of the paragraph is dashed out as nonsense.

† of rousing to vigour. ‡ the languid state.

conclusion of the general plan of cure, is in these words:

101. "SINCE, therefore, the same powers produce life and all its phenomena *, sometimes in excess, sometimes in due proportion, sometimes in a deficient degree, in proportion to the variation in the degree in which they are employed; and since the same is the fact with respect to the same powers, when they are applied as remedies; let it be therefore a perpetual rule to attend to two things, first to apply the proper kind of powers, and then not to over-do them, so as to convert either diathesis into the other," and, by passing over the line of health, instead of the intended cure, to substitute one disease in place of another, and thereby bring life itself into danger.

A Short Review of the remaining part of the Elementa.

102. THIS is a pretty concise account of the preliminary part of the doctrine delivered in the Elementa Medicinæ. In it the several propositions re-

* Elem. Med. 110.

cessary to the developement of the fundamental principle, are laid down according to the sense of the author in the original work. And the whole is interspersed with explanatory remarks and illustrations, so as to give the philosophical and medical readers, who are otherwise unacquainted with the full explanations, a tolerable idea of the subject. For an acquaintance with the fuller detail of the work, and its several applications to use, the subsequent parts may be consulted.

103. In the second part, and first chapter of the work, the exciting powers, producing either sthenic or asthenic diathesis, are delivered alternately, as each power, according to the different degrees of force with which it is applied, produces either of these states. The order, in which they are treated, is precisely that in which they are enumerated in the 1st and 2d paragraphs of this work, or in the 11th and 12th of the Elementa. They occupy from the 111th number to the 148th, or beginning of the second chapter of the same second part of the work. Next, the cause of each diathesis, or the state of excitement, produced by the exciting powers, constituting the cause, is briefly announced in the 148th and 149th numbers. The 3d chapter is taken up with a short account of the sthenic dia-

thesis, or of the chief symptoms which distinguish that state of the body. The 5th chapter is a similar concise history of the asthenic diathesis, or the chief symptoms constituting it. The 4th and 6th chapters contain an explanation of the principal symptoms; the former of the sthenic, the latter of the asthenic; not with a view to supply any deficiency in the fundamental principle, or in the several propositions in which that is unfolded, but for the purpose of giving it further confirmation. This part of the work, therefore, widely differs from all the symptomatologies, which are to be found in any other medical systems; these being commonly so many expletives, or means of supplying the glaring want of principle, which runs through, and disfigures the whole. The amount of such explanations is, that they are so many little systems within a great one, the completeness of which should have superseded them all: They are contradictions, in place of illustrations; exceptions, in place of explanations; mysterious, distracted, hypothetical jargon, in place of clear, connected, and solid demonstration of a subject, founded on a common principle. The whole, is darkness for light; incoherence, for unity; enigmas and riddles, for elucidations of nature: They beget neither doubt, uncertainty, nor suspence of judgment; but a clear con-

viction of their perfection, as deviations from truth and simplicity, and of their being productions of a complete depravity of human reason. The four chapters last mentioned, occupy from the 151st to the 237th paragraph, or from the 3d to the 7th chapter of the second part. As, in every other part of the work, so, it is particularly in this, that the fundamental principle, and the detail of particulars, reflect mutual illustration and confirmation on each other. The arrangement of all the symptoms in this part, has not received that completeness which the author wishes to give it: But, till that shall be done, he refers his reader to an example of a natural arrangement of the principal asthenic symptoms, as these ascend in disease, from the slightest loss of appetite, to the highest convulsive and spasmodic affection of the organs of voluntary motion * in tetanus and epilepsy. The series of the symptoms, are loss of appetite, loathing of food †, thirst, nausea ‡,

* Voluntary motion, is that motion of the body which is performed by its own muscles, with the consent of the will, as in walking, stretching out a limb, &c. Involuntary motion, is that which is performed without consciousness of the interference of the will, as the motion of the heart, that in the stomach and intestines, by fibres that are muscular, but not disposed in a fascicular form, as those in the muscles.

† Elem. Med. 186. ‡ Elem. Med. 187.

vomiting *, pain of the stomach and intestines †, pain in the exterior parts of the body, in both cases sometimes of the spasmodic ‡, and sometimes of the convulsive kind §. He prosecutes the explanation of them from the 195th to the 203d paragraph, showing that they all arise from a set of debilitating powers, and all yield to stimulant remedies; a fact, which, while it is proved in that work to a demonstration, is, at the same time, an intire piece of medical news to all who are unacquainted with this doctrine. To give a specimen, both of his manner of explanation, and of the important view in which that explanation has placed the symptoms; he says, in the 195th number,

104. "THE simple course of" this chain of symptoms "is from the slightest of them, in loss of appetite, arising from want of the stimulus of food, and of other stimuli, or from an over-proportion of these, to spasmodic or convulsive pain. For the reasons just now mentioned ‖, at first there is no desire for food; if the debilitating practice," which occasioned that, "is persisted in, and there is no food of the kind which can be taken, as ani-

* Elem. Med. 188.
† Elem Med. 189 191. ad 194.
‡ Elem. Med. 190.
§ Elem. Med. 191. to 194.
‖ Elem. Med. 195.

mal soups, a loathing comes on * ; by and by, if still nothing stimulant is employed, a thirst will succeed ; to quench which, there will be the keenest desire for the most debilitating power, cold water ; which will be preferred to the highest delicacies, and greedily swallowed : The latter is no sooner done, than it is followed by stomach sickness † ; which, unless prevented by a diffusible stimulus, such as a glass of the strongest spirit, or, that failing, another, perhaps a third," according to the urgency of the case, and the patient's former habits, will go on directly to vomiting ‡ : And when the affection rises to any considerable violence, an acute pain, in the time of vomiting, arises in the stomach," exciting the feeling of " a bar of iron in that organ, placed across, and rudely over-stretching it : When the affection still increases, and the force of the cause gains ground, every degree of torture is experienced ; the head aches, as it were from the stroke of a hammer : There is often a profuse looseness, with gripes and great pain ; but " the" state of the " belly is oftener that of costiveness, which, in the inverted peristaltic motion" producing vomiting, is less to be wondered at § ; and there oc-

* Elem. Med. 186. † Elem. Med. 187.

‡ Elem. Med. 188.

§ Elem. Med. 195. p. 106. The next words are not

cur, from time to time, the alternate vicissitudes of vomiting and looseness *. Among the distressing affections just now enumerated, are comprehended, dyspepsy, or indigestion in English, the gout itself, diarrhæa, dysentery, cholera, the colic, the iliac passion, the green purgings of children," a certain wasting which happens to them, called "tabes and atrophy," meaning that consumption, where a local affection is supposed to be in the neighbourhood of the intestines, not in the lungs; "and the far greatest part of the diseases of that early age †."

105. "As the cause proceeds in violence, and the debilitating hurtful powers prove still more urgent; the external parts of the body, the organs of voluntary motion ‡, are drawn into consent. Sometimes the legs, sometimes the arms, and other parts, are variously affected with cramps. The pains," occasioned by these, "are felt sometimes in different parts of the thorax § all round; sometimes in the shoulders; at other times in the sides; one

translated, because they are left out, in an after correction, as tautology.

* Elem. Med. after *vomendi*, read *dejiciendique*. See also Elem. Med. 189.

† Elem. Med. 195. ‡ Elem. Med. 196.

§ which, read for *pectus* in the original.

while in the back; another while in the neck behind. Nor is any part of the human body exempted from them: They happen in the regions of the lungs; of the liver; of the stomach: Arising in all which, they are the effect of spasmodic or convulsive motion, not of internal inflammation, as they have been commonly supposed: That the former is their real origin, is proved by the restoration of the several stimuli," the want of which had been the occasion of them, "removing them, often instantly, always in a short time, and replacing the healthy state; it is proved by the complete failure of the opposite plan of cure, consisting in bleeding, various other evacuations, and abstinence. Nay, what makes still more strongly for the same conclusion, is, that, as abstinence often alone is sufficient to produce" these "pains; so a full and rich diet has been also alone sufficient to remove them.

106. "As the same pains are sometimes conjoined with the irregular" spasmodic and convulsive "motions, of which we have spoken, and sometimes happen without them; they are, in both cases, absolutely free from every sort of inflammation; and, therefore, to distinguish them from other pains arising from such, or a similar cause, attention must be paid to the concourse of symptoms" accompany-

ing them. The presence of "sthenic diathesis points out that the pains are sthenic;" that of the "asthenic diathesis, that they are asthenic. This observation applies to the affections of daily occurrence, and overturns the ordinary practice for the cure. Even headach, which is so frequent a complaint, requires the stimulant plan of cure ten times, for once that it requires the contrary," though the latter is the only one, till of late, that ever was thought of *.

107. THERE is a frequent disease, of which pain, somewhere in the chest, or pulmonary region, is the alarming symptom. The more ignorant physicians have often mistaken it for a peripneumony †; and the most knowing, equally unacquainted with its true nature, have considered it as a bastard sort of that disease. The mode of treatment made use of by both, was profusion in bleeding, in other evacuations, great abstinence, and the other parts of an exquisite antiphlogistic regimen. Now, a question of no difficult solution occurs here: To what is its great fatality owing? the malignant nature of the disease, or the improper method commonly employed for its cure? That it is not the former, the

* Elem. Med. 197. † Elem. Med. 198.

easy and quick solution of the disease, when treated by proper stimulant and invigorating remedies, proves by a large induction of facts * ; that it is the latter, is further proved, by the conformity of the stimulant plan in this case, to that which constantly succeeds in every case of similar debility, employed in different degrees of force, in proportion to the different degrees of the cause ; and that through the whole great circle of asthenic diseases ; which, in point of frequency, are in the proportion of ninety-seven out of the hundred, to the sthenic diseases, or those of the contrary form. While the fact rests, respecting this cure, upon such a solid induction of proof, it can be perceived, in conjunction with a great many of equal weight, to reflect the same probation upon other cures. Accordingly, the very plan of cure, which proves so successful in that painful affection of the thorax, is equally so in whatever part of the abdomen, or external surface, the pain occurs. Nay, the chain of connection goes further, and extends to " symptoms

* A gentleman, well acquainted with both the principles and practice of the new doctrine, found both this disease, and even the moderate intermittent fever, in the fens of Lincoln, after resisting the ordinary practice : the former, the mode of cure spoken of here ; the latter, the peruvian bark, to yield readily to a properly conducted stimulant plan of cure.

of" high morbid "perturbation in the alimentary canal *, as those of hysteria, cholera, colic, dyspepsy, and the gout, and other affections without a name. Accordingly, beside the pains formerly mentioned (104.), there" sometimes "happens a certain sensation of burning, anguish, painful throes, and direful torment," in the stomach or intestines, which are "formidable in the highest degree, both to the patient and by-standers, and" which "create a suspicion" in this case, as well as in the others just now mentioned, "of inflammation being their cause †. That these complaints, however, have nò connection with inflammation, and that they depend upon quite an opposite state of the part, is proved by the cure turning out as often successful as it has yet been tried;" and its trials have been many. The mode of cure, upon which this proof turns, is the use of "wine, opium, and the other diffusible

* From *talem* to *pulmones* is dashed out in the 198th Number of the Elementa, as a repetition.

† This case the author himself experienced, and found the most difficult of cure of all others that he had ever engaged in; it requiring the whole round of diffusible stimuli, administered in high proportion, and with the utmost skill that he himself was master of. The cure was completed in ten days, though every day it suffered a temporary solution from the use of the remedies: Ordinary cases, however, are quickly cured.

stimuli," as musk, volatile alkali, camphor, ether; after the use of which, and also along with them," beef, or other "animal soups; after them," and when the patient can take and digest it, "solid meat, the usual diet," in all its articles; "the usual mode of life, and guarding against" the operation of "weakening" powers. Whatever passed in the minds of physicians for the cause, whether they considered that as actual inflammation, or, according to their own language, as inflammatory; their uniform method of cure proves, that they had not the most distant comprehension of the true cause: But that it is not either inflammation, or any state approaching to that, is evident, both from the certain and extensive probation adduced, and from this further argument, mentioned in the original work, that the sthenic universal inflammation, or any approach to it *, is never, even in sthenic diseases, seated in an interior part †.

108. Beside the high symptoms of disturbance, mentioned before, as affecting the trunk, with a certain resemblance to peripneumony, and further particularised in the 199th number of the Elementa: In the natural chain of connection by which all these

* Elem. Med. 169. to 172. † Elem. Med. 168. and 198.

symptoms are united into one general affection, the same in kind, and differing only in degree; their common cause, debility, or diminution of excitement, rises to the head, producing the violent pain of that organ, and even "delirium, often so fierce, as to lead to efforts above the patient's strength. This state happens towards the end of typhus fever, even when very violent. The apprehension, with respect to the cause, is, that it is inflammation: Blood is let," and "directly from the head; blisters, which are the extreme unction of physic, are applied; silence and darkness are enjoined; even the gentlest stimulants are denied. In consequence of the emptiness of the stomach, of the vessels of the whole system; in consequence of the highest languor" compatible with the living state, and that only for a short time; from the deficiency of every other stimulus," as well as those which stimulate, by filling the stomach and vessels, vertigo * is superadded to delirium;" and the patient, "deprived of his strength, his senses, his judgment, breathes out his last †." This is another high instance of this kind of affection being either without sthenic inflammation" altogether, "or," if there be any inflammation in the case, "of its being quite distinct

* a feeling as if the head turned round,

† Elem. Med. 201. Vid. loc. proxime relat.

from universal sthenic inflammation *. That it is not the latter, is proved by the incredible success of the plan of cure, which first stimulates, and then fills, the vessels; as well as by the complete failure of the debilitating evacuant plan: And the quickness of the restoration of health is an equal proof of its being no other inflammation. Now, as weakness and confusion in thinking, even in persons who are otherwise sound, is the universal consequence of debility, as arising both from other sources, and from the emptiness of the vessels, and a general penury of blood and other fluids; is there any wonder, that, in the highest penury of these fluids compatible with life, scarce leaving a shadow of life, amidst a diminution of the other functions, a failure of the intellectual one, that is, delirium, should be one? It is, however, a demonstrated fact. In that way, famine, and water-drinking, contrary to custom, after drunkenness, or a debauch in eating as well as drinking; as also depression of mind, grief, terror, despair, not only induce temporary delirium, but often carry up their effect to downright madness. The same is the upshot of any considerable loss of blood: For, how many persons have there been, who, after wounds, received in

* Elem. Med. 169.

line of battle or from highwaymen, have, during their life, and that often a pretty long life, never after recovered their reason? To say nothing of contusions, wounds, and other injuries, by which the texture of the brain is hurt, these belonging to the head of local diseases, where they will be considered; is not death from cold effected, amidst a diminution of the other functions, by delirium preceding it? From these facts, so strong and numerous, and which bring nearly all the exciting powers into the proof, the conclusion must be admitted, that headach, and every failure of the intellectual function, in all its degrees, great and small, and, in the highest of all, delirium, do not at all depend upon sthenic universal inflammation, the only inflammation hitherto known; nor necessarily upon the other universal one, the asthenic; but upon the greatest want both of other stimulant powers, and of that which a due fulness of the vessels affords." That the latter, however, is the most frequent cause of the symptoms now mentioned, is evinced from the establishment of health being so certainly made out upon the new plan of cure *.

109. FAR as we have stretched out this chain of sameness in the cause of asthenic symptoms, it ex-

* Elem. Med. 202.

tends yet farther, producing other "formidable symptoms, partly febrile, partly epileptic and apoplectic; such as stupor, and disposition to sleep, in all the three; in fevers, often that false watching, which is called typhomania; and "sometimes coma," or that profound sleep which gives little refreshment after coming out of it; "as well as starting of the tendons; in the other diseases, convulsion, and diminution of the voluntary motions. All these, without distinction, are evidently owing to the same cause, upon which all asthenic diseases depend, that is, debility; though some of them, as typhomania, and starting of the tendons, have been imputed to irritation; others to plethora, either alone and pure, or along with it to mobility." But the same "proof," which has been so often adduced, "of their all originating from debilitating powers, and being all relieved or removed by stimulant remedies," is sufficient to establish debility as their origin, in common with all those of which we have taken notice. It is in vain, "and indeed the highest absurdity," to make plethora the cause of apoplexy, as if, at a time of life when the system is enervated and almost bloodless, that is," at a period "when food is neither desired, nor taken" in due quantity, "nor digested" with proper force, "more blood could be produced than in the flower, and most vigorous

period, of human life. On the contrary, when apoplexy supervenes, upon account of indirect debility from great age, and the amount of excitement during the former part of life, the solids are languid, the fluids scanty, as well as the source of the latter, the blood :" Nor is the doctrine of plethora, which has been equally applied to epilepsy, better founded; the cause of which being the same debility, the same penury of fluids," as in apoplexy, and in all the other asthenic diseases. " Fevers may consist in indirect debility, as is undoubted in the confluent small-pox *, or when the hurtful power" producing them " has been ebriety :" But " direct debility is by far their most frequent cause †."

110. We have now, at greater length than the bounds which we had at first prescribed to ourselves permitted, given an example of the author's manner, as well as matter, in his explanation of symptoms. And, if the rest of the chapter from which this has been taken, as well as the whole foregoing one, be carefully examined, the purport of the whole, it is hoped, will be admitted to amount to a full establishment of the fundamental principle: Which is, that we are nothing in ourselves, but

* Elem. Med. 669. 676. † Elem. Med. 200.

every moment in dependence upon the exciting powers, to which the whole phenomena of life, in all its states *, are owing; that these produce only perfect health, or deviation from that to diseases and death, in proportion to the degree in which they are applied; that the healthy state is unaccompanied with those alterations of the functions, which are called symptoms; that the latter, in predisposition, are not evident; and that, in disease, there is not the least connection betwixt their appearance and real nature (41. 42. 43.); that the only well-founded estimation of them must be taken from the powers producing and removing them, compared, in their respective degrees of force, with those which produce the healthy state; that, when their excess goes to a certain height, it produces sthenic disease, as is shown by the concourse of symptoms enumerated and explained in the 5th chapter; that, rising still higher, or falling too low, they produce the diseases, an explanation of which is delivered in the 6th chapter, and exemplified in the specimen given here. In the 7th chapter, the subject of which is the consideration of sleep and vigilance, whether in their salutary or morbid state,

* Elem. Med. 9.

111. Sleep is considered as arising from the same powers which induce death, only acting in a temporary way *. In the 8th chapter, the cure of each diathesis is delivered in the order of the exciting powers, as first (2. 3.) enumerated. In the 9th, a comparison is made of the parts, or means of cure of the sthenic, with each other; and in the 10th, to the 304th number, the same comparison of the parts of cure is applied to the asthenic diathesis.

112. In the 304th, the title of which, added in manuscript, is, *how the remedies should be varied* †, an estimation is made of the comparative force of the remedies, and of the effect of the direction of different remedies to different parts, with the view of obtaining as equal a diminution of excitement in sthenic, and as equal an increase in asthenic diseases, as possible, and thereby of procuring a complete and perfectly equal re-establishment of health. For want of which knowledge, when, even in the cure of the few sthenic diseases, for a gross idea of which they were indebted to Dr Sydenham, physicians had pushed a particular remedy, as bleeding, to its ut-

* For particulars, consult the Elementa from 237. to 251.

† Elem. Med. In the original. Quo modo remedia variare debeant.

utmost extent, and, as our author shows, to great excess; their very common complaint was, that, though they had used that remedy so freely as not to dare to push it further, still something was wanted to complete the cure: The plain cause of all that is demonstrated in this part of the work, where he says, "To bleeding alone, which is the most powerful of the debilitating remedies *, it is improper to intrust the cure of any sthenic disease; for though," by it, "the excitement is sufficiently, and, perhaps, too much diminished in the larger blood-vessels;" yet, "in the extremities of these, in the colourless vessels, and in the rest of the system not vascular, it is not enough diminished: There is, therefore, an inequality in the sum-total of cure: Consequently, purging and vomiting, which latter had never been thought of in sthenic diseases, where it is highly serviceable, and upon this very principle, and never omitted in asthenic diseases, where its tendency is pernicious; and sweating, when the reduction, or original gentleness, of the diathesis admits it; and abstinence, or vegetable aliment and watery drink, and cold; lastly, guarding against the stimulating influence of the passions, and of the exercise of the intellectual functions †: All these

* Elem. Med. 305. † Ibid.

must, in concourse or succession, be used in their proper season and degree, to produce an equal diminution of sthenic diathesis, and therefore a completion of the cure. In the next paragraph he lays claim to the discovery of even the cure of sthenic diseases; from these two considerations; the reduction of the cure to its right principle, which is also the common one of all the rest of his doctrine; and the enlargement of it, so as to render it adequate to all the purposes of practice in every possible case *.

113. From the 307th paragraph to the end of the chapter, he continues the application of the same idea to the diseases of debility, or his asthenic form of diseases; and shews, that, as bleeding, the most powerful remedy of sthenic diseases (112.), is not solely to be depended on for the cure of that set of diseases; so, neither is the operation of the diffusible stimuli, the most powerful of the remedies here required, to be relied on: For, beside the stomach, upon which the predominant part of their operation is exerted, other parts of the system must receive the support due to them: Particularly, the emptiness of the vessels, which is a morbid state univer-

* Elem. Med. 306.

sal in this set of diseases, must be remedied by the most nourishing alimentary matter, given in such form, as can be taken and digested; and the stimulus of heat must be applied to the external surface: By which means, both the internal and external surfaces, and the vascular system over all, receive their equal support from the remedies *. Beside the use of these, along with the diffusible stimuli †, the excitement afforded by the motion of the body, first in gestation, and then in exercise, must be applied ‡. Lastly, the stimuli, supplied by the exercise of the intellectual faculty, by a proper state of passion and emotion, and a greater purity of air, than is easily applicable to patients confined to a room, are requisite to the finishing of the cure; which last, being what is called the convalescent state, requires a common management with the convalescent state from sthenic disease §. He finishes the whole of this preliminary and reasoning part of his work in the 312th paragraph, with the following words:

114. "THE stimulant || plan of cure, whether the theory or the practice; the cause; the exciting

* Elem. Med. 308. † Elem. Med. 309.
‡ Elem. Med. 310.
§ Elem. Med. 305. at the end, and 311.
|| In 312. for *asthenica*, read *stimulatrix*.

powers; the indication of cure; or the remedies, be considered, is, in all its parts, bren-new. Is not, therefore, the whole doctrine, which has hitherto been delivered, a demonstration, that the art of medicine, hitherto conjectural *, incoherent, and contradictory in all its parts, is reduced to an actual science, founded, not upon mathematical principles, which is only one sort of probation, but upon physical ones; and supported by the sure testimony of our senses, which affords the very axioms upon which the elements of mathematics, the only demonstrated part of the science, rest?

115. After proving, in the 11th chapter, that the remedies of diseases are the same with all the other powers, a proof which had been, in effect, though not in form, sufficiently made out before; in the 12th and last chapter of this first part of his work, he extends the subject to every thing vital in nature. We shall present the reader with a literal translation of it: It is entitled,

* Celsus, in his preface, says, *ars nostra conjecturalis est*; and many have reason to say that beside Celsus.

That all the Powers, which support any sort of Life, are the same: Or,

The Principle of Farming.

116. "AGAIN, are not the powers, which produce and support perfect health, the same with those, which, by excess of force, occasion sthenic, by a deficiency of it, asthenic diseases, and the respective predispositions to each," and that "without any difference, except in degree (10. to 116.)?"

117. FURTHER, as the whole foregoing doctrine teaches, the hurtful powers producing sthenic diseases, are the remedies of asthenic, and the hurtful powers exciting the latter, are the remedies of the former*" (84. 85. 86.). The functions of the other species of animals can easily be perceived to be of a similar kind to those of the human species, differing only in degree, according to the difference of the simple solids, in form, figure, proportion, quantity, disposition, and structure. The effect of that is, that, though some animals exceed the human species in the perfection of their corporeal func-

* Elem. Med. 89. 90. 91.—93. 94. MS.

tions, yet the far greater number fall short of it, even in these; and all in the portion of intellectual powers allotted to them. Upon the whole, there is, among the other animals, a scale of life stretching, in uniform gradation, from their nearest approach to human excellence, downwards, till it disappears in a shade of ambiguity with the living state of vegetables. But the chain of life ends not there; that is not the place where nature has marked her degree of nought: From the greatest perfection of this sort of life, till either its extinction in fossil existence, or its transition into an obscure mode of vitality, that we cannot comprehend; there are likewise a great number of degrees of vitality, still the same through its whole extended line. As space and duration for certain are; so life, possibly, is infinite over the universe: The idea, however, is obscure, and not to be prosecuted. Our author, accordingly, mindful of his own rule (p. 5. 6. 7. 19. 21. 22.), has here set up his pillar of ne plus ultra, and is content to limit his system of life, his science of living state, within the boundaries of animal and vegetable vitality, in the following words, added in MS. marked 326.

118. "THERE are many reasons for the opinion, that this globe has undergone great changes; that,

whatever is now sea, has been land, whatever is land at present, has been sea, and that fossils have not been more tenacious of their respective forms. But, whether they, like animals and plants, have a sort of life, so as, like these, to be produced into living state, to grow, to attain to a full state of vigour, to decay, to die, and, in death, lose their living form; the length of their age," which may be millions of centuries, "and the shortness of ours, deprive us of the means of knowing, and of coming to the truth of so vast a fact."

119. "ALL the powers, that support any state of animal life, are the same in kind, only differing in degree: Concerning which, every conclusion which has been drawn," equally "applies to plants. Accordingly, as animals, in every state of life, have their exciting powers (1. 2. 3. 5.); in predispositions and diseases, their exciting hurtful powers (10. 52. 58.); in the cure of both *," and in either of the two forms, "their respective indications (84.) †, and respective remedies, (86) ‡; the same thing, in every respect, happens to plants."

* For *morborum*, read *utrorumque* in this paragraph, which is Elem. Med. 318.

† Elem. Med. 88 ‡ Elem. Med. 89. 90. 91.

120. "THE powers exciting which, in every state of life, are heat, air, moisture, light, some motion, internal juices *."

121. "THE action of the same also consists in stimulus (7. 8. 9.); by which the phenomena peculiar to this sort of life, some sense, some motion, and verdure, are produced: And the cause of this state is the common effect of the exciting powers (5.).

122. "NAY, here also, these powers (120.), when applied in exact proportion, produce health; and diseases, or predispositions, are the consequence of their application, either in excess or under-proportion: the former inducing those that depend on too much; the latter, those that arise from too little stimulus (10.). Accordingly, too much, or too little moisture, too much heat or cold, lead to diseases and death, by an equal operation," "directly or indirectly debilitating: And, as the rays of the sun †, when too intense, or too long continued, prove debilitating indirectly; while too much darkness, or

* Elem. Med. 319. interline *motus aliquis, succi intus;* what follows *lux* in the sentence is erased, as out of place.

† Before *tenebræ*, in this sentence, 321. of the Elementa, read *solis radii vel.*

too long a continuance of it, directly operate the same effect; the alternate succession of night and day, of light and darkness, is a provision of nature *, to prevent the continuance, or excessive splendor, of the rays of light, from stimulating either in excess, and thereby inducing sthenic diseases, or in ultimate excess, and thereby inducing those of indirect debility;" as also to prevent diseases of direct debility from perpetual darkness.

123. "NOR are plants destitute of their respective excitability (1. 5.); which, equally as in animals, is not different in different parts of its seat, nor does it consist of parts, but is one" uniform "undivided property over the whole system (31.): The consequence of which is, that, to whatever part of a plant any † exciting power is applied, its operation, whether in excess, in exact proportion, or in defect, immediately affects the excitability over the whole system."

124. "THAT effect takes place here also with the same inequality as in animals, being greater in

* A little after erase *videtur*.

† The idiom of the Latin leads to say *each*. Elem. Med. 222.

the part, to which the exciting power has been immediately applied, than in any other equal part (32.): And as, in animals, the cause of that turns upon two circumstances, the direct impulse of the power upon the part especially affected (32.), and a greater force of it upon the excitability of that part, than of any other equal part; so, the same thing happens in plants: And as, in the brain, in the stomach, and intestines (32.), the excitability has a greater affinity to the impulse of the powers, than in most other parts; in like manner, the root of plants so corresponds to these parts, as to be most completely affected by the exciting powers: It is to the root of plants, in preference to other parts of them, that moisture flows: It is in the root * that the most perfect temperature occurs; where" the the heat is " neither excessive, and" therefore " liable to produce sthenic affection; nor ultimately excessive, so as to endanger indirect debility; nor deficient, or what is called cold, so as to produce direct debility †."

125. " But the only use of the soil, through the pores of which the powers we have mentioned penetrate, is to act as a filter, the pores of which are

* Illic, in the original. † Elem. Med. 323.

neither so large, as to allow" the powers "to go down in too great a quantity, and produce, first a sthenic, or too luxuriant a state of the plant, and afterwards indirect debility; nor so contracted, as, by not giving sufficient admission" to the powers, to occasion "indirect debility, or the decaying state of the plant: But that the soil," otherwise, "is not necessary to a certain life of vegetables, is proved by their living to a certain degree in pure water; and that it is useful as a filter, is inferred from the good effect of ploughing, breaking the clods, dividing clayey, tough earth, with lime, absorbent earth, and thereby relaxing its pores; and likewise from the good effect of "making land, that is too friable, more adhesive and tough by dunging it;" from that "of covering thin ground with rags and stones, and by these * keeping in the heat and moisture, and by contracting the pores in every respect †."

126. "ACCORDINGLY, the reason is evident, why every sandy, as well as every clayey soil, when the former does not receive, the latter part with, some tenacity, is barren and unfruitful: Hence, very hot summers and countries are hurtful t

* sic. † Elem. Med. 324.

clayey grounds, by obstructing the pores" of the soil; but serviceable to friable and lean ones, by contracting the pores: "Hence, dry seasons suit low-lying rich lands, which draw, from all quarters around, a quantity of moisture to the roots of the plants; whereas rainy seasons" are the favourable ones to "high grounds of a thin," poor, "soil: Declivities of a northern aspect, the soil of which is commonly of the latter sort, are cherished and sheltered by clumps of trees, set down here and there, and" even "by a great number of loose bare stones, covering the surface: These are serviceable by the heat and moisture which they afford; and the taking away the stones, a practice, which an ill-advised industry has sometimes suggested, is productive of hurtful consequences: But there is not the same occasion for such" sources of shelter and moisture "in places of a southern aspect, they being cherished by the sun, defended from the cold winds," (which are commonly those that blow from any of the northern points betwixt due east and west,) "and exposed, by their more unhappy situation, to the breezes, that blow from the south; which," besides their warmth, "are seldom too dry."

127. "Celsus, for a reason at first not very obvious, sets out, in the beginning of his preface, with

the insinuation of a connection between agriculture and medicine. That there is such a connection, and a close one, is proved by the foregoing observations: But the purport of these goes further: It holds out a fundamental principle, upon which all the phenomena of vegetable life, in all its states, may be explained. The want of that principle has been acknowledged and regretted: But the cause of regret was greater than was rightly understood. The same want of principle in agriculture, as in medicine, has produced the same errors in practice. The qualities of the soil, and of the manure, have been constantly talked of, as producing all the good or bad effects which were observed. The common language, in books of farming, has been about the salts of the manure, the salts of the soil, the oil of the manure, and the oil of the soil; as if these ingredients, blended either with the earth, or the matter added to it for the purpose already mentioned, had any effect, independent of that which gives the due porosity. The external powers, producing and supporting vegetation, are those we mentioned, and those only: Nor does the soil, whatever qualities are assigned to it, perform any other use, but that of a filter, strainer, or conductor, of the external exciting powers: And the sole virtue of the manure is, to correct the faulty state of porosity, in the way that has been

mentioned. The whole facts in farming and gardening, when fully and judiciously reported and properly stated, will be found to bring complete proof of this fundamental proposition. In the mean time,

128. "To return" from this illustration and extension of our subject, the doctrine of life; "from all which has been said of the culture and nature of plants, we learn, that their life is perfectly similar to that of animals; that every thing vital in nature is governed by the excitement, which the exciting powers alone produce; that no inherent property, necessary to the support of life, exists in any living system, whether animal or vegetable; that the same powers which first produce, and then support life, at length tend to death; that the living state, its continuation, decay, and dissolution, are all "equally natural; that every living system lives in its production; that, in that way, the generations of animals and vegetables are renewed, the universe remains, and remains for ever: in one word, that all things have been fabricated with one" single "instrument."

129. "THE motions of the planets, which were made to remain and continue their courses for ever,

all depend upon this one principle, That they go in a straight direction, like all projectiles; and then, by the power of gravity, which affects them all, are constantly drawn downward, and, in that way, are, upon the whole, all thrown into circular motions. But, in the smaller living bodies, with which these larger ones are filled, that is, animals and plants, the whole species of which remain, while the individuals" of each species "perish; the same cause, which produces the commencing and perfect state of their functions, occasions" also "the diminution, the decay, and at last the extinction of these. It is not, therefore, true, that some powers are naturally made for the production of life and health, others for that of diseases and death;" on the contrary, "the tendency of them all is indeed to life; but that is forced, while, afterward, their tendency to death is quite spontaneous *.

The Account of the Elementa continued.

130. THIS finishes the first volume of the Elementa Medicinæ. The second contains the practical part of the doctrine, or its application to diseases

* Elem. Med. 326. 327.

as an art. Where, first, an account is given of sthenic diseases; the other parts of the detail of which occupy from the 328th paragraph to the 453d; and their cure from the latter to the 503d, or 4th part of the work;

131. WHERE the account of asthenic diseases begins, extending to the 690th paragraph, or the 5th and last part of the whole work. In the preface, the author had given an account of the circumstances which led him to this extensive discovery; and had said, that the cause, and cure, and true nature of the gout, a disease to which he himself was liable, were the first part of discovery he made: But, it is here to be observed, that the view given, of every one of the asthenic diseases, is equally true, as that of the gout; and that the gout, instead of being a disease, sui generis, according to the pedantic language and unphilosophical ideas of systematic writers, is, in every respect, such a disease as every other occasioned by debility. All which will sufficiently appear from the explanation of symptoms, a specimen of which has been given here; and likewise from the history and cure of the gout, delivered from the 595th to the 604th paragraph, where the description of the moderate

gout, and from the 613th to the 617th, where that of the violent case of it, is given.

132. From the 650th to the 690th, intermittent fevers, or the several forms of agues, notwithstanding the seeming remarkable difference of their types, are shown to be the same cases of disease as continued fevers; the latter the same as dysentery, the confluent small-pox, and cholera, arranged among them; every one of them the same as the plague; and the whole the same, as any other disease of this form, though never esteemed febrile.

133. In the 5th and last part, or division, of the whole work, from the 690th paragraph to the end, he delivers his doctrine

Of Local Diseases,

134. The arrangement of which he delineates in the following words: "Local diseases," says he, not "in an" artificial or arbitrary "order," but in that "of nature, are divided into five parts," or heads. "The first of which comprehends" those "organic diseases, in which no affection arises in any part of the whole body, unless in the part first

injured. This affection happens in parts which have, according to the common expression, little sensibility, and are endowed with little excitability."

135. "THE second division occurs in parts," that are "very sensible, endowed with very much excitability; in which the effect of the local affection is propagated over the whole body, over the whole nervous system; and" in which "a great many symptoms, similar to those of universal disease, are produced. The third is" that "division in which a symptom of universal disease, at first," like every one of those which "depend upon increased or diminished excitement, rises to that degree, in which it is" no longer "under" the influence of "excitement, and," therefore, "affected by none of the remedies which correct the morbid state of excitement. The fourth division," is appropriated to those cases, "in which a contagion is externally applied to the body, and diffused through the whole." The diseases arranged under "the fifth head, arise in consequence of the application of poisons, and of their diffusion over all the vessels, in such sort, that they are not understood immediately," or "at first, to have any tendency either to increase or diminish excitement; but falling, differently in different cases, upon parts, to in-

jure the texture of these, and, by that injury, to produce symptoms of tumult and disorder over the rest of the system.

136. The author of the Elementa uses, in his lectures, to reduce the whole doctrine to such a short simple view as he can express in a scale. In that he draws a line, divided into eighty parts, expressing so many degrees of excitability, allotted to any given system upon the commencement of its living state. While all these are intire, the system is understood to be not yet brought into its living state. When they are all worn out, life is supposed to be come to an end. The mark at eighty, is life to be * ; that at 0 is life past †. Again, the increase of life, in proportion to the waste of excitability, which is effected by the operation of the exciting powers, to a certain limit, is expressed by decreasing numbers from eighty to forty, in the line of excitability ; and by increasing numbers from 0 to forty, in that of excitement. This, then, is marked as the point of life, in its completest state, and most perfect vigour (13.). Beyond that, the decay of life, in proportion to all further waste of the excitability, still effected by the operation of the exciting

* vita futura, † vita præterita.

powers, is expressed by continuing the decreasing numbers from forty to 0, equally with respect to excitability and excitement. This may be considered as either a scale of human life, from beginning to end, or as a scale of all the deviations from the point of health towards either of the extremes of predisposition and morbid state, till the complete dissolution of the living state in death.

137. In the 701st paragraph, he equally proves the application of his fundamental principle to local, as to universal diseases; showing, that it is the excitement (26.) which governs the whole process in both cases, and that nature has no powers independent of it. The conclusion, then, from the whole view which we have taken of this work, is, that excitement, universal or local, is the principle which governs life over all nature. The motions of the planets, though Sir Isaac Newton had not discovered them, would have continued; but, to say nothing of the other parts of this large subject, human health depends upon too nice an adjustment of exciting operation, not to require the highest skill, and most dexterous execution, to regulate it, and maintain the equal balance.

END OF VOL. FIRST.