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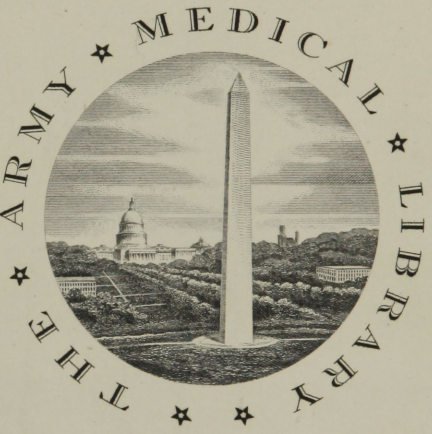


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THE

# ELEMENTS OF MEDICINE;

OR,

A TRANSLATION

OF THE

# ELEMENTA MEDICINÆ BRUNONIS.

WITH LARGE

NOTES, ILLUSTRATIONS, AND COMMENTS.

BY THE AUTHOR OF THE ORIGINAL WORK.

WITH OBSERVATIONS ON THE

CHARACTER AND WRITINGS OF THE AUTHOR,

*BY THOMAS BEDDOES, M. D.*

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A NEW EDITION.

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# PREFACE

TO THE

# *ORIGINAL WORK.*

BY the Author of this work more than twenty years were waſted in learning, teaching, and diligently ſcrutinizing every part of medicine. The firſt five paſſed away in hearing others, ſtudying what he had heard, implicitly believing it, and entering upon the poſſeſſion as a rich and valuable inheritance. *His mode of employment* the next five years, was to explain more clearly the ſeveral particulars, to refine and give them a nicer poliſh. During the next equal ſpace of time, becauſe no part of it had ſucceeded to his mind, he became cold upon the ſubject, and with many eminent men, *even* with the vulgar themſelves, to deplore the healing art as altogether uncertain and incomprehenſible. *All this time paſſed away* without *the acquiſition of* any advantage, and of that, which of *all* things is the moſt agreeable to the mind, the light of truth; and ſo great, ſo precious, a portion of the fading and ſhort-lived age of man was loſt. It was only betwixt the fifteenth and twentieth year *of his ſtudies*, that, like a traveller in an unknown country, wandering in the ſhade of night, after loſing every trace of his road, a very obſcure gleam of light, like that of the firſt break of day, dawned upon him.



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Thirteen years ago (*a*), when he was going in the thirty ſixth year of his age, he fell into his firſt fit of the gout. For many years before he had lived well, with the exception of having confined himſelf to a diet more ſparing than uſual a few months before the arrival of the diſeaſe (*b*). In about ſix weeks the diſeaſe finiſhed its courſe, and did not return till ſix years after, and not even then, but in conſequence of unuſual low living for ſeveral months (*d*). He was in the vigour of his age, and, excepting the taint of the gout, and ſome debility, brought on by his unuſual abſtinence, his habit was good. The diſeaſe, according to an old theory among phyſicians, was ſaid to depend upon plethora and exceſſive vigour; vegetable aliment was enjoined, wine was forbidden, and the careful execution of *that plan of cure* was promiſed to be rewarded with no return of the diſeaſe. A whole year paſt in a ſtrict adherence to this regimen. In the courſe of that ſpace of time, *inſtead of never having a return of the diſeaſe*, he experienced no leſs than four fits, moſt violent, moſt painful, and of a very great duration: *In ſhort*, the whole year, except fourteen days, was divided between limping and excruciating pain.

If an over-proportion of blood and exceſs of vigour was the cauſe of the diſeaſe, *according to the general theory juſt now mentioned*, it became next with him a ſubject of enquiry, how ſuch diſtreſſing ſymptoms were to be explained; his reflections were, why the diſeaſe had not made its *firſt* appearance

(*a*) Four years muſt be added now, it being that time ſince the ſecond volume of the Elementa was publiſhed, that is, ſeventeen years ſince the author's firſt fit of the gout. At this very time from hard walking in very hot weather, to inſpect the beauties and majeſty of Hampton-Court he had a ſlight attack, which gave him no ſort of trouble, never hindered him from buſineſs, and which he repelled in leſs than thirty-ſix hours.

(*b*) It was about ſix months.

(d) Between five and ſix.

pearance twelve or fifteen years before, *at a time* when there was *in reality* more blood and vigour in the ſyſtem (*e*), and why it only came on after an abatement of diet both conſiderable in degree and duration; why ſo great an interval of time, during which he had returned to his uſual full diet, had intervened betwixt the firſt fit and theſe recent ones; and, why the diſeaſe had twice, almoſt inſtantaneouſly, come on after the change of *full nouriſhing* diet into a ſparing one. At laſt the ſolution of this queſtion was made out by the interpoſition of one of greater magnitude, in the following interrogatories: What is the effect of food, drink, and ſimilar ſupports of life? They produce ſtrength. What is their effect afterwards? Always leſs and leſs. What is it towards the end of life? They are ſo far from giving any more ſtrength, that they evidently prove weakening. Nay, the very ſame powers, by which life was at firſt ſupported, at laſt put an end to it, commonly through the intervention of diſeaſe.

As diſeaſes firſt, and death after, in general happen in the way *that has been juſt now* explained, not from want, but an over-abundance of the ſupports of life, he found, however, that the cauſe was debility, and ſaw that it was not debilitating (*f*) but ſtrengthening powers that were to be thought upon as remedies. To this ſort of debility he thought proper to give the name of indirect. Such for two

(e) The blood is made from the food, and is in proportion to the quantity, quality, and completeneſs of its digeſtion. Now, before each of his laſt fits for the time ſpecified in the text, as well as during the whole courſe of the attacks of the ſecond year, his food had been almoſt ſolely vegetable, and, therefore, was not ſuited to produce enough, much leſs an exceſſive quantity, of blood, and the digeſtion was alſo more imperfect.

(f) according to the common practice of evacuation and ſtarving.

two years was the ſucceſs of his invigorating plan (*g*), that at the end of that *ſpace of time* he only underwent a very ſlight fit, which did not amount to a fourth part of any of the former ones (*h*). Now, no phyſician will deny, that the recurrence of ſuch a diſeaſe *as the gout*, which had made four attacks in one year, would have been more frequent than in that proportion the next two years, had the ſame method of cure been continued; nor will any one think the addition of two fits every year too much. The mild fit was four times leſs in degree than the more violent ones. Multiply, therefore, twelve by four, and, according to that computation, the proportion of alleviation of the diſeaſe will amount to a reduction of eight and forty to one. As, during the firſt year, he had made uſe of vegetable food alone, ſo, during theſe two years, his only food was of the land animal kind, and of the moſt nutrient quality. *Of the latter*, his choice was directed to the beſt in kind, *without any other precaution than* being ſparing in the quantity he uſed (*i*). A young gentleman, who lived with him and had laboured under a very ſevere aſthma, in conſequence of *ſubmitting to the ſame* treatment, ſuffered only one fit at the end of the *ſame* two years, inſtead of *experiencing* one every day, *as he had done upon the common treatment.*

Afterwards to remove an opinion, that had been often inſiſted on, of the gout not depending upon debility, becauſe inflammation accompanied it; little doubting that the

(*g*) which he immediately after the laſt mentioned reflections and queries carried into execution;

(*h*) the fit that happened at the thirty-ſixth year of his age, and the four ſevere ones, that attacked him about ſix years after, all within the courſe of the ſame year.

(*i*) He found moſt kinds of fiſh, whether from the ſea or freſh-water, nearly as debilitating as vegetable matter, when ſolely or chiefly relied upon for a meal.

the inflammation itſelf depended on debility, he ſubjected the queſtion to experiment. He invited ſome friends to dinner, and by the uſe of certain ſtimulants uſed in their preſence (*k*), recovered the moſt perfect uſe of that foot, with which, before dinner, he could not touch the floor for pain. By this *fact* he ſaw, that *not only the gout itſelf*, but the inflammation accompanying it, was aſthenic (*l*). And he found, afterwards, ſuch inflammations affecting the throat in the putrid, in the gangrenous ſore throat, and the joints in rheumatalgia, or that rheumatiſm which depends upon debility, and is improperly denominated chronic rheumatiſm (*m*), and ſuppoſed, if there be any truth in that ſuppoſition to attack the brain in the end of typhus, to be alſo aſthenic.

As the gout affects the alimentary canal, and eſpecially the ſtomach, and proceeds in its courſe with diſtreſſing circumſtances ſimilar to thoſe *that happen* in dyſpepſia (*n*); being deſirous to know if there was any affinity betwixt it and them, he obſerved that they, as well as it, depended on debility, and yielded to ſtimulant remedies. Nay, he afterwards found for certain, that all the ſpaſmodic, all the convulſive, diſeaſes of the ſame canal (*o*), and nearly all the diſeaſes of children, were of the ſame ſtamp.

Continuing his inveſtigation of the ſame ſpaſmodic and convulſive diſeaſes, when they occupy the organs of voluntary motion; he diſcovered that their nature was alſo

(*k*) Theſe are mentioned in Dr. Jones's Enquiry.

(*l*) that is, depending on debility.

(*m*) The word rheumatiſm, as implying a ſimilarity of the diſeaſe to the true acute rheumatiſm, ſhould be rejected, and this term, taken from Sauvage, ſubſtituted in its place.

(*n*) or indigeſtion;

(*o*) or, firſt paſſages, comprehending the paſſage to the ſtomach, that organ itſelf, and the inteſtines below it;

ſo the ſame *in kind*, but *only* greater in degree; as *they are exemplified* in the ſpaſms and pains, *that occur* in various parts of the external *ſurface* of the body, and in epilepſy (*p*), and in tetanus themſelves. And by that means he diſcerned, that a vaſt number of affections, in which, upon the ſuppoſition of their being inflammatory, no limits had been ſet to the uſe of the lancet, *inſtead of ariſing from an over-proportion of blood and exceſſive vigour, or any other ſuch cauſe*, depended upon an under-proportion *of that fluid*, and other cauſes of debility, and were to be cured, not by bleeding, nor any other evacuations (*q*), but by filling *the veſſels*, and reſtoring the ſtrength *of the whole ſyſtem*.

At firſt, for the purpoſe of removing fits of the gout, he went no farther than the uſe of wine, and other ſtrong drink of *a* ſimilar *operation*, and nouriſhing food, that is ſeaſoned meat, and kept the uſe of the more powerful remedies in reſerve. But, of late (*r*), his ſurpriſing ſucceſs in the uſe of the latter, has enabled him to find in opium, and certain other ſtimuli, the ſecret of repelling the fits of the gout as often as they returned, and at the ſame time, re-eſtabliſhing the ſound healthy ſtate, a ſecret that has hitherto been ſo much wanted and deſpaired of. This he has often effected both in himſelf and in other perſons. It is now going the third year, and near the end of it (*ſ*), ſince he has *always* been able to prevent all return of the diſeaſe.

Taught by ſimilar inſtances of actual practice, he found for certain that bleeding diſcharges, which are called hemorrhages, do not depend on plethora and vigour, but upon penury of blood and debility ariſing from any other ſource,

(*p*) or the falling ſickneſs,

(*q*) ſuch as vomiting, purging, ſweating, bliſtering, glyſtering, &c,

(*r*) that is, now, for many years paſt.

(*ſ*) now the ſeventh,

ſource, and therefore did he reject them from the number of ſthenic diſeaſes (*t*) among which they had been arranged in the firſt edition of the text book, reſerving a place for them among the aſthenic diſeaſes in the ſecond volume of that work. For he ſaw, that bleeding, various *other* evacuations, abſtinence, cold, and ſedatives, as they are called, proved hurtful; and that the ſtimulant plan of cure alone, was ſalutary. Even wine and brandy, which had been thought ſo hurtful *in thoſe diſeaſes*, he found the moſt powerful of all other remedies in removing them. Upon finding that a certain fact; he learned, that in all the diſeaſes, in which others had thought there was abundance of blood, there was a deficiency of it, and that from the defect of that and of other ſtimulants the *real* cauſe of *the diſeaſes* was debility; and ſtimulants, given in proportion to the degree of the cauſe, the *proper* remedies.

In conſequence of the light that thus beamed in from the practice, he found, that the cauſe and cure of fevers, both intermittent and continued, was the ſame as thoſe already mentioned.

Gradually led, as it were by the hand of nature, around the whole circle of aſthenic diſeaſes (*u*) he thoroughly perceived, that they all depended upon the ſame cauſe, that is, debility, that they were all to be removed by the ſame kind of remedies, to wit, ſtimulants (*x*), and that neither their cauſe nor their cure differed but in degree.

With

(*t*) Sthenic diſeaſes, as will be afterwards explained, are ſuch as depend upon an exceſſive application of the ſeveral powers that otherwiſe produce health.

(*u*) diſeaſes of debility.

(*x*) Wherever the word ſtimulant is uſed without a particular qualification of its degree, the degree is underſtood to be greater than that required in the healthy ſtate, as will afterwards more fully be explained.

With reſpect to ſthenic diſeaſes, the nature of either the cauſe or cure of which nobody had obſerved; he had long ago underſtood that inflammation in them, as well as the other ſymptoms, were not, as had been univerſally believed by Syſtematics, the cauſe, but the effect: and that the inflammation aroſe from the cauſe, i. e. the diatheſis (y), and not even from it, unleſs very violent. In fine, he experienced in his own perſon, that catarrh was not produced by cold according to the common opinion, but by heat, and the other known ſtimuli, and was removed by cold and other debilitating powers. By which diſcovery he was led to form a proper judgment of the catarrhal ſymptoms in the meaſles: In which he found, that a very great man who had improved the cure of ſthenic diſeaſes, but never attained to any knowledge of the aſthenic, had been miſled, by the alexipharmic phyſicians. And, as theſe ſymptoms are the moſt dangerous part of the diſeaſe, he was right in ſuppoſing, that the proper cure of them very much intereſted that of the whole diſeaſe. The conſequence of which was that it came out a demonſtrated fact, that the refrigerating antiphlogiſtic plan of cure was of equal ſervice in the meaſles and ſmall-pox.

In ſthenic diſeaſes he illuſtrated the cauſe, enlarged the plan of cure, enriched the knowledge of both, explained and reduced the whole to a certain principle; he diſtributed all general diſeaſes into two forms, a ſthenic and an aſthenic one (z). He demonſtrated that the former depended upon exceſs, the latter upon deficiency of exciting power; that the former were to be removed by debilitating, the latter by ſtimulant, remedies; that the hurtful powers which excited either were the remedies of the other, and the contrary;

(y) or habit.

(z) Sthenic ſignifies exceſs, aſthenic a defect, of invigorating power.

trary; and that they acted by the same operation with the powers which produce the most perfect health, differing from them only in degree. He extended the same doctrine to plants. He laid down a principle which is illustrated and confirmed by all the parts of the detail, and *itself* reflects illustration and confirmation upon every one of them. *Lastly*, he put the question, whether the medical art, hitherto conjectural, incoherent, and in the great body of it false, was not at last, reduced to a demonstrated science, which might be called the science of life (*a*).

(a) That question has been answered in the affirmative by every one who had been at due pains to understand the doctrine.

PRE-

# PREFACE

TO

# THE TRANSLATION.

A PRESSING, and very general, demand for an Engliſh tranſlation of the Elementa Medicinæ, made ſeveral years before the publication of the ſecond edition of that work, and ſucceſſively repeated with an encreaſing importunity ever ſince; a deſire of ſpreading the knowledge of a doctrine, which had exhibited ſo many indubitable proofs of its importance and utility to mankind: an ambition, not quite extinguiſhed by advancing years, domeſtic cares, and a declining ſtate of health, to get the better of the keeneſt, and moſt univerſal perſecution that ever was raiſed againſt an uſeful and extenſive diſcovery; the neceſſity for a tranſlation in the preſent decaying ſtate of the knowledge of the Latin language; the danger of the doctrine coming before the public from adventurers unequal to the taſk; and ſome other circumſtances, partly of a private, partly of a domeſtic, nature, with which it would be impertinent to trouble the reader; all theſe at laſt prevailed with the author to ſubmit, for once, to a taſk, otherwiſe not deſirable, that of tranſlating his own work. Such a taſk ſeemed more naturally calculated to lay the foundation of the commencing fame of an ingenious pupil. But, as no one of many, whoſe literature

and knowledge of the ſubject completely qualified them for the undertaking, wiſhed to ſuperſede the occaſion for his engaging in it himſelf; and as the courage of ſeveral perſons of a different deſcription keeped not peace with their affectation or intereſtedneſs; it is to be hoped the public will not be diſpleaſed to receive the work from the author himſelf. This performance is intended for the uſe of three ſets of readers; 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 comparing it with the original, and, thereby, of acquiring, renewing, or improving their knowledge of the latter; thoſe, who are only acquainted with ſuch Latin, as has prevailed in modern times; and, laſtly, thoſe who either cannot, or will not be ſubjected to the trouble of reading Latin at all, and who, ſurely, may often be better employed.

Both this and the original work, are intended not for the excluſive uſe of medical readers, but alſo for that of the public at large, it being evident, that without even the exception of the profeſſional knowledge of each individual, that of his own health is preferable to all others. And ſuch an acquiſition becomes valuable in proportion to its juſtneſs and ſolidity. The public are preſented with a work, that claims the merit of having reduced the doctrine and practice of medicine to ſcientific certainty and exactneſs. With reſpect to the form in which it is delivered, it is ſtripped of that jargon of numerous, unmeaning or miſleading terms, and all that myſtery either in ſtyle or matter, that has hitherto rendered the pretended healing art impenetrable to the moſt intelligent and diſcerning, and locked it faſt up in the ſchools. No terms are admitted but the few that neceſſity impoſed, and theſe are every where defined. The ſtyle is ſimple, and

ſuited

ſuited to the ſimplicity of the ſubject. In the language and compoſition, as far as the thoughts, which are new throughout, and that reſtraint, which is inſeparable from exactneſs of tranſlation, permit, clearneſs is every where preferred to elegance, and diffuſion to brevity.

The author, in prefixing his name to both forms of his work, has thrown the gauntlet to its numerous, but anonymous, oppoſers. They are, therefore, called upon, now or never, to diſprove it, and the judicious and candid part of mankind to judge between the parties.

THE

# OBSERVATIONS

ON THE

# CHARACTER AND WRITINGS

OF

# *JOHN BROWN*, M. D.

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At the time I undertook to ſuperintend this republication of the Brunonian Syſtem of Medicine, I was pleaſed with the proſpect of recording the life of its extraordinary author. Of the viciſſitudes he experienced I had formerly heard enough to be perſuaded that they would furniſh a narrative ſufficiently amuſing. I was, moreover, aware of circumſtances in his hiſtory, which it would be impoſſible to relate without adverting to the condition of medicine—a ſubject concerning which, unfortunately for many who have occaſion to ſeek aſſiſtance from that art, groſs miſconceptions prevail throughout ſociety.

I find myſelf, however, obliged to relinquiſh the office of biographer, ſuch as I had conceived it. Of late I have had few opportunities of perſonal inquiry; and very little of the information, I had reaſon to expect, has reached me.

Never-

Nevertheleſs, I may ſucceed in delineating the moral portrait of my hero, for his character was exceedingly open to obſervation; and in his productions the temper and underſtanding of the man are moſt faithfully exhibited.

A perſon, who was his ſchool-fellow, and afterwards his pupil at ſchool, informs me that his parents were mean, but honeſt. What was the particular occupation of his father I have not heard. Had his condition been ſuperior to that of a petty village artificer, I ſuppoſe the original deſtination of the ſon would have been higher, for this is an affair in which parents ſeldom err by exceſs of humility.

Mr. WAIT, the late reſpectable rector of Dumfries ſchool, ſuppoſes that John Brown was born in 1735 or 1736. He was a native of the pariſh of Buncle, in the county of Berwick. He himſelf, in order to aſſociate his name with that of John Duns Scotus, commemorates the place of his education rather than of his birth.—From expreſſions he ſometimes dropped in his lectures, I conclude that he was endowed with that quickneſs of ſympathy and that ſenſibility to the charms of nature, which characterize the infancy of genius. This warmth of heart, I believe, he never loſt.

I am ſorry I cannot minutely trace the ſteps, by which he advanced towards intellectual eminence. Mr. WAIT, without whoſe communi-

cations

cations mine would have been a meagre narrative, ſtates that "he early diſcovered uncommon talents. His aptitude for improvement," continues this gentleman, "induced his parents, after having fruitleſſly bound him apprentice to a weaver, to change his deſtination. He was, accordingly, ſent to the grammar-ſchool of Dunſe, where, under Mr. Cruickſhank, an able teacher, he ſtudied with great ardour and ſucceſs. Indeed, he was, at that time, regarded as a prodigy. I went the ſame road to ſchool with him; and his application, I well remember, was ſo intenſe that he was ſeldom without a book in his hand." It is a ſingular coincidence, that the two individuals, who in theſe times have been principally celebrated for their attempts to extend the knowledge of animal nature, ſhould have been both natives of Scotland, and that each ſhould have been put to a coarſe mechanical employment—John Brown to the trade of a weaver, and John Hunter (according to common fame and the report of one of his biographers) to that of a carpenter or wheelright.

By an anonymous writer, who ſeems well-informed, it is aſſerted that Brown "ſubmitted in his youth to be a reaper of corn to procure for himſelf the means of improvement. With the price of ſuch labour he put himſelf to ſchool, where his abilities and ardour attracted

" ed the notice of his maſter, and procured him " the place of aſſiſtant to the ſchool (*a*)." His revolt from the loom, according to this account, muſt have been attended with highly honourable circumſtances: and the reader will deſire fuller information concerning both his motives and conduct than has been tranſmitted to me.—From the cuſtom of the country, we may preſume that he had received much more inſtruction, before he was put apprentice, than commonly falls to the lot of boys of his condition in England.—Conſidering the energy of his mind, we cannot be ſurpriſed that a little cultivation ſhould have rendered the gloomy and uniform labour of a weaver diſtateful. But this, though true, is perhaps not the whole truth. As he was repelled on the one hand, ſo he might, on the other, have had ſome peculiar attraction towards literature. The ſuppoſition is, at leaſt, conformable to analogy; ſince in the hiſtory of eminent men, when we are fully acquainted with it, we never fail to diſcover ſome incident, which has determined each individual towards the purſuit in which he has excelled. Now I imagine Brown may have applied himſelf with ſuch unuſual aſſiduity to ſchool, learning from a perſuaſion that it would qualify him to propagate more effectually the tenets of his ſect. My conjecture is founded on

(*a*) Analytical Review for Auguſt, 1789. p. 450.

the

the following expreſſions of Mr. Wait: "he "had at this time"—the time of his entrance at Dunſe ſchool,—"ſober habits: he was exceed- "ingly religious, and ſo attached to the ſect of "*Seceders* or *Whigs*, as they are called in Scot- "land, that I really believe he would have "thought his ſalvation hazarded, if he had heard "or read the profane diſcourſes of the Scotch "eſtabliſhment. He aſpired to be the miniſter "of a purer church, of which it was expected "he would prove a choſen veſſel." Nor is this force of religious ſentiment unuſual in youthful minds. Samuel Johnſon was early ſtruck with ſuperſtitious terror: Haller had ſcarcely emerged from his infancy, when he began to preach to his father's domeſtics: and in families, where the hatred of ſect againſt ſect is cheriſhed, one may generally perceive its moſt virulent tokens in the boys. The moſt humanized of my readers may remember the time when he glowed with zeal againſt perſons who had been taught a different creed: and where reflection, ſoftening the heart into univerſal charity, has not introduced perfect indifference as to the religion or irreligion of others, the pious flame muſt be ſtill alive.

The years of Brown's grammar education appear to have been, in no common degree, well-ſpent and happy. He had vigour of body with vigour of mind, and exerted both. He himſelf, with much complacency, relates proofs of that

that ſtrength, which his appearance indicated. When a boy, he ſays he valued himſelf on being a ſtout walker. At fifteen, on a ſummer's day, he peformed a march of fifty miles between Berwick upon Tweed and Morpeth in Northumberland. Some years afterwards, he travelled on foot, reſting but one hour and making but one "hearty" meal, from four o'clock in the evening of one day till two in the evening of the day following—two-and-twenty hours—with ſo ſhort an intermiſſion! During this excurſion, he traverſed "all ſorts of ground, in roads and "out, over ſmooth and plain, mountain and "heath." We have ſeen, however, that he could make a more rational uſe of his ſtrength than merely to ſtake it againſt time and ſpace.

While he was thriving in godlineſs and knowledge, but at what preciſe period I am not informed, there occurred an incident which finally diverted him from the path he had hitherto with ſo much alacrity purſued. At a meeting of the provincial ſynod of the Merſe and Teviotdale, a party of his ſchool-fellows urged him to accompany them to the pariſh church of Dunſe.—He manifeſted reluctance, but yielded to their importunity, and remained to hear the ſermon. The ſcandal did not paſs unnoticed. He was ſummoned before the ſeſſion of the ſeceding congregation; but not chooſing either to atone by an apology for his ſin in mixing with profane worſhippers

worſhippers, or to wait for a formal ſentence of excommunication, he abdicated his principles, and profeſſed himſelf a member of the eſtabliſhment. Thus, bigotry is often but the maſque of avarice, pride, or ambition; and here though the nature of his preſent zeal was a ſecret to the zealot himſelf, we ſee it fully diſcloſed by this inſtructive anecdote. Encouragement at firſt, and afterwards flattery, from his brethren, ſeems to have formed a ſtrong connection between the peculiar articles of his faith and a ſenſe of his perſonal importance; the moment this connection was diſſolved, an alteration of ſentiment ſucceeded, not very much unlike that produced in Luther's mind by the offenſive meaſure of the pope: the opinions he had ſo warmly cheriſhed loſt all their value in his eſtimation; or rather, perhaps, became odious from the diſgrace with which they threatened him. Religious enthuſiaſm, however, ſurvived this ſacrifice to pride; and his friends ſtill recollect the vehement indignation he expreſſed on account of the dangerous tendency of Mr. HUME's ſpeculative writings; which, ſome time after this event, he found much the ſubject of converſation at Edinburgh.

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 purſuits. Nor would he have enjoyed fewer or leſs lively ſenſations of

pleaſure

pleaſure than a different courſe procured him; for to a perſon of his temperament, fame and fanaticiſm may well ſupply the place of wine.

He continued at the grammar ſchool till he had nearly attained the age of twenty. In the ſummer of 1755, his reputation, as a ſcholar, procured him the appointment of tutor in a family of ſome diſtinction in the neighbourhood of Dunſe. But here, it ſeems, he did not long continue to be an agreeable inmate. It is likely enough that he had added the ſtiffneſs of pedantry to the ſourneſs of bigotry. But I have no information concerning his deportment; and ſhould any of his diſciples think a fuller narrative due to their maſter's memory, ſome notices may, I conceive, ſtill be collected from the ſurviving members of the family.

When deprived of this employment, he repaired to the univerſity of Edinburgh. In this buſy ſeat of ſcience, after going through the uſual courſe of philoſophy, he regularly entered upon his theological ſtudies: he attended the lectures, diligently applied to the peruſal of the authors recommended by the profeſſor, and proceeded ſo far as to deliver in the public hall a diſcourſe upon a preſcribed portion of ſcripture: which is an academical exerciſe previous to ordination as a clergyman of the Scotch eſtabliſhment. At this point he ſtopped, and relinquiſhed the profeſſion of divinity altogether.—

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The ſequel will ſufficiently explain his motives for this change. Its immediate conſequence was his retreat from Edinburgh to Dunſe. Here, to gain time, as may be ſuppoſed, for arranging the plan of his future life, he engaged himſelf as uſher to the ſchool which he had lately quitted. In this capacity he officiated from Martinmas 1758 to Martinmas 1759. Mr. WAIT, who profeſſes himſelf to have benefited by the new uſher's inſtructions, mentions, as a proof of the accuracy of his memory, that after once reading over the leſſon, conſiſting of two octavo pages in Latin, he would lay aſide the book and *pre-lect* the whole over, without miſtaking a ſingle word. In the courſe of this year, one of the claſſes in the high ſchool at Edinburgh becoming vacant, Brown appeared as a candidate, but, "on a comparative trial, proved unſucceſsful."

While he remained at Dunſe, it was remarked that the ſtrictneſs of his religious principles was relaxed. He even began to be accounted licentious both in his principles and conduct.—At a later period he was open enough in his avowal of irreligion. Whatever ſcope the fact may afford to the eloquence of perſons, accuſtomed to decry Edinburgh as a ſchool where the reaſon of young men is exerciſed more than their faith, it ſeems too evident to be denied, that this revolution of opinion in our ſtudent of theology took place during his reſidence there.

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The diſtinguiſhing portion of his heriditary creed he had abjured from pique; nor can he be ſuppoſed to have had any rational conviction of the remaining articles; if rational conviction can only originate in ſincere doubt and perfect careleſſneſs in regard to the concluſion to which examination may lead. Under ſuch circumſtances it is eaſy to conceive by what a precarious tenure a ſpeculative ſtudent, placed in a ſituation where information is at hand and inquiry not only free but faſhionable, holds the benefit derived from the religious leſſons of his parents and preceptors. Some unlucky ſuggeſtion may ſtart a perplexing ſcruple, the ſerious inveſtigation of this ſcruple may raiſe a hoſt of difficulties, and deliberation terminate in unbelief.

At the time he renounced divinity, the ſcene before him muſt have directed his thoughts to the ſtudy of medicine. The only difficulty lay in the expence: but his obſervations might have ſuggeſted the means of overcoming this difficulty, independently of the encouraging circumſtance which I ſhall immediately relate. He muſt have been aware that ſtudents of phyſic are, in general, by no means ſuch proficients in claſſical acquirements as to ſpeak Latin with tolerable fluency. Hence, before the examinations for a doctor's degree, which are carried on in Latin, it is common to have recourſe to a private inſtructor, who converſes with the candi-

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date in that language. This preparation is familiarly called *grinding*, as a ſimilar proceſs at Cambridge is, I think, called *cramming*. The tranſlation of inaugural diſſertations into Latin, which the ſtudents, in moſt inſtances, compoſe for themſelves in Engliſh, is another occupation from which a good ſcholar may derive emolument at Edinburgh; the ordinary gratuity for a tranſlation being five, and for an original compoſition, where that is required, ten guineas.

Of his qualifications for theſe employments, accident, ſhortly after his unſucceſsful competition for the vacancy in the High ſchool, furniſhed him with an agreeable proof. Application being made to one of his friends to recommend a perſon to turn a theſis into Latin, Mr. Brown was mentioned. He performed the taſk in a manner that exceeded the expectations both of the friend and the candidate. When it was obſerved how much he had excelled the ordinary ſtyle of ſuch compoſition, he ſaid *he had now diſcovered his ſtrength, and was ambitious of riding in his own carriage as a phyſician.*—Towards the cloſe of 1759, therefore, he ſettled at Edinburgh in the double capacity of teacher and ſtudent.—At the opening of the ſeſſion, he addreſſed a Latin letter to each of the medical profeſſors. They were perhaps already apprized of his merit as a claſſical ſcholar; and they were all induced by his application to preſent him with a ticket of admiſſion

admiſſion to their lectures. After ſo auſpicious a beginning, he ſoon became famous as a teacher of Latin; and I believe he never afterwards refuſed to exerciſe his pen in the tranſlation of theſis. He was alſo at all times ready to furniſh an original diſſertation according to the ſyſtem his employer preferred.

I have obtained no particular information concerning the firſt four years of his medical ſtudies. His circumſtances were probably more flouriſhing than at any former period. From the beginning of the maſterly preface to his Elements it appears that he proſecuted his ſtudies with his characteriſtic ardour. In 1763, an old acquaintance found him in as high repute among his fellow-ſtudents as he had formerly been among his ſchool-fellows—a diſtinction which has never been obtained without the conjunction of ability with induſtry. He ſeems, however, during the intervals of his application, to have given into the moſt dangerous of vices; "for "the langour of his appearance ſeemed to ſhew "that he had taken liberties with a conſtitution "originally firm and vigorous."

In certain univerſities, deſtitute of foundations or yearly ſtipends for ſcholars, the ſtudents live diſperſed in ordinary dwelling-houſes: and this diſperſion, according to my obſervation, is not leſs favourable to diligence and regularity than reſidence in colleges. In mixed company the

the vicious propenſities, peculiar to any claſs of individuals, will never be countenanced; or, in the language of Dr. Adam Smith, a whole company can never ſympathize in thoſe unbecoming practices, to which a few only feel themſelves inclined. By this mutual correction, the aſſociation of perſons of different ages and ſexes becomes the great preſervative of good manners and good morals. Colleges, which, after the example of monaſteries, ſeem inſtituted on purpoſe to prevent this ſalutary variety, doubtleſs give frequent occaſions to emulation in thoſe exceſſes, to which young men are particularly prone. A nice obſerver, too, may perhaps diſcover that their monaſtic diſcipline irritates full as much as it reſtrains. At Edinburgh the keepers of lodging and boarding houſes have generally ſober habits; and the obſervance of early hours is enforced with as much effect, though with leſs form, than by the porter's lift, the fine, and *impoſition*. As far as diſcipline regards learning, every man muſt eſtimate its value by his opinion of the effect to be produced by ſetting grown gentlemen taſks. Where there have exiſted none of thoſe reſtraints, which always give more or leſs diſguſt, I have ſeen a large majority of ſtudents purſuing knowledge with as great eagerneſs as any of their equals in age where elſewhere purſuing the pleaſures of the chace; and from the ſame motive—the immediate ſatisfacti-

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on it affords. Nor do I believe that the acquiſition of knowledge can be otherwiſe than agreeable, except from the fault of the tutor or the inſtitution.—If examinations are conſidered as powerful incentives to diligence, none can equal in ſeverity thoſe which are carried on at the voluntary meetings, which it has long been the cuſtom to hold at the great ſchool of medicine in Scotland, and which have ſince been eſtabliſhed among the ſtudents at the inns of court in London, with the approbation of the moſt diſtinguiſhed profeſſors of the law.

Brown, who now ſeems to have ſupported himſelf in affluence as a ſingle man, perceived in the eſtabliſhment of a boarding-houſe for ſtudents, a reſource which would enable him to maintain a family. His reputation for various attainments was, he thought, likely to draw round him a number ſufficient to fill a large houſe. With this proſpect he married in 1765; and his ſucceſs anſwered his expectations. His houſe was ſoon filled with reſpectable boarders. But he lived too ſplendidly for his means, and "ma-
" naged ſo ill that in two or three years he became
" bankrupt. Towards the end of 1770, though
" reduced in his circumſtances, he maintained
" the independence of his character, proving
" himſelf to be, in the language of his favour-
" ite Horace,

———*Satis inter vilia fortis.*

" He ſeems to be happy in his family, and, as " far as I could ever obſerve, acquitted himſelf " affectionately as an huſband and a parent.— " He ſtill frequented the medical claſſes," (or lectures) ; " and I heard him ſay he had now " attended them ten or eleven years."

[Mr. Wait].

We have ſeen how liberally Brown was treated on his entrance upon the ſtudy of medicine. From the celebrated Cullen he early received the moſt flattering marks of attention. This ſpeculatiſt, like Boerhaave and other men of genius in the ſame ſtation, was accuſtomed to watch the fluctuating body of ſtudents with a vigilant eye, and to ſeek the acquaintance of the moſt promiſing. There was a period when he made the greateſt exertions to gain proſelytes to his opinions ; and his mind was doubtleſs alive to that pleaſure which the encouragement of merit affords to all who are capable of diſcerning it, when no dread of rivalſhip interferes with the gratification. But Brown's power over the Latin language ſerved him as a peculiar recommendation ; and his circumſtances might induce Cullen to believe that he could render this talent permanently uſeful to himſelf. Taking therefore its profeſſor " under his immediate patron- " age," he gave him employment as a private inſtructor

inſtructor in his own family, and ſpared no pains in recommending him to others. A very ſtrict and confidential intimacy enſued. The favourite pupil was at length permittad to give an evening lecture, in which he repeated, and perhaps illuſtrated, the morning lecture of the profeſſor; for which purpoſe he was intruſted with Cullen's own notes. Though Mr. Wait had not recollected the profuſe encomiums of his old ſchool-fellow, his warmth of attachment would be fully teſtified by ſubſiſting tokens; to his eldeſt ſon, for inſtance (WILLIAM CULLEN BROWN) were given both the chriſtian-name and ſirname of his patron. Other proofs of mutual confidence and eſteem might be collected: but friendſhips originating in protection are very prone to terminate in enmity, unleſs difference of rank and purſuits totally preclude competition; and it is well known that the friendſhip in queſtion was far from permanent. My materials do not furniſh diſtinct information concerning the cauſe or pretext of an alienation, which was certainly injurious to the dependant party, and perhaps detrimental to ſociety. In a communication from Dr. S—, likewiſe an old and intimate acquaintance of Brown, it is ſaid, that after the failure of his boarding-houſe, he "became impatient, and unfortunately quarrelled "with Dr. Cullen, from a ſuppoſition that the "doctor had it in his power to extricate him from

" from embarraſſment by placing him in a more " liberal and lucrative ſituation in the medical " line." A report I remember to have heard at Edinburgh coincides with intimation; but I relate it only on the authority of rumour. When the theoretical chair of medicine became vacant either on the death of Dr. Alexander Monro Drummond, or the refuſal of this promiſing young phyſician to fill it, Brown gave in his name as a candidate. 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 quoted, he acquitted himſelf in a manner far ſuperior to the other candidates, private intereſt then prevailed over the juſter pretentions 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. The magiſtrates of Edinburgh appoints profeſſors to the college, as well as maſters to the ſchool. They are reported deridingly to have inquired

inquired who this unknown and unfriended candidate was; and Cullen, on being ſhewn the name, after ſome real or affected heſitation, is ſaid to have exclaimed in the vulgar dialect of the country—*Why, ſure, this can never be our Jock!* With this ſneer the application of a man was ſet aſide, whoſe equal the patrons of the Edinburgh profeſſorſhips will probably not ſoon have an opportunity of rejecting. Though this account ſhould come near the truth, it does not follow that the municipal board deſerves much cenſure. In the execution of their truſt they are indeed bound to examine the pretentions of the competitors, or rather to caſt their eyes round whereever the Engliſh language is ſpoken, and ſelect the perſon beſt qualified for the office, even if he ſhould not enter the liſts of competition.—But they had not our means of deciding; and although he, who enjoyed ſo high a reputation among his fellows, and to whom Cullen partly committed the credit of his ſyſtem, could not well be deemed a contemptible candidate, there did not perhap exiſts reaſons to warrant them in raiſing him to the vacant chair. Public fame ſeems the ſureſt guide for ſuch electors; and the reputation, ſo long enjoyed by the Univerſity of Edinburgh, proves that it is a guide ſufficiently ſure. The danger is, leſt its patrons, relying upon the eſtabliſhed credit of the ſeminary, ſhould at any time ſuffer intrigue to interfere with

with their choice. In this caſe a ſplendid college may indeed be erected, but ſtudents from different regions of the globe will ſoon ceaſe to crowd its halls.

Whether ſuch a ſarcaſm was uttered or not, Cullen (*b*) completely eſtranged the mind of his Latin ſecretary on a ſubſequent occaſion. As I am not ſufficiently acquainted with the particulars, I cannot venture to appreciate his conduct; but the mortal affront was given, when Brown attempted to gain admiſſion into that philoſophical ſociety which publiſhed the Edinburgh Eſſays. After this tranſaction, an open rupture took place; but, however it aroſe, the account furniſhed, if not written, by Brown, evinces that both parties had before conceived a ſecret jealouſy of each other: the account is as follows: "There is a junto of men in Edinburgh "who at all times, from fear of his" (Brown's) "learning and abilities, have been "his determined enemies; and by all arts, but "good ones, have uniformly ſought his ruin, "and that of a large and innocent family de-"pending upon him. This conduct, firſt of "all, was the return they made him for great "ſervices done to them as a body, and to cer-

(*b*) Jones's Enquiry into the State of Medicine, 1781, p. 358.

tain

" tain individuals of them as friends. Their " open conduct to him was friendly; their se- " cret a plot, a dark Catalinian conspiracy.— " Accordingly, his suspicion of it was late, the " full detection later . . . . He chose to tear " off the mask of their pretended friendship. " His first step was to make application for be- " ing made a member of a certain literary soci- " ety, to which no man's petition had ever been " rejected before, or since: foreseeing that he " would be rejected. This accordingly hap- " pened. But he was previously advised by one " of themselves, as a friend, to withdraw his " letter of application. A frivolous and false " cause was assigned for the opposition. The " friendly monitor who had perceived that our " author had a new doctrine of medicine in me- " ditation, began, as it would appear, to fear " that it might terminate in the extinction of " one which he assumes as his own. He was " therefore the prime mover of the plot.—The " answer was, in a tone of firmness, that the ap- " plication would not be withdrawn . . and that " the applier" was resolved to make the pre- sent conduct of the adviser and his friends "the " criterion of his judgment of their intentions " towards him." The *body* must mean the col- lege of physicians; the *services* I presume to have been the translation of their Pharmaco- pœia into Latin, and the *plotter* unquestionably

was

Cullen. After the failure of this bold experiment upon the ſtrength of his credit, the projector had evidently no time to loſe in ſeeking ſome freſh reſource for the ſupport of his family. The following notice from Dr. S—— applies to this part of his hiſtory.

" Being eſtranged from Dr. Cullen's family, " he gradually became his greateſt enemy, and " ſhortly afterwards found out the new theory of " phyſic, which gave occaſion to his publiſhing " the *Elementa Medicinæ*, in the preface to which " work he gives an account of the accident that " led to this diſcovery. The approbation his work " met with among friends encouraged him to give " lectures upon his ſyſtem. Though his lectures " were not very numerouſly attended by the ſtu- " dents, on account of their dependence upon the " profeſſors, ſtill it was always remarked that the " cleverеſt among them were all, as they were " now called by way of nick-name, BRUNO- " NIANS. Hence aroſe that perſecution which " was carried on with ſuch rancour that it at " length obliged him to leave Edinburgh.—" This account of the origin of the Brunonian ſyſtem, as we may conclude from the preceding quotation, is not exact; and in other particulars the ſtatement, from evidence I ſhall afterwards produce, will appear overcharged. Meanwhile, if it be undeniable that, as the Cullenian hypotheſes were ſinking into diſrepute, many of the ableſt

ſtudents reſorted to the ſtandard of Brown, it ought not to be forgotten that it was joined alſo by the moſt idle and diſſolute. Their miſconduct and their maſter's imprudence in private life, together with the offenſive manner in which he ſpoke of himſelf and of others, kept the ſyſtem and the author in conſtant diſcredit.

He was ſoon in a ſtate of open hoſtility with all the medical teachers at Edinburgh; and it required nicer management than he could obſerve to keep on fair terms with other practitioners of medicine. To a diſciple, who was deſirous that he ſhould meet one of the profeſſors in conſultation, he remarked, "that he (the diſciple) "was unacquainted with the intereſted arts "of thoſe men; that all their ideas in medi-"cine, and particularly in its practical part, "were ſo diametrically oppoſite to his, that they "never could be brought to any ſort of recon-"ciliation."—Like other reformers, who have had to wreſtle with powerful oppoſition, he committed and ſuſtained injuſtice. Like them too, where his ſyſtem was concerned, he gradually loſt his ſenſe of equity. If we judge by his language the only way he had to ſhow his diſpoſition, his countryman Knox could ſcarcely have exceeded him in ferocity. Thus, having remarked that the doctrine of ſpaſm, ſuggeſted by Van Helmot, and clumſily wrought up into a ſyſtem by Hoffmann, was baniſhed by Boerhaave from

the country which gave it birth, "it found at "laſt," he adds, "amidſt a new perſecution "raiſed againſt it by the pupils of Boerhaave— "then in poſſeſſion of the medical chairs at Edin- "burgh—a friend and protector in Dr. Cullen, "who had lately become one of the number of "thoſe profeſſors.

"This brat," he proceeds, "the feeble, "half-vital, ſemi-production of phrenzy, the "ſtarveling of ſtrained ſyſtematic dullneſs, the "forlorn outcaſt of the foſtering care to which "it owed its inſect vitality, was now to be "pampered by a crude and indigeſtible nutri- "ture, collected from all the materials which "had compoſed the ſeveral fabrications of for- "mer 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 man- "kind, it was to be oſtentatiouſly obtruded up- "on the world as a new, and reſpectable doc- "trine, and held up, forſooth, as the formida- "ble rival of a ſplendid ſyſtem(c)."

Such is the torrent of metaphors that ruſhes upon his imagination when he thinks of the ſyſtem of his ancient friend and maſter. Of the

(c) Obſervations on the old Syſtems of Phyſic, 1787, p. xxxi.

paſt

paſt and preſent condition of the healing art he ſpeaks with greater coolneſs, but with equal contempt:

" The accompliſhments of the regulars have " been learning and ingenuity in a few, not di- " rected to improvement in their own profeſſi- " on: a mere ſhadow of learning, or the ſtudy " of a bad kind of it, as botany and the other " branches of natural hiſtory, 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; all for the purpoſes " of trade; ſilence, from a conſciouſneſs of in- " ability to ſpeak ſo as to gain by it; formality, " pomp, ſtatelineſs, gravity, all making a " motley group of abſurdities; invincible at- " tachment to the errors of their education; " averſion to improvement; ready upon every " ſlight occaſion to break out into rage and " tranſport; invincible bigotry and prejudice; " an over value of what learning they have any " pretenſions to; and under value of all they " are conſcious they want.

" As every country, in proportion as it is diſ- " tinguiſhed by riches, and openneſs of man- " ners, for that very reaſon, becomes the em- " porium, the ſcene of action, for high-way-men,

" men, footpads, pickpockets, ſwindlers, ſharp-
" ers, gipſies, regular practitioners in law and
" phyſic, quacks in both 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.*" (*c*)

During the heat of the contention betwen the oppoſers and defenders of the new ſyſtem, an event happened which I wiſh I could fairly paſs over in ſilence. But as it has already been the ſubject of more than one publication (*d*), there can be no pretence for the omiſſion.

Mr. Iſaacſon, a ſtudent of medicine, had been ſeized with a fever, which in its progreſs exhibited the moſt alarming ſymptoms. Dr. Duncan was firſt called in, and afterwards Dr. Monro. Dr. Robert Jones, a new graduate, and a friend to Mr. Iſaacſon, tampered with the nurſe to in-

(*c*) Obſervations, pp. lxxxi—111.

(*d*) See Jones's Enquiry, p. p. 134—150.—Letter to Dr. R. Jones, by Andrew Duncan, M. D. Cadell, 1782.—Letter from Philalethes to Andrew Dr. Duncan, without date or title, announcing a reply to the former publication, which, I believe, never appeared.

duce

duce her ſecretly to adminiſter ſtrong ſtimulant medicines: they were given, as he aſſerts, for about twenty-four hours, with ſuch effect that, on their next viſit, the phyſicians "declared the pa-"tient free of fever," though before he had all the ſymptoms of approaching death. In the afternoon, however, of the ſame day, he was ſeized with a raging delirium. Jones in his alarm applied to his preceptor; the preceptor being told that the nurſe deſired to ſee him, ordered "her "to be brought before him." When ſhe was brought before him, he complimented her by a ſolemn appeal to her underſtanding concerning the great principles of his ſyſtem. "He en-"deavoured to aſſure her that there was either "no inflamation in the caſe at all, or that it was "a very different affection from the inflamati-"on that phyſicians were acquainted with; that "inſtead of requiring bleeding and other eva-"cuant antiphlogiſtic means, it is required the "very ſame treatment which had been laſt em-"ployed; and he aſſerted with confidence that "the intermiſſion of the ſtimulant powers "through the day was the cauſe of all that had "happened; that, in ſhort, the preſent affec-"tation was a diſeaſe of debility of the whole "ſyſtem, predominant in the brain, in conſe-"quence of the great ſinking of ſtrength which "conſtantly follows a total ceſſation of the uſe "of ſuch highly ſtimulant powers. He beg-

ged

" ged therefore as the life of a fellow-creature " was at ſtake, and as ſhe had been ſo late a " witneſs of the good effects reſulting from the " method of cure, the continuance of which " he ſtill recommended that ſhe would not al- " low prejudice and impreſſions from the falſe " theories of phyſicians, among whom ſhe had " been converſant, to prevail over the high " probability of ſucceſs from this mode of cure. " He diſmiſſed her, after obtaining a promiſe " that ſhe would continue the plan of cure in " queſtion (*e*)."

Brown, for a comic figure, was not inferior to Sancho Panza; nor indeed much unlike that entertaining perſonage; and this clandeſtine conference, if it had been delineated by Cervantes, would have made a good companion for the nocturnal interview between Don Quixote and the venerable duenna, Donna Rodriguez.

The patient, thanks be to fortune, ſkill, or virtue! recovered. The Brunonians placed the cure to the credit of their practice, which they reported to have been ſucceſsful after Dr. Duncan and Dr. Monro had given the patient over; they publiſhed the caſe; they aſſerted that the cure " gave great vexation to the attendant phy- " ſicians and all their partizans;" and with the policy uſual among agreſſors, they complain-

(*e*) Jones, p. 136.

ed that

ed that Dr. Brown was ill-treated, becauſe he was blamed in "the numerous circles of phyſi-"cians friends and his enemies, while no oppor-"tunity was offered him of vindicating him-"ſelf from theſe charges."

The nurſe had threatened, if the ſecret proceedings ſhould tranſpire, to deny the performance of her part of what in the *Enquiry* is termed the *paction*. Dr. Duncan, rouſed by theſe rumours, applied for information to the nurſe and her aſſiſtant, to Mr. Iſaacſon himſelf, to the miſtreſs of the houſe where he lodged, to Mr. Edmund Goodwin, and Dr. Monro. In his letter he has publiſhed their reſpective atteſtations and depoſitions upon oath; it appears that the clandeſtine propoſals were rejected, and that only one unſucceſsful attempt was made by the negociator himſelf to adminiſter a doſe of his diffuſible ſtimulants. According to the nurſe's teſtimony, Mr. Jones on her firſt refuſal declared, if ſhe "would do as he deſired her, Mr. Iſaacſon "would give her a handſome reward when he "recovered—that the medicine he wiſhed her "to adminiſter was a bottle of double rum, of "which ſhe was to give him a glaſsful, with "fifty drops of laudanum in it, the firſt night; "and another glaſsful, with one hundred drops "of laudanum in it, the ſecond night, if the "firſt doſe ſhould have a good effect. To this "propoſal ſhe anſwered, that if ſuch medicines were

" were adminiſtered to Mr. Iſaacſon in the ſtate " in which he then was, he would not recover " to reward either her or Mr. Jones. To " which he replied, that ſhe was a damned fool " for refuſing, and that he would give her two " guineas out of his own pocket if ſhe would " do it. She ſaid, that if the beſt graduate in " Edinburgh would give her her apron full of " gold, ſhe would not." This woman depoſed moreover that one evening, while ſhe was employed apart, ſhe heard Mr. Iſaacſon ſuddenly cry out, " Good God, what is this? It is laud- " anum! I am poiſoned!" She then obſerved Mr. Jones by the bedſide with a tea-cup, containing ſome liquor, in his hand, which he ſet down on the table, requeſting the landlady to give it to Mr. Iſaacſon at a proper opportunity. The landlady aſſerts, that, late one evening, ſhe ſaw Mr. Jones drop one hundred drops of laudanum into a tea-cup, and add ſome wine, which he immediately carried into Mr. Iſaacſon's room She followed him: he endeavoured to make Mr. Iſaacſon, who was ſo far delirious that he did not appear to know Mr. Jones, ſwallow the contents; " on taſting the medicine, he ſpit " it out of his mouth; cried out that it was " laudanum, and that he was poiſoned; but to " the beſt of her obſervation, he did not ſwal- " low any of the medicine;" which, ſoon after, was thrown into the fire.

The

Dr. Duncan's indignation urged him to an immediate proſecution, which, as he was aſſured by ſome eminent advocates, would have terminated in the infliction of a ſevere puniſhment on the negociator. Dr. Monro diſcouraged by this idea for reaſons which it would be injurious not to quote; they are thus aſſigned in the letter to Dr. Jones: "He was principal-
" ly averſe to it on your account, becauſe he
" conſidered you in the light of an imprudent
" young man—he imagined that the mal-prac-
" tices might be ſufficiently proved of you, al-
" though they could not be brought home to
" Dr. Brown, whom he conſidered as the ori-
" ginal aggreſſor. He was averſe to it on ac-
" count of Dr. Brown's wife and infant chil-
" dren, who might have ſuffered more ſeverely
" by it than we could eaſily foreſee. And be-
" ſides this, he thought there was but little
" danger that Dr. Brown ſhould repeat ſuch
" practices, and ſtill leſs chance that he would
" again find any ſtudent to be his aſſiſtant in the
" manner you had been." In theſe reaſons Dr. Duncan acquieſced.

By this intrigue Dr. Brown's "character was
" very near ruined as a phyſician, and as a man
" (*Enquiry*, p. 139)." All chance of lucrative employment in his profeſſion, if he ever had any, was deſtroyed. His character among his countrymen ſuffered irretrievably; nor have I

courage without better documents to undertake his vindication. Dr. Duncan assures me, that he knows of no reply to his letter; and little satisfaction I apprehend will be found in the pleas offered by the *Enquirer* and *Philalethes*. If the means of erasing this blot remain, I hope they will be employed without delay. I shall be glad to have solicited, where I could not ascertain the truth. But "the desire of rescuing a fellow-"creature," will never be admitted by the public as a justification of the clandestine interference of any man, much less of a physician, in the treatment of the sick. Such motives may be chiefly feigned; and, when real, they may occasion endless mischief.

Things and persons are generally estimated in the gross; and this unwelcome portion of my narrative, I fear, will raise in many minds a prejudice fatal to the credit of the following system. Just and judicious readers will, however, discriminate. And if, in the case of Bacon, the baseness of the magistrate detracts not from the wisdom of the philosopher, why should the imprudent or unjustifiable means which Brown adopted to carry his principles into practice, influence our opinion concerning the justness of those principles?

He sometimes discovered the propensity, so common among the framers of systems, in a less offensive way.

A student

A ſtudent of medicine died of a low fever in ſpite of the full and avowed uſe of diffuſible ſtimulants. The body was opened; ſeveral perſons were preſent; among others the gentleman that informed me of the occurrence.—During the examination of the appearances, Brown with an air of great ſagacity remarked that the body was unuſually freſh. The diſſecting ſurgeon, whom perhaps kindred devotion to Bacchus had inſpired with tenderneſs for the Doctor, replied that, conſidering the circumſtance, he had ſcarce ſeen an inſtance where putrefaction had made ſuch little progreſs. "Then, "gentlemen," rejoined the doctor, "I appeal "to you if we may not conſider this as a clear "proof of the propriety of our practice."

Brown was elected Preſident of the Medical Society in 1776 and again in 1780. In what years he became a lecturer and graduate in medicine, I muſt leave to ſome future biographer to ſettle. Though he had attended the medical claſſes at Edinburgh ten or eleven ſeſſions [Mr. WAIT], he reſorted to St. Andrews for a Doctor's degree. His pupils, I believe, following in his train, ſtrove to give to his paſſage the air of a triumphal progreſs; he was certainly accuſtomed to relate with infinite ſatisfaction the circumſtances attending his graduation. He deſcribed the profeſſors beyond the Firth as overawed by his fame and preſence; it is likely enough

enough that they wiſhed to exchange their diploma for his money with as much expedition as poſſible.

For ſeveral years after 1780, and perhaps before, the profeſſors, the phyſicians to the infirmary, and the ſocieties were unceaſingly annoyed by the adherents of Brown; the ſtudents' debates were carried to the higheſt pitch of violence; by the Medical Society a law was paſſed, and, I think, put in force, that if any member ſhould challenge another for any thing ſaid in debate, he ſhould incur the penalty of expulſion.

The efforts of the Brunonians to expoſe thoſe practitioners, who followed a different ſyſtem, are fully exemplified in *a Letter on the management of patients in the Royal Infirmary* (*g*). This letter was occaſioned by a reſtriction annexed to the allowance of a very thin beef-ſtake to a patient in that hoſpital. It was expreſſly ordered that the ſtake ſhould not exceed one inch and five ſixteenths in length, nor ſeven eighths of an inch in breadth. This, at leaſt, is the meaſure of the pattern (*h*). The tone, aſſumed in the commentary upon this text, is that of vehement invective: on the authority,

(*g*). Edinburgh, 1782, pp. 32 Signed *Veri Amicus*

(*h*). Letter, p. 9.

as

as the writer ſays, "of one of your own ſtu-
" dents" he gives the following ſtatement of the hoſpital diet:

" *The Common Fare.*

" *Soldiers pay 2s. 4d. per week.*

" Breakfaſt—One roll of bread and a meaſure of milk
" or beer.
" Dinner—One ditto, and a choppin of weak broth.
" Supper—The ſame as breakfaſt.

*Common Patients.*

" Breakfaſt—Half a roll, and a meaſure of milk or
" beer.
" Dinner—One roll, and a choppin of weak broth.
" Supper—The ſame as breakfaſt.

" In a few particular caſes, a little meat is al-
" lowed and other neceſſaries, as may appear
" proper to the phyſicians."

He then notices the roaſt beef and porter of St. George's hoſpital in London, and ſubjoins this appeal: " Let me figure the caſe that you,
" Doctor, were plunged at once into diſeaſe
" and beggary; I put this plain queſtion, whether
" would you chooſe to be lodged and nurſed in
" St. George's hoſpial, or to be depoſited and
" ſtarved in the Royal Infirmary, under ſuch
" medical treatment as your own? Your victu-
" als," he proceeds, " are not only ſcanty but
" bad. Your porridge is ſometimes boiled
" almoſt into water-gruel; your broth is commonly

" commonly much better qualified to operate as " an emetic than to nouriſh the ſyſtem—of your " milk we need only ſay that it reſembles the " reſt which is ſold in the ſtreets of Edinburgh. " Your beer is not always tolerable even to the " palate of an alehouſe ſcullion."

None undoubtedly but members of the medical profeſſion, can have an adequate conception of the wide-waſting miſery that daily ariſes from the want of food, fuel and cloathing. Occaſionally, in diſtreſsful ſeaſons, the gnawing pains of hunger are aſſuaged by private charity; and impending death or madneſs is prevented. But no effort is made to improve the predominant condition of the poor, though it is alike deſtitute of comfort and of hope. Experience teaches how little they have to expect from thoſe POLITICAL SWINDLERS, who, under falſe pretences, acquire the power of ſporting with the wealth and blood of nations. The wretchedneſs of impriſoned criminals remained unredreſſed only becauſe it was indiſtinctly known; the wretchedneſs of the indigent is not more clearly underſtood; to expoſe it fully to the eyes of the community is a work of extenſive beneficence reſerved for ſome future HOWARD. When it is atchieved we ſhall be aſtoniſhed at the proportion of human beings that languiſh in miſery or periſh prematurely; the univerſal feelings of mankind will riſe in behalf of theſe victims

victims of penury; and their fleſh will no longer be devoured by the luxurious creatures of corruption. But our Brunonian "friend of truth," ſeems to work upon the paſſion of his reader, merely for the purpoſe of degrading a few profeſſors in the opinion of a ſet of ſtudents. If his letter contains material exaggerations, it could only ſerve to bring the cauſe of humanity into diſrepute.

In 1782 I remember to have ſpent an evening in company 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 converſation a ſecond time. Others received entertainment; and by thoſe who knew him well, he is remembered as "the beſt companion in the world." His Doric dialect had nothing prepoſſeſſing to an Engliſh ear. It was ſo broad as to leave me often uncertain of what he ſaid even in his lectures. And yet before he undertook the charge of a private tutor, he had attended an Engliſh maſter at Edinburgh, "for the purpoſe of acquiring a proper pronunciation and method of teaching that language, which he had not before had an opportunity of being improved in" [D. S.]. But the *veſtigia ruris* were not to be effaced, or elſe he had voluntarily reſumed his original notes.

Unprofitable adherence to the houſe of STUART, had been relinquiſhed at Oxford before my entrance: and Brown was the firſt perſon I ever ſaw abſurd enough to profeſs himſelf a Jacobite. He had ſeveral years ſince embraced political ſentiments thus repugnant to thoſe he once held, and which had now become almoſt univerſally extinct. In 1770, "I was ſurpriſed," ſays a gentleman who had known him long, "to find "the Doctor a warm admirer of the Scottiſh "ariſtocracy: the lairds of Clanronald, Kep-"poch, and Gengary, were the theme of his "eulogy; and prints of ſome of the chieftains "who had joined the late Pretender were pla-"ced among the divinities of his houſehold." No cauſe for ſuch a revolution of opinion is aſſigned. It did not ariſe by analogy from his hoſtility to the profeſſors, for it took place before his rupture with Dr. Cullen. This ſpecies of ſuperſtition eaſily faſtens upon the mind of the antiquary; and Brown had paid attention to the antiquities of his country. He was elected aſſiſtant Latin ſecretary to the Antiquarian Society of Edinburgh, without his ſolicitation or knowledge, and from the ſole conſideration of his literature, according to the *Enquiry*; but this aſſertion is contradicted by Dr. Duncan.—His contradiction is founded on Mr. Cummyng's declaration when he propoſed Brown, that "he "knew him to be very deſirous of obtaining "the appointment."

His converſation was full of contempt for the literature, talents, and doctrines of the medical profeſſors, one great natural philoſopher excepted. He continually criminated them as his perſecutors, and as unjuſt towards thoſe ſtudents who adopted his principles. This injuſtice is ſaid to have appeared in unuſual ſeverity on the examinations previous to *graduation*. In the *Enquiry* theſe complaints are repeated; and to ſhew how much the right of private judgment was infringed in the article of inaugural diſſertations, the following correſpondence is produced: the candidate, it ſhould be premiſed, was deſirous of quoting the ſixty-ninth, ſeventieth, and ſeventy-firſt paragraphs from the *Elementa Medicinæ* in a theſis on epilepſy.

" Sir,

" A former experience of your civility pre-
" vents my apologizing for troubling you on
" the following occaſion, viz.

" From a ſtrict peruſal and attention to my
" diſſertation, I find it neceſſary to ſolicit your
" approbation of inſerting the quotation I made
" from Dr. Brown's printed book, to which
" you formerly objected.

" Amongſt many other reaſons, I will ſubmit
" the two following to your conſideration.

" 1. That without it I am prevented from
" ſaying what I *really believe*, to the manifeſt
" injury of my diſſertation.

" 2. That I am deprived of the liberty other " candidates have always enjoyed in making " quotations from any author; a privilege too, " which was *promiſed me by Dr. Gregory.*

" As I wiſh to have my diſſertation printed " immediately, your anſwer as ſoon as conveni- " ent, would oblige

" Your humble Servant,

" J. WAINMAN."

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The anſwer was as follows:

" Sir,

" I objected to your quotation, as I have of- " ten done to quotations made by other candi- " dates, not that it contained the opinion of " *this doctor*, or of *that profeſſor*; but that it " contained ſuch jargon, as could not fail to " diſgrace the candidate, and of courſe the " univerſity, which gave ſanction to its publi- " cation. As to the liberty you ſay, 'candidates " always enjoyed of making quotations from " any author, right or wrong,' I never heard " of it before, and *am determined* to give it *no* " *quarter*, neither now nor hereafter."

(*Signed.*) ALEXANDER MONRO.

I muſt profeſs myſelf incapable of entering into theſe ſentiments: and I ſuppoſe many readers will concur with me in regarding with contempt the *patch-work* of education; whether it conſiſt of a ſpecimen of penmanſhip, retouched by

ed by the maſter for the honour of the ſchool, or an *inaugural ſpecimen*, garbled by the profeſſors for the honour of the Univerſity.

Obſerving the ſtudents of medicine frequently to ſeek initiation into the myſteries of free-maſonry, the author of the *New Doctrine* thought their youthful curioſity afforded him a chance of proſelytes. In 1784 he inſtituted a meeting of that fraternity, and entitled it, *The Lodge of the Roman Eagle*. The buſineſs was conducted in the Latin language, "which he ſpoke with "the ſame fluency and animation as he ſpoke "Scotch. I was much diverted," adds Dr. Macdonald, "by his ingenuity in turning into "Latin all the terms uſed in maſonry."

In unfolding his ſyſtem it was his practice firſt to tranſlate the text book, ſentence by ſentence; and then to expatiate upon the paſſage. For moſt of his pupils the tranſlation was a preliminary highly neceſſary; and he muſt have conſidered it as politic to combine literary with ſcientific inſtruction. The proſpect of this double advantage, might perhaps, from time to time, bring him a few additional hearers; but whatever was the abſolute or comparative merit of the theory he taught, his ſeats, I fear, were ſeldom crowded.

The introductory lecture, if my memory is accurate, was intended to impreſs upon his audience a ſenſe of the importance of the lectu-

rer's

rer's diſcoveries; its effect was rather to render him ridiculous. The dread of pain and death eaſily perſuade us that improvements in medicine are more beneficial than any other art; but when a man aſſerts the ſuperior utility of his diſcoveries to thoſe of Newton, he will with difficulty avoid the appearance of aſſerting the ſuperiority of his talents. The lecturer, in his cooler moments, would have been ſenſible that lofty claims produce only laughter or reſiſtance. But his imagination eaſily kindled; he was thrown off his guard, and he ſtrongly expreſſed what he fervently believed. He uſually proceeded to open his ſyſtem with animation; but he did not always perſevere with the ſame ſpirit. He was apt, as he advanced, to fail in punctuality of attendance. As the maſter's ardour abated, ſlackneſs ſtole upon the pupils; ſo that his courſes not very unfrequently, I believe, ſhared the fate of Butler's ſtory of the bear and fiddle. The numerous inaccuracies with which, in ſpite of the remonſtrances of his well-wiſhers, he ſuffered both editions of his *Elements* to paſs through the preſs, evince his negligence in thoſe concerns which might be ſuppoſed to lie neareſt his heart.

His voice was in general hoarſe and almoſt croaking, but "when he became animated, he "had fine cadences and pleaſing tones, which "took off all the uncouthneſs of his accent and "his manner."

One of his pupils informs me that when he found himſelf languid, he ſometimes placed a bottle of whiſky in one hand, and a phial of laudanum on the other; and that, before he began his lecture, he would take forty or fifty drops of laudanum in a glaſs of whiſky; repeating the doſe four or five times during the lecture. Between the effects of theſe ſtimulants and voluntary exertion, he ſoon waxed warm, and by degrees his imagination was exalted into phrenzy.

The ſubjoined quotation ſhews that he ſometimes endeavoured to enforce his tenets in a manner not very uſual; conceiving it lay in his power to remove certain objections deducible "from the real or imagined inflammation of the "brain at the end of Typhus," and "from "the inflammatory part of the gout," he called together a party of his confidential pupils.

"He had brought on a ſlight fit of the gout "by unuſual exerciſe in walking. This was an "opportunity for making an experiment which "was to decide the whole controverſy. A per-"ſon called for him before dinner, who was in "a way of buſineſs that led him to drink in the "morning; he expected a glaſs from him and "was gratified. The Doctor for a reaſon that "the reader muſt perceive, collected half a "dozen of his principal pupils to dinner, and "drank then till he only, in conſequence of

"what

" what he had taken before, was conſiderably " affected. He told them he had planned ſome " degree of intoxication in order to explain ma- " ny inflammations, which were univerſally un- " derſtood to be accompanied with, or to de- " pend upon, phlogiſtic diatheſis. Before the " application of the ſtimulus we ſpeak of, he " had not been able to put his inflamed foot to " the ground, but had ſupported himſelf in any " little motion that he choſe to make through " the houſe, by his ſound extremity, aſſiſted " by the uſe of his ſtaff; but before he diſmiſ- " ſed his company, he recovered the perfect " uſe of his affected leg (*k*)."

A few words will deſcribe the tenor of this unfortunate man's life, till his removal from Scotland. He was ſo reduced in his circumſtances as to be committed to priſon for debt, where his pupils attended his lectures. In the abuſe of intoxicating liquors he obſerved no moderation. In 1775 Mr. Wait found him drinking water only. His ſituation, about that time, would have rouſed almoſt any man to a ſtruggle with this deſtructive habit. His preface diſcloſes the reaſon of his ſobriety. Finding the gout return with ſeverity, after ſome perſeverance in this experiment of abſtemiouſneſs, he returned to the bottle, and never afterwards relinquiſhed it.

(*k*) Enquiry, p. 134.

His

His proſpect of maintaining himſelf by teaching medicine at Edinburgh becoming every year worſe; he at length carried into execution a deſign which he had long meditated, and to which he had received ſome encouragement. In 1786, therefore, he embarked for London, bearing in mind moſt probably, if he did not utter, Scipio's exclamation againſt the ingratitude of his country. Immediately on his arrival, an incident befel him which I have heard Mr. Murray, the bookſeller of Fleet-ſtreet, relate in proof of his ſimplicity. The peculiarity of his appearance, as he moved along—a ſhort ſquare figure with an air of dignity, in a black ſuit which heightened the ſcarlet of his cheeks and noſe—fixed the attention of ſome *gentlemen* in the ſtreet. They addreſſed him in the dialect of his country; his heart, heavy as it muſt have been from the precarioufneſs of his ſituation, and diſtance from his accuſtomed haunts, expanded at theſe agreeable ſounds. A converſation enſued, and the parties, by common conſent, adjourned to a tavern. Here the ſtranger was kindly welcomed to town; and after the glaſs had circulated for a time, ſomething was propoſed by way of ſober amuſement--a game at cards or whatever the Doctor might prefer. The Doctor had been too civilly treated to demur, but his purſe was ſcantily furniſhed, and it was neceſſary to quit his new friends in ſearch of a ſupply. Mr. Murray was the

the perſon to whom he had recourſe; the reader will not wonder that his interference ſhould have ſpoiled the adventure.

A London ſharper of another denomination afterwards tried to make advantage by the Doctor. This was an ingenuous ſpeculator in *public* medicines. He thought a compoſition of the moſt powerful ſtimulants might have a run, under the title of Dr. Brown's *exciting pill*; and for the privilege of his name offered him a ſum in hand by no means contemptible, as well as a ſhare of the contingent profits. Poor Brown, needy as he was, ſpurned at the propoſal.

It is eaſy to anticipate the remainder of my tale. Change of reſidence wrought no change of conduct. Some of his friends were diſguſted by thoſe habits which repetition had unalterably fixed. In dictating Brown's reſolutions, pride had always its ſhare: Cullen, who never mentioned his abilities without praiſe, uſed to add, that his temper rendered it difficult to deal with him. At the preſent period I have been told, and I can eaſily believe, that he was more impracticable than ever. He ſpoke in ſanguine terms of the probability that his ſyſtem would become at length triumphant; but whatever he ſaid or imagined, he effected little. He attempted to open, but never, I underſtand, completed a courſe of lectures in London. In 1787 he publiſhed, without his name, thoſe "Obſervations,"

" Obſervations," from which I have already borrowed a paſſage. He could not in reaſon expect to find a cordial welcome among his brethren in England. Public opinion can alone awe the body of eſtabliſhed phyſicians in any country into toleration of innovators; and knowledge on this ſubject was too little diffuſed for public opinion to operate with effect in his favour. Theſe " Obſervations" were therefore properly intended for general peruſal; but the author was extremely defective in the talent of rendering ſcience popular. Nor was he patient or rich enough to wait for the beneficial conſequences that might have reſulted, if he could have rendered his doctrine a ſubject of univerſal curioſity.

He perſiſted in his old irregularities for ſome time, meditating great deſigns, with expectations not leſs ardent than if the ſpring of life, in all its bloom of hope, had been opening before him. At length, on the ſeventh of October, 1788, when he was about fifty-two years of age, he was ſeized with a fatal fit of apoplexy. He died, if I am not miſinformed, in the night, having ſwallowed as he went to bed a very large doſe of laudanum; a ſpecies of dram to which he had, indeed, been long addicted. He was at this time about to begin a courſe of lectures. I am aſſured by one who had ſeen him the evening preceding his death,

that his appearance did not betray any tokens of diſtreſs; nor was it apparent that his conſtitution had run much into decay ſince his departure from Scotland.

When Cullen, two years afterwads, died in embarraſſed circumſtances, his friends obtained public aid for his family. Brown's deſtitute widow and children were ſaved from diſtreſs by private benificence; but it cannot be expected that the contributions, raiſed for that purpoſe, ſhould have proved ſufficient for their permanent ſupport.

Dr. Brown's family has been already mentioned as numerous: he left two ſons and four daughters. His eldeſt ſon is now ſtudying medicine at Edinburgh, where he has experienced great liberality from the profeſſors and the ſocietis of ſtudents. His talents will, I hope, meet with a more adequate compenſation than thoſe of his unfortunate father.

In the recital of this ſcanty information, my own ſentiments have fluctuated ſo much that I am doubtful whether I have preſerved impartiality, or ſhall appear conſiſtent in the diſtribution of pity, ridicule, cenſure, and applauſe, among the incidents of Brown's life. Yet the peculiarities by which he was diſtinguiſhed, appear obvious enough. He was endowed with uncommon ſuſceptibility to impreſſions. By whatever object they were touched, the ſprings of his

of his nature bent deeply inwards; but they immediately rebounded with equal energy. This quality is the foundation of all moral and intellectual ſuperiority; but, unhappily, the ſtrong feelings and bold reſolutions of Brown were not improved into ſteady principles. He never ſeems to have taken pains to form a ſyſtem of conduct advantageous to himſelf, and juſt towards others. As ſoon as he loſt the controul of ſuperſtition, his high ſpirits hurried him into the moſt intemperate exceſſes; and, at a later period, his actions can only be regarded as the plunges of deſpair. The tenderneſs with which his cordiality inſpired thoſe who knew him formerly, I could demonſtrate by a variety of teſtimonies. By a writer already quoted, he is ſtyled "a man of infinite good-"neſs of heart (*n*)." Dr. S——— concludes his communication with theſe expreſſions: "He was poſſeſſed of a great mind that "ſupported him in the midſt of all his diſtreſſes. "He deſpiſed riches; deteſted every thing baſe, "and poſſeſſed ſuch openneſs of heart as to be "liable to be taken in by every knave." He undoubtedly committed an error, which has often been productive of fatal conſequences to perſons accuſtomed to ſcientific ſpeculation.—He gave man kind credit for a more ſincere re-

(*n*) Analyt. Rev. See above.

gard

gard for truth, and an higher ſenſe of its importance, than they have entertained in any age.—He imagined, perhaps, that Plato's ſally concerning Virtue was applicable to Science. He therefore utterly neglected thoſe arts by which the imagination is captivated; and truſting to their intrinſic value, bluntly chalenged acceptance for his opinions.

Cicero and Bacon were his favourite authors; in his elaborate compoſitions he imitated the Roman orator with affectation; and it muſt be confeſſed, that by taking advantage of the penury and want of preciſion, which Lucretius and Cicero ſo loudly lament, he has ſucceeded to his utmoſt wiſhes in conſtructing a ſtyle of claſſical obſcurity. He could, however, write otherwiſe, and unite at will perſpicuity with purity. This may be aſcertained by examining the diſſertations, which he furniſhed, at leaſt, with their Latin garb. Several are preſerved in a well-known collection (*o*); but for an obvious reaſon I muſt leave it to the curious reader to diſcover, by private enquiry, which were compoſed by Brown.

Bacon he admired not only for his maſterly ſurvey of univerſal ſcience, but likewiſe, as Dr. Macdonnel acutely conjectures, becauſe that great author appeared to countenance him in the

(*o*) See Theſaurus Medicus, iii. and iv. Edinburgh, 1785.

diſreſpect

diſreſpect with which he treated his predeceſſors. He had little medical erudition. At firſt he probably read more than ordinary ſtudents; but after he had conſtructed his theory, he ſeldom peruſed or conſulted any medical author. He was impatient when any difficulty was ſtarted which he did not ſee clearly how to ſolve (*p*): nor would he ever acknowledge any exception to his principles. An argument againſt his fundamental propoſitions, which I had mentioned in converſation to a favourite pupil, was communicated one evening, to the maſter in my preſence, a little before the hour of lecture.—He ſaid little in reply at the moment. But it appeared that the objection worked upon his mind; in the courſe of his lecture he waxed unexpectedly warm; and at laſt, addreſſed himſelf particularly to the pupil who had ſtated the objection. He did not attempt to expoſe its futility, as might eaſily have been done; but, exhorting him to ſuffer no inſinuations to divert his attention from the *doctrine*, he proceeded to deliver againſt the exerciſe of the underſtanding, a diſſuaſive that might have done credit to the pulpit.

The Obſervations, and the Elements of Medicine, are all the productions which he avowed. But there prevailed a ſuſpicion, and it has

(*p*) Dr. Macdonnel.

been

been publicly mentioned (*q*), that he was the author of the Enquiry, publiſhed in the name of Dr. Jones. By his moſt confidential diſciples I have been aſſured, that they never heard him drop an hint of having aſſiſted in its compoſition. In manner it certainly bears a ſtrong reſemblance to the "Obſervations;" there are, beſides, as the reader may obſerve in my quotations, forms of expreſſion peculiar to Scotland; but the profeſſed author may be ſaid to have derived the one from his preceptor, and the other from the country in which he reſided. This book, we are told, was compoſed as ſpeedily as it could have been tranſcribed by an ordinary hand. It is unqueſtionably ill arranged, tedious, uncouth, arrogant, and illiberal; yet it contains paſſages preſenting juſter views of medicine than I remember to have elſewhere ſeen, and conceived in the genuine ſpirit of Bacon.

He deſigned a Latin elementary treaties of morality on philoſophical principles (*r*)—*Elementa Morum*; but he never, perhaps, committed any portion of ſuch a work to paper. We may fairly preſume that it would have been original, luminous, and profound.—And ſince no man, not deeply ſkilled in ſuch knowledge, as phy-

(*q*) Dr. Duncan's Letter, p. 25.
(*r*) Dr. Macdonnel.

ever

ficians 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.

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Having received a little additional information, too late for inſertion in the proper place, I annex it here. To Mr. Wait's account of his quickneſs in maſtering languages; it may be added, "that Brown diſplayed a genius for literature far ſuperior to any ſcholar that had "ever been under the care of Mr. Cruikſhanks. "In the courſe of two years, he could read all "the Latin claſſics with the utmoſt facility; in "the Greek language, he made the ſame remarkable proficiency." This intelligence comes from Dr. S——, who likewiſe mentions the aſtoniſhing power of his memory, and adds, that he firſt went to Dunſe ſchool in 1751, when he muſt have been above fourteen years of age. The fact is remarkable, as he does not appear to have been before inſtructed in the rudiments of the learned languages. The ſame gentleman confirms my account of the motives of his ſtrenuous application. "The leading members of "the ſeceding congregation at Dunſe, to which "his parents belonged, were ſtruck with the "proofs of capacity he manifeſted at the coun-"try-ſchool, where he learned reading and "writing; they encouraged him to go to the "grammar-

" grammar-ſchool, that he might be afterwards " educated as one of their miniſters, expect- " ing he would greatly contribute to the promo- " tion of their particular intereſt,"———

I have pleaſure in recording that, by advice of the friend who brought him the firſt theſis to tranſlate, he addreſſed a Latin letter, to the late excellent Alexander Monro, then profeſſor of anatomy at Edinburgh, requeſting gratuitous admiſſion to his lectures. Having ſucceeded in this inſtance, he applied in the ſame manner to the other medical profeſſors.———

His intercourſe with Cullen forms the moſt curious part of Brown's hiſtory. The following memorandum includes his reaſons for diſſatiſfaction with his patron, as they were aſſigned ſoon after the ſeparation to a perſon how acknowledged his talents, without being a partizan in his diſputes, or a follower of his doctrines. " They lived upon the ſtricteſt intimacy for ma- " ny years; and Brown could call for a bottle " of wine in Cullen's houſe, when he pleaſed. " During all that time no man in Brown's com- " pany could contradict any of Cullen's opini- " ons without danger of offending him. After " the quarrel, he ſaid Cullen had promiſed him " his intereſt for the firſt vacant chair in the " college; but when the late Dr. Gregory died, " inſtead of uſing his intereſt in Brown's fa- " vour, he did the reverſe—that, to try him further

" further, Brown petitioned for admiſſion in-
" to the philoſophical ſociety, but was re-
" jected through Cullen's means." Here only one ſide of the queſtion is ſhewn: and the repreſentation comes from a man of impetuous paſſions, who, to obtain our full confidence, ſhould either have been leſs violent in defending or in oppoſing Cullen.—Complaints of diſappointed expectations are ſtill more common in the intercourſe of patronage, than of faithleſs vows in that of gallantry: this happens, I ſuppoſe, becauſe offers and promiſes are extracted from *harmleſs* expreſſions, by which perſons who amuſe themſelves with gallantry and patronage, do not *intend* to convey any particular meaning.

# OF Dr. BROWN's PRIVATE PRACTICE.

TO ſome readers it may appear ſtrange that I ſhould have finiſhed the life of a phyſician, who cauſed ſo great an uproar in the medical world, without more particular notice of his private practice. I enquired with ſome ſolicitude, but in vain, whether during the long period of his ſtudies he was peculiarly obſervant of diſeaſes. One circumſtance I have lately learned; and it will ſurpriſe thoſe who believe him to have inculcated contempt for the ſciences auxiliary to medicine: my authority however is unqueſtionable. The ſeaſon before he became an independent lecturer, he was induſtrious to acquire more minute anatomical knowledge than he had gained by attendance on the public lectures; and for ſome time attended a private inſtructor at five o'clock in the morning, and continued with him for two hours; botanical information was added, on theſe occaſions, to the anatomical. He had formerly been adviſed by Cullen to qualify himſelf for giving demonſtrations in anotomy. Nothing could be imagined ſo entirely repugnant to his turn of mind; no wonder, therefore, the advice was not followed.

Brown ſomewhere condeſcends to ſpeak of his own "very large practice;" but this is a compliment which every medical writer apparently thinks that uſage juſtifies him in paying to himſelf.

I remember to have heard of an houſe at Edinburgh, which the Brunonians opened for the reception of poor patients; probably they were not able to procure funds for its permanent ſupport. The founder of the ſect was, I believe, ſeldom conſulted but in caſes given up as hopeleſs; and he was then apt to ſpeak with imprudent confidence. According to Dr. S——, "his wiſh to ride in his carriage would, in all "probability, have been gratified, had it not "been prevented by his ſudden death afterwards "in London." If this ſurmiſe is founded upon any real tokens of approaching proſperity, I could wiſh they had been aſſigned. For Brown went to London with no favourable omens; every extraneous circumſtance was againſt him, and what elſe could avail him in a place, where it is well known to men of obſervation, that ſucceſs has ſeldom been in proportion to merit? Dr. JOHNSON, who muſt have witneſſed phyſician after phyſician carrying away the prize of public favour from competitors, far ſuperior in particular ſkill and general abilities, declares that "in a great city medical reputation is, for the "moſt part, totally caſual." "By an acute "obſerver,"

" observer," he subjoins, " who had looked " on the transactions of the medical world for " half a century, a very curious book might " be written on the *fortune of physicians.*"— The idea appears to me so happy that I shall venture to prosecute it through a few pages.

Such a book, with a due extention of the plan, would afford opportunities for displaying professional science, to wit, knowledge of the world, and benevolence. For if it be true that many have been received in the name of the goddess of health, who were, in reality, not the least active among the ministers of death, the mistake deserves to be cleared up; and a proper explanation would be better than " cu- " rious;" it would not only teach how some members of *the faculty* have contrived to retain a privilege which the priesthood has lost, but furnish I know not how much useful instruction besides.

## OF REPUTATION IN PHYSIC.

On the most superficial enquiry, it would be manifest that *this* man prospered because he had been of a certain university; *another*, merely because he belonged to a particular sect; a *third*, because he happened to be in the way of procuring a recommendation to some leader in politics or fashion. A great number would be seen to have succeeded in life for the same reason precisely

preciſely that Falſtaff ſucceeds upon the ſtage. Few analyſe their ſenſations, and the firſt impreſſion made by theſe adventurers was pleaſing. As far as the dramatic perſonage is concerned, the reaſon is unqueſtionable, but it by no means applies ſo happily to the other caſe. The qualities producing the happy impreſſion, have, in truth, frequently borne no nearer a relation to profeſſional merit, than Falſtaff's pleaſantry to ſolid worth of character; in a variety of inſtances, they have been no other than ſymmetry of features or ſoftneſs of addreſs.

It is calamitous enough for individuals, labouring under diſeaſe, to fall into bad or indifferent hands; but when the caprice of fortune elevates her worthleſs favourites to the firſt eminence in ſo important a profeſſion as medicine, a more extenſive injury is done to ſociety than we ſhould at firſt imagine. To calculate its amount requires a great deal of thought. Beſide the miſchief they perpetrate with their own hands, theſe intruders occupy the ſtation due (if the general welfare is to ſettle the precedence), to phyſicians of enlarged views, who would make a beneficial uſe of its advantages, and impel the defective art on towards perfection. Is an example neceſſary to enable you to conceive what might be effected by the powerful influence of medical men, enjoying the confidence of the great? A number may be given,

but

but one will ſuffice: and it is the better for its ſimplicity. We have no obſervations from which we can certainly deduce the difference, in point of efficacy, between certain warm medicinal ſprings and common water, heated to the ſame temperature. The problem, merely for its curioſity, deſerves to be ſolved; and it happens to be peculiarly intereſting to that order, from which doctors in vogue receive their ampleſt gratuities. They have ſhewn little anxiety for the removal of this difficulty, either for their own direction in practice, or by way of return to their benefactors.

They will too often, I fear, be found to have been worſe than inattentive to the advancement of their art; and to have diſcouraged uſeful inveſtigations by inſinuation, if not by direct oppoſition. Pride and avarice will always combine to render a proſperous adventurer in medicine, whoſe views are narrow, jealous of improvements and hoſtile to improvers. The internal monitor whiſpers that it was not by knowledge he roſe, but by knowledge he may ſink. It is therefore the conſtant expedient of dullneſs to perſuade the world that men of genius are deficient in judgement; though it be certain that the very perſons who have been moſt remarkable for deviſing new means of relieving diſtreſs and removing uncertainty, have alſo been the moſt acute in diſcerning the real relations of things.

things. Still, however, *the old way* is judged *the ſafeſt*, and crafty mediocrity treaſures up the ſpoils of the credulous and the rich.

It is poſſible to meaſure the number of degrees by which medicine is more imperfect than it would have been if the public was not ſo liable to miſplace its confidence, and had not actually ſo often miſplaced it. For this purpoſe, our enquirer, I apprehend, will find in the progreſs of a kindred art, a ſtandard of eaſy application. Let it be ſuppoſed that a ſucceſſion of men of ſpecious carriage and mean talents had flouriſhed for a century paſt, in the place of our great improvers of ſurgery. Then good part of their diſcoveries would have been loſt, for we cannot believe that, under diſcouragement, and with inferior opportunities, Pott, Hunter, and their predeceſſors could have rendered equal ſervices to humanity. Of theſe ſervices a conciſe but clear account ſhould be given; the ſame ſcrutiny ſhould then be extended to the labours of the phyſicians that have flouriſhed during the ſame period; it may begin with Radcliffe, and be carried down to our own times. Thus ordinary readers would be put in a condition to judge how far it betrays a ſpirit of wanton diſparagement, to affirm that a phyſician in a great city, "is the mere plaything of fortune, they that "employ him, not knowing his excellence,

"nor

nor they that reject him, his deficience (*s*);" theſe aſſertions, if they be well-founded, inevitably lead to a concluſion more important than ſatisfactory, for however we may be ſtartled, we muſt infer *that the greateſt repute in medicine affords ſcarce the ſlighteſt preſumption of ſuperior ſkilfulneſs.*

Of the fortunate ſons of Eſculapius, ſeveral have been wary enough not to expoſe themſelves to criticiſm; in moſt caſes, however, we have memorials ſufficient to guide our judgement; ſome have left written documents of their powers; here the proportion between reputation and ability can be eſtimated with great preciſion.

Conſidering that his enquiry can be uſeful only by inculcating ſalutary circumſpection, our author ſhould not be deterred by the firſt ſentiments of repugnance which *the attack* would excite in many minds, nor by the reſpect due to his virtues, from examining the title of the celebrated Fothergill to preſent confidence, or poſthumous reputation. He ſhould inſiſt the more on this deciſive example, becauſe Fothergill really appears to have done his beſt towards improving the art that enriched him; and becauſe it would be difficult to prove that any among his equals in popularity, have performed, or could have performed greater things. How far

(*s*) Johnſon's Life Akenſide.

he excelled

he excelled in ſagacity of diſcrimination, or fertility of reſources, would be eaſily ſhewn by an impartial ſurvey of his works; and little doubt would remain whether his patients would have ſuſtained much diſadvantage, or our preſent ſtock of information much diminution, if any well-meaning man of plain ſenſe had moved in his ſphere. If the ſmalleſt ſcruple ſhould be left, there exiſts a piece of evidence which it may be the more difficult to reſiſt, as it comes from the mouth of the worthy Doctor himſelf. Fothergill and others, have been heard by Dr. G. Fordyce, "to ſtate in a ſerious harrangue, "their inſpiration, not only in the knowledge of "diſeaſes without enquiring into their external "appearances, but in making preſcriptions to "flow from their pen, without any previous "compoſition in their mind; not in compli-"ance with the prejudices of their patients, but "from their own belief (*t*)."

From ſuch a comparative eſtimate, the chief reaſon why ſurgery has ſo far diſtanced medicine, would appear. Should it be ſaid that ſurgery muſt, from its nature, have outſtripped medicine, as mechanical philoſophy neceſſarily attained ſome degree of perfection before chemiſtry, the juſtneſs of the obſervation may be acknowledged. But after a liberal allowance for

(*t*) Fordyce on Fever, p. 160.

this cauſe of inequality, the author of the Inveſtigation would find a far more powerful cauſe neceſſary to account for the whole effect.—He might corroborate his inference by an enumeration of the improvements actually made in medicine; from which it would be evident that they have been principally owing to perſons enjoying moderate reputation in the country.

Objections will occur to haſty reaſoners; and theſe the author muſt take care to obviate. "A "phyſician of great eminence may be too buſy "to write; he may, alſo, be highly uſeful in "his generation without leaving any traces of "his ſkill behind." He could not, however, well be more buſy than ſeveral of the moſt eminent ſurgeons, who have found time to write extenſive treatiſes; moreover, his practice and converſation, without the aid of his pen, would ſo widely ſpread the knowledge of his diſcoveries, that the patients of every village apothecary would have cauſe to bleſs the London luminary of phyſic.

The anſwer to theſe objections affords a criterion, by which we ſhall be as little liable to be deceived, as when we judge of the value of a fruit-tree by its produce. *If a phyſician has attained to great eminence without having made ſome aſſignable improvement in phyſic, if he has neither executed nor promoted any deſigns, tending to this end, he may be ſafely ſet down as the narrow-minded creature*

*creature of artifice, or the ſpoiled child of chance.*— In an age where every incident is brought within reach of every eye, we may with perfect ſafety apply to perſonages ſo conſpicuous the maxim of the ſchoolmen, that "what does not appear, is "to be reputed not to exiſt."

The work in queſtion doubtleſs requires courage as well as other valuable qualities; yet the author, if I do not miſtake, would incur leſs danger at preſent than at any preceding period. The profeſſors of ſurreptitious or accidental fame, would infallibly join in crying or hunting him down, and by ſigns of alarm bear witneſs to the merit of the production. But I have reaſon to believe that the combination would fail in bringing it into total diſcredit. Some progreſs has been made in arranging the peculiar properties of animated nature, and in recommending to mankind the knowledge of themſelves. A ſeries of propoſitions, expreſſed in intelligible language, and capable of compariſon with appearances, has been formed. Theſe propoſitions, which occur principally in the writings of Dr. Brown, Mr. Hunter, and the author of Zoonomia, may be regarded as the foundation of a new ſcience, not leſs generally intereſting than any of the preceding: for it would be difficult to aſſign a reaſon why the celeſtial motions, the working of machines, or chemical phænomena, ſhould be objects of liberal curioſity; to the

to the excluſion of the effects produced by the principle of life. One reaſon, of which the force will not be eaſily eluded, may be aſſigned in behalf of the latter ſtudy. It directly tends to promote the well-being, and prolong the exiſtence, of the ſtudent. The time therefore cannot be far diſtant, when inſtruction concerning the cauſes of health and diſeaſe will be acknowledged to form a neceſſary part of all rational education; and the nearer we approach to this period, with leſs hazard may the analyſis propoſed by Johnſon, with the plan ſo enlarged, and the purpoſe ſo ennobled, be executed.

There is, ſtill, an addition which, in my opinion, would contribute ſomewhat to preciſion, and ſomewhat to ſecure the ſick againſt the danger of medical ſlaughter. This appendix I ſhould call Jatrologia, a denomination from which the learned reader may infer, that I have in view ſome ſuch application of the Linnæan method to phyſicians, as Baron Born has exemplified in his claſſification of Monks.

If thoſe aſſemblages of human animals, that conſtitute political ſocieties, were arranged according to the nature of their occupations, one claſs would conſiſt of individuals, depending for their ſupport upon opinion. This claſs, being provided with the name of Greek origin, might be eaſily ſplit into orders; of theſe orders the medical tribe would make one. We have the order broken

der broken into genera ready to our hands: of the diſtribution into ſpecies (which is more difficult) a ſpecimen is ſubjoined.—Our writer's preſent concern is only with the genus—*Doctor of Phyſic.* This genus we may ſubdivide into ſections, or groups; as Linnæus ſometimes manages with genera, comprehending a number of ſpecies.

## SECT. I.

DOCTORS *as deſirous, at leaſt, of doing good and extending knowledge, as of amaſſing wealth.*

1. *The philanthropic* DOCTOR, D. equally ſenſible of the importance and imperfection of medicine; compares the phænomena of health and diſeaſe with unwearied aſſiduity, that he may form a juſt arrangement of the actions of life, perſuaded that this is the only ſure guide in medical practice; cautiouſly tries new remedies, and abides by the beſt; beats the coverts of ſcience, that he may himſelf ſtart ſomething uſeful; is humane in his conduct, not ſo much from ſudden impulſes of the paſſion of pity, as from a ſettled conviction of the miſery prevailing among mankind.

Var. α. *The* ſhy *philanth. D.* ſick with diſguſt at the manœuvres of his intriguing brethren, runs into the oppoſite extreme, and keeps too cloſely retired from public notice.

Var. β. *The* renegado *phil. D.* poſſeſſing activity

tivity of mind and integrity of principles; relinquiſhes the practice of phyſic, partly for the ſame reaſon as Var. α. and partly from diſſatisfaction with its helpleſs ſtate; applies his talents to literature or ſcience.

*Obſ.* 1. Several of the greateſt acceſſions to human knowledge are owing to this ſecond variety.

*Obſ.* 2. A careful examination and compariſon of theſe two varieties, with ſome of the ſucceeding ſpecies, will elucidate the nature of thoſe phyſicians, that have uſually had great *local* vogue.

More frequent than formerly—not apt to flouriſh in great cities--otherwiſe not confined to any particular ſituation. As ſelf-love grows more enlightened, the more common will this ſp. of D. become, till it ſupplants all the others: man being an animal leſs liable to be duped as his ignorance decreaſes.

## SECT. II.

D. *Mere collectors of fees, regardleſs of medical ſcience, given to artifice and intrigue, each ſpecies after its own manner.*

3. *The bullying* DOCTOR, D.

——Inexorabilis, acer

looks big, ſtruts, ſwaggers, ſwears.

*Obſ.* Surgeons, in our times, more frequently bear theſe marks. According to a moſt acute contemporary author, the famous RADCLIFFE was a compleat ſpecimen of the bullying

D. " With ſmall ſkill in phyſic, and hardly any " learning, he got into practice by vile arts.— " He would neglect a nobleman that gave exor- " bitant fees;" and to heighten the inſult by contraſt " at the ſame time carefully attend a " ſervant or mean perſon for nothing—he was " ſurly and moroſe; treated his patients like " dogs—extended his inſolence even to the " Royal Family--ſcorned to conſult with his bet- " ters on what emergency ſoever; looked down " with contempt on the moſt deſerving of his " profeſſion, and never would confer with any " phyſician who would not pay homage to his " ſuperior genius; creep to his humour, and " never approach him but with the ſlaviſh obſe- " quiouſneſs of a court flatterer."

3. *The bachanalian* DOCTOR. D. given to ſot- tiſhneſs, if not drunkenneſs—generally ſome- what of the Bully.

4. *The ſolemn* DOCTOR. D. with garb, voice, geſtures, and equipage, contrived to overawe weak imaginations, and hide the futility of his art.

*Obſ.* 1. D. of this remarkable ſpecies firſt practiſed phyſic with pomp: they invented or borrowed from the other profeſſions thoſe bar- barous habiliments, of which ridicule has but lately ſtripped phyſicians. In times, when an huge wig, or a flowing gown, could more effec-

tually

tually command reſpect than ſound morality, ſubſtantial juſtice, or uſeful ſkill, the ſtratagem ſucceeded to admiration.

*Obſ.* 2. D. of this ſpecies, when a pretext offers, ſpeaks oſtentatiouſly of their experience —never ſuſpecting any of their hearers may know that there are underſtandings which multiplicity of appearances ſerves but to confound.

5. *The club-hunting* DOCTOR. D. frequenting the crowded haunts of men; puſhing himſelf forward, ſaluting all he knows, and all who will know him; talking much and loud.

*Obſ.* In England, D. of this ſpecies have of late been frequently ſeen in paroxyſms of frantic loyalty, and of *civiſme* in France.

6. *The burr* DOCTOR. D. faſtening himſelf upon you as tenaciouſly as the heads of the noiſome weed *(centaurea calcitrapa)*, from which the trivial name of the ſp. is taken, fix upon your cloaths.

*Obſ.* Nothing in art, but the juggler's addreſs in making you take what card he pleaſes out of a pack, equals the dexterity with which D. of this ſp. force themſelves on patients.

7. *The wheedling* DOCTOR. D. with an everlaſting ſmirk upon his countenance—frequent at the polite end of large cities, and at places of faſhionable reſort.

Var. α. *The* Adonis *wheedling D.* D. with an handſome face, joined to the wily addreſs, characteriſtic

racteriſtic of the ſp.—flouriſhes at watering places; ſometimes joins to his profeſſion the trade of a fortune-hunter; and if he ſucceeds, "gives phyſic to the dogs."

*Obſ.* 1. D. of this ſp. when moſt moderate, preſcribe for every rich patient two draughts a day, and one night draught, beſides pills and powders. Hence needleſſly to ſwallow nauſeous drenches may be numbered among the curſes of wealth.

*Obſ.* 2. The *Adonis* D. has ſooner or later a patient of note, ill of a fever or ſome diſeaſe, that uſually terminates favourably; in caſe of recovery the female buſy-bodies of the place, exert their ſpirit of cabal in behalf of the wonder-working youth, and his fortune is made.

8. *The caſe-coining* DOCTOR. D. publiſhing forged or falſified caſes.

*Obſ.* "A very fertile ſource of falſe facts has "been opened for ſome time paſt. This is, in "ſome young phyſicians, the vanity of being "the authors of obſervations which are often too "haſtily made, *and ſometimes, perhaps, very entirely dreſſed in the cloſet.* We dare not at preſent be more particular; but the next age "will diſcern many inſtances of perhaps the direct falſhoods, and certainly the many miſtakes in fact, produced in the preſent age, "concerning the virtues and powers of medicines." CULLEN. Mater. Med. I. 153.

A-kin to this flagitious abuſe is the practice of purchaſing falſe atteſtations, on oath, for advertiſements; and what is ſtill worſe in effect, though not in intention; a cuſtom beginning to prevail among perſons of diſtinction—who cannot be ſuppoſed capable of diſcriminating diſeaſes, or deciding on the efficacy of drugs—but who, nevertheleſs, permit Quacks to uſe their names in teſtimony of cures, which they *ſuppoſe* themſelves to have witneſſed.

9. *The good-ſort-of-man* DOCTOR. D. a good ſort of man, armed, by ſome miſtake with a diploma.

Var. α. *The* goſſiping *good-ſort-of-man* D. fetches and carries ſcandal.

*Obſ.* Varieties numerous as the hues of the camæleon.

10. *The Sectarian* DOCTOR. D. dwelling among his own people at firſt; and by them often puſhed on to ſpread devaſtation among the reſt of mankind.

*Obſ.* Varieties manifold; each diſtinguiſhable by the livery of its ſect—one is too curious to be omitted.

Var. α. The inſpired *Sect.* DOCTOR. D. believing himſelf to be inſpired with the knowledge of diſeaſes and remedies.

In civilized countries not much more frequent than witches. Among rude tribes, as among the Tartar hordes, a kindred variety is univerſally

ſally found. See Gmelin's Travels. But theſe ſeem rather to pretend to inſpiration, than really to believe that their deity ſerves them in the capacity of Prompter: and they conjoin the characters of prieſt and conjurer with that of phyſician. I have not been able to aſcertain whether our variety receives the afflatus, except in its medical capacity: and the miracles it has wrought in this, are not ſo perfectly authenticated, as to ſilence cavillers.

*Obſ.* People are now-a-days delicate in giving recommendations on ſome occaſions; but the beſt bred perſons make no ſcruple of preſſing a favourite phyſician or apothecary upon their acquaintance. Yet one would think that they are nearly as competent to ſpeak to the merit of a footman, as of a preſcriber or compounder of drugs. Sects ſometimes improve this propenſity into a regular ſyſtem of cabal. The deeper the hypocriſy, or the wilder the enthuſiaſm of the Sect. Doctor, the more eagerly will his brother-fanatics daſh through thick and thin to ſerve him. Now as belief or diſbelief in certain points of theology, has no apparent connection with ſkill in the adminiſtration of antimony, mercury, opium, and bark, we may deduce from this fact a rule which is probably as little liable to exception, as any that be laid down on the whole ſubject. *Never call in a phyſician,* BECAUSE *he is recommended by a perſon of the ſame ſect; the more*

*ye*

*you are urged, be the more on your guard againſt the ſnare.* This rule extends to all dæmoniacs poſſeſſed by the *corporation-ſpirit*, and to all ſets of perſons remarkably gregarious.

- *Obſervation.*

Concerning this decad of doctors, there remains a caution to be laid down; and that it may make the greater impreſſion, I ſhall deliver it in the ſtyle of my models, the naturaliſts. *Notandum in toto hoc genere naturam mirabiles edere luſus.* It is indeed applicable to all the ſpecies; individuals being apt, like hybrid plants, or mule animals, to exhibit the marks of two ſpecies, wholly or in part.

OF

## OF THE BRUNONIAN DOCTRINE.

A complete inveſtigation of Dr. Brown's theory of living nature, with its application to the knowledge and treatment of diſeaſes, would, at leaſt, equal the original work in ſize: beſides, if I had any inclination to write ſuch a commentary, I ſhould not conſider this as the proper place for introducing it. I have, however, a few words to ſay on the outlines and formation of the ſyſtem. I ſhall ſubjoin ſome reflections to put medical ſtudents and readers, not profeſſional, in the way of profiting by the true principles he promulgated without being miſled by his doubtful or erroneous poſitions.

### *Of Dr. Brown's Fundamental Propoſitions.*

The varied ſtructure of organized beings it is the buſineſs of anatomy to explain. Conſciouſneſs, aſſiſted by common obſervation, will diſtinguiſh animated from inanimate bodies with preciſion more than ſufficient for all the ends of medicine. The cauſe of *gravitation* has been left unexplored by all prudent philoſophers; and Brown, avoiding all uſeleſs diſquiſition concerning the cauſe of *vitality*, confines himſelf to the phænomena, which this great moving principle in nature may be obſerved to produce. His moſt general propoſitions are eaſy of comprehenſion.

I. To every animated being is allotted a certain portion only of the quality or principle, on which

which the phænomena of life depend. This principle is denominated EXCITABILITY.

II. The excitability varies in different animals, and in the ſame animal at different times. As it is more intenſe, the animal is more vivacious or more ſuſceptible of the action of *exciting* powers.

III. Exciting powers may be referred to two claſſes. 1. External, as heat, food, wine, poiſons, contagions, the blood, ſecreted fluids, and air. 2. Internal, as the functions of the body itſelf, maſcular exertion, thinking, emotion and paſſion.

IV. *Life is a forced ſtate;* if the exciting powers are withdrawn, death enſues as certainly as when the excitability is gone.

V. The *excitement* may be too great, too ſmall, or in juſt meaſure.

VI. By too great excitement weakneſs is induced, becauſe the excitability become defective; this is *indirect debility:* when the exciting powers or ſtimulants are withheld, weakneſs is induced; and this is *direct debility.* Here the excitability is in exceſs.

VII. Every power that acts on the living frame, is ſtimulant, or produces excitement by expending excitability. Thus, although a perſon, accuſtomed to animal food, may grow weak if he lives upon vegetables, ſtill the vegetable diet can only be conſidered as producing an effect, the ſame in kind with animals, though inferior

ſerior in degree. Whatever powers therefore, we imagine, and however they vary from ſuch as are habitually applied to produce due excitement, they can only weaken the ſyſtem by urging it into too much motion, or ſuffering it to ſink into langour.

VIII. Excitability is ſeated in the medullary portion of the nerves, and in the muſcles. As ſoon as it is any where affected, it is immediately affected every where; nor is the excitement ever increaſed in a part, while it is generally diminiſhed in the ſyſtem; in other words, different parts can never be in oppoſite ſtates of excitement.

I have already ſpoken of an illuſtration, drawn up by Mr. Chriſtie from a familiar operation, to facilitate the conception of Brown's fundamental poſitions. I introduce it here as more likely to anſwer its purpoſe than if ſeparately placed at the end of my preliminary obſervations. "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 fixed 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 ; " *fuel* in it, the *matter of life*, the *excitability* of the " Dr. Brown and the *ſenſorial power* of Dr. Dar- " win ; the *tube* behind ſupplying freſh fuel, will " denote the power of all living ſyſtems con- " ſtantly to regenerate or reproduce excitabili- " ty ; while the *air machine*, of ſeveral tubes, " denotes the various *ſtimuli* applied to the ex- " citability of the body ; and the *flame* drawn " forth in conſequence of that application re- " preſents *life*, the product of the exciting " powers acting upon the excitability."

" As Dr. Brown has defined *life* to be '*a for-* " *ced 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 differ- " ent tubes of a machine. If ſome of theſe " tubes are ſuppoſed to convey *pure* or dephlo- " giſticated air, they will denote the higheſt " claſs of exciting powers, opium, muſk, cam- " phor, ſpirits, wine, tobacco, &c.—the dif- " fuſible 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,

" frame, ſuch as heat, light, air, food, drink, &c.
" while ſuch as convey impure and 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 it
" 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 fire*.—
" 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."

Or to tranſlate it more literally,

" Baths, women, wine, exhauſt our frame,
" But life itſelf is drawn from them."

" Equally

" 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 quanti- " ty of excitability, that is, if no more excite- " ment is drawn forth than is equal to the quan- " tity 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 debi-* " *lity*, 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 ſtimu- " lus be applied, or too much air blown in, the " excitability will ſoon be waſted, and the mat- " ter of fuel almoſt ſpent. Hence will ariſe *in-* " *direct 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 indi- " rect debility, in conſequence of too much or " too little ſtimuli, ſo all the defects of the fire

" muſt

" muſt ariſe from direct or indirect lowneſs, in
" conſequence of too much or too little air
" blown into it. As Brown taught that one de-
" bility was never to be cured by another, but
" both by the more judicious application of ſti-
" muli, ſo will be found the caſe in treating the
" defects of the fire. If the fire has become
" low, or the man weak by the want of the
" needful quantity of ſtimulus, more muſt be
" applied, but very gently at firſt, and increaſ-
" ed 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 ab-
" ſtraction of the uſual ſtimulus of 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 increaſ-
" ed. 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 entirely, but we are by little and little to
" diminiſh the overplus of ſtimulus, ſo as to

" enable

" enable the excitability, or matter of fuel, gra-
" dually to recover its proper proportion.—
" Thus a man who has injured his conſtitution
" by the abuſe of ſpirituous liquors, is not ſud-
" denly 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 Edin-
" burgh, is ſaid to have treated a Highland
" chieftain, who applied to him for advice in
" this ſituation. The Doctor gave him no me-
" dicines, 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 accu-
" mulating, diminiſhed daily the quantity of
" the 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 farther ;
" 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

" is capable of enduring great varieties, if time
" be given it, to accommodate itſelf to different
" ſtates. All the miſchief is done in the tranſi-
" tion from one ſtate to another. In a ſtate of
" low excitement we are not raſhly to induce a
" ſtate of a 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 prin-
" ciple impaired, and diſeaſe, often death, is
" the inevitable conſequence."

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" I have only to add that though in this illu-
" ſtration of the Brunonian Syſtem (written ſe-
" veral years ago), I have ſpoken of a tube
" conſtantly pouring in freſh fuel, becauſe I
" could not otherwiſe convey to the reader a fa-
" miliar idea, of the power poſſeſſed by all li-
" ving 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 there-
" fore, although he ſpoke of the exhauſtion,
" augmentation, and even *renewal* of excitabi-
" lity, I do not think it was his intention to in-
" duce his pupils to think of it, as a kind of
" fluid *ſubſtance*, exiſting in the animal and ſub-

" ject

" ject 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 mate-
" rial substances."

T. C.

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IT was not unusual for Brown's disciples to disagree, when they were called upon for a strict interpretation of his principal tenets. If they be rigidly examined, they will be found, I think, not quite consistent with his own important doctrine of the accumulation of excitability, during different states of inaction. It appears to me, that according to his first chapters (xviii), living beings ought to have proceeded through langour to death in one unbroken tenour of wakefulness, and that all the images and lamentations which sleep has suggested to the poets, would have been lost. He who assumes that a certain portion of excitability is originally assigned to every living system, by his very assumption, denies its continual production, subsequent diffusion, and expenditure at a rate equal to the supply, or greater or less. That the brain is an organ destined to secrete the matter of life, he could never have supposed, otherwise he would not have expressed a doubt whether excitability be a quality or a substance.

If we admit a successive supply of this princi-

ple, we may ſolve in a very eaſy manner, ſeveral difficulties, for the ſake of which new epicycles muſt be added to Brown's ſyſtem. In the cold bath we may imagine the generation of ſenſorial power, to proceed with ſmall diminution, while the actions on the ſurface of the body are conſiderably abated by local ſubduction of heat. Thus the well-known glow will be the effect of undiminiſhed production within, while external expenditure is diminiſhed. But weak perſons frequently do not experience any glow. Here the action on the ſkin affects the ſyſtem univerſally; the production, therefore, is checked from the torpor of the ſecerning organ, and this ſtate of the brain explains the head-ache and chilline ſs, ſubſequent to the miſuſe of the cold bath. Theſe effects are not, in my apprehenſion, eaſy to be reconciled to the hypotheſis of a fixed original ſtock of excitability; the ſame thing may be ſaid of ſeeds and eggs long preſerved, without ſenſible change, in a ſtate capable of germination and growth. Sleep ſometimes produces no refreſhment, and yet it ſeems not to be imperfect or diſturbed in proportion to the langour felt on awaking. This I have attributed to a failure in the ſupply of excitability (*a*.); and nervous fever is imputed by another phyſiologiſt, to this cauſe of debility, of which Brown had no ſuſ-

(*a*) Obſervations on Calculus, &c.

ſuſpicions.—

picion.—If an illuſtrative analogy be deſired, his excitability might be compared to a fluid lodged in the body as a reſervoir. According to the ſtatement which I think more conſonant to the phænomena, excitability would be like a fluid iſſuing from the brain as water from a ſpring.—Theſe reſemblances might be traced a little way, but they ſoon fail, as always happens in matters ſo eſſentially diſſimilar.

The hypotheſis of Brown is happily adapted to the limited term of life; according to the other ſuppoſition, we muſt conceive old age and death to depend upon a limited power of ſecretion in the brain. The difference is ſcarcely perceptible here, but in terms; it is, however, pleaſing to ſuppoſe that wiſer ages will be employed in the culture of the human ſpecies to which prolongation of life is eſſential: and we can more eaſily reconcile our thoughts to augmentation of power in a ſecerning organ, than of the original proviſion of excitability; ſo that the doctrine, in other reſpects the more probable, ſeems more conformable to the proſpect of improvement.

## *Of Brown's Application of his Principles.*

The moſt negligent obſerver might bring ſpecious objections againſt that uniformity of operation in ſtimulus which is taught in the firſt propoſitions of the following elements: "heat and wine, "it might be ſaid, can never act in the ſame "manner, for no perſon is intoxicated by heat." In the progreſs of his work we find the author re-

laxing, in ſome degree, the rigour of his principles. When the excitability is waſted by one ſtimulus, excitement, he ſays, may be produced by another; nor does it ſeem neceſſary, according to the examples quoted in the latter part of the thirty-firſt paragraph, and the ſubjoined note, that the ſecond ſtimulus ſhould be more powerful than the firſt. The ſucceſſion in the note is, *food, thought, wine, food, punch, opium, punch, thought,* and *ſpeech;* and this is not conformable to the aſcending ſcale of ſtimuli, according to his eſtimate in other paſſages.

He alſo admits ſome modification of ſtimulant power, from the manner in which different ſtimuli are applied. Thus heat ſtimulates the ſurface more than the ſubjacent parts; and ſtimuli received into the ſtomach exert more action there than on any other part.

It is extraordinary that he ſhould not have extended this inequality of operation to the conſtituent, as well as the integrant parts of the ſyſtem. It was his principal fault, *naturam tanquam e prælta turri deſpicere;* hence his explanation of minute appearances, will often be found unſatisfactory. The fourth and and ſixth chapter of Part II. afford ſeveral examples; I ſhall ſelect one: "Thirſt and heat," he obſerves, (CLIX.) "depend upon ſthenic diatheſis of the extreme "veſſels of the fauces and ſkin. Theſe veſſels "become ſo much conſtricted as to prevent the "diſcharge of the perſpirable matter. Mean-

" while the blood, flowing near the extremi-
" ties of the exhalant veſſels, lodges under the
" cuticle, the heat which is generated in the
" ſyſtem, and which would be carried off, if the
" perſpiration were free." He explains ſthenic thirſt from a ſimilar conſtriction of the veſſels, which ſecrete ſaliva and mucus; and in the ſmall-pox the puſtules are ſaid to be occaſioned by a ſimilar conſtriction, which detains the contagious matter under the cuticle. This permanent conſtriction, we are told, is not ſpaſm; no diſtinction, however, is attempted, except by referring conſtriction to exceſs, and ſpaſm to defect, of excitement.

Upon this reaſoning, it may be remarked, 1. That exceſſive excitement of veſſels conſiſts in exceſſive oſcillations—in the increaſe, not in the ſuppreſſion of their healthy functions; and 2. That to account for morbid alteration in the ordinary ſtate of any diſcharge, we ought to look for an alteration in the action of thoſe veſſels, by whoſe counteracting powers it is regulated in health. The balance in the perſpiration depends on the cutaneous exhalants and abſorbents; but the properties of the lymphatic ſyſtem ſeem never to have ſtruck the imagination of Brown, though the inveſtigation was carried on with ſo much ardour during the period of his ſtudies; attention to theſe anatomical diſcoveries would have aſſiſted him in the full explanation of many diſeaſes, which, though they paſs under the ſame denomination, he has moſt juſtly claſſed

as of a nature entirely oppoſite; the one, ſthenic, the other aſthenic; but to make out this explanation, he muſt have acknowledged in theſe different vaſcular ſyſtems, ſome degree of inequality in the way in which they are affected by ſtimulants that operate on both. Thus if the power of abſorption be ſooner increaſed by the cauſes inducing the ſthenic diatheſis than that of exhalation, there is no occaſion to imagine any conſtriction to account for the dryneſs of the ſkin and fauces. The conſequent more ſpeedy exhauſtion of excitability in the abſorbents, would likewiſe have ſuggeſted the rationale of that diſcharge that follows the ſtate of dryneſs or *huſkineſs* of the ſkin, fauces, or urethra, of the trachea and its ramifications, when theſe parts are affected by inflammation.

A great part of the ſymptoms of Brown's *aſthenic form of diſeaſe*, depend upon imperfect abſorption from indirect debility of the veſſels deſtined to that office; thus perſons whoſe lungs have been weakened by inflammation after a meal expectorate mucus. In this caſe the food excites the whole ſyſtem; the activity of the bronchial glands is increaſed, more mucus is ſecreted, and part becomes ſuperfluous, on account of the comparative inactivity of the abſorbents. *Quibus poſt inflammationem ſupereſt urethræ debilitas profluit mucus limpidus, poſtquam tenſus fuerit penis.* The reaſon is the ſame.

Had it been once allowed by Brown that the different

different conſtituent parts of the body, bear a different relation to the ſame agents, he muſt have admitted the operation of ſpecific ſtimulants to an unlimited extent. This however, would have deſtroyed the univerſality of his principles, which he conſidered as the great beauty of his ſyſtem; but his own opportunities of obſervation were probably too few, to force upon him a conviction of their inſufficiency; it is eaſy to exceed equity and prudence in refuſing to hearken to teſtimony, we may daily ſee ſpeculative men forgetting that philoſophy does not more conſiſt in petulent rejection of information than in credulity.

*Of the Formation of the Brunonian Syſtem.*

It is believed that hints thrown out by Cullen, were the ſeed from which Brown raiſed his doctrines.

The connexion between the two men, is doubtleſs favourable to the ſuppoſition of a communication of ideas, and it is confirmed by the circumſtantial evidence of a common term, from which the other terms, employed by Brown, might be conſtructed by an obvious analogy. The hints ſuggeſted by Cullen occur in the CXXXth, and ſome of the following paragraphs of his *Inſtitutions of Medicine.*

" It is," he ſays, " probable that the " nervous " fluid in the brain, is truly capable of different " ſtates

" ſtates or degrees of mobility, which we ſhall " call its ſtates of *excitement* and *collapſe*." In his youth, this author had imagined a mechanical hypotheſis reſpecting the nervous fluid, which he regarded with fondneſs through life, and unfolded with great prolixity in the decline of his powers (*b*). When he wrote the paſſage I have quoted, his thoughts were turned from the living body to an electrical machine; and he evidently does no more than deſcribe the common experiment, in which a congeries of flexible fibres is made to ſtand erect, and to diverge by electricity, and then ſhrinks together on the application of a conducting ſubſtance. His idea of excitement has therefore nothing in common with that of Brown; and, on campariſon, I am perſuaded it will appear that Brown was very little indebted to the phyſiology of his maſter.

A material correction of the Brunonian theory may be more ſafely aſcribed to one of Mr. Hunter's diſcoveries, than its origin to theſe obſcure opinions of Dr. Cullen. An intelligent writer whoſe expreſſions beſpeak perſonal obſervation, gives the following account of the extent and occaſion of this correction. " In the firſt promul- " gation of his doctrines, Dr. Brown did not ſuf- " ficiently diſtinguiſh between the actions of " the living body and its powers.—*Excitement* " and *ſtrength* were at firſt conſidered by him

(*b*). See his Materia Medica

" as

" as ſynonymous terms; and on the ſtate of ex-
" citement, his diſtinction of diſeaſes were en-
" tirely founded. To the laſt he had but two
" claſſes; diſeaſes of increaſed and diminiſhed
" excitement.

" After many diſcuſſions of his doctrine, in
" which the diſtinction between the powers and
" actions of the living body . . . . . was preſ-
" ſed upon by him, he adopted the term *excita-*
" *bility* to expreſs the diſpoſition in action, and
" to replace the terms *irritibility*, *ſenſibility*, and
" *inability*, which he had diſcarded from his ſyſ-
" tem (*c*)."

An alteration of ſome conſequence reſpecting diſcharges of blood, which was made in the interval between two Latin editions of his elements, is noticed by the author himſelf. What corrections and enlargement are further required, the curious reader may determine by a careful compariſon of the following ſyſtem with the kindred ſyſtems of two contemporary authors; conſtant reference being had to nature at the ſame time.

## *Of Prediſpoſition to Diſeaſe.*

Among a number of individuals equally expoſed to any cauſe of diſeaſe, we conſtantly find ſome affected, and others eſcaping. The circumſtances on which exemption and aptitude de-

(*c*). Engliſh Review for Oct. 1794, p. 282.

pend

pend have been anxiouſly inveſtigated; and if we were well acquainted with the powers that favour and reſiſt morbific influences, we ſhould be able more effectually to accompliſh one of the two grand purpoſes of the medical art—the preſervation of health. But although facts have been noted, the principle lies involved in total obſcurity. Brown does not purpoſely elude the difficulty, but his principles lead him beſide it; and we may doubt whether the term *prediſpoſition* ought, in ſtrict propriety, to have appeared in his Elements; for prediſpoſition is with him a ſlight diſeaſe, differing only in degree from that into which the perſon prediſpoſed falls. (Chapter VIII. Part I.).

Between thoſe actions of our different organs, and of the ſame organ which frequently occur together or in ſucceſſion, a bond of union is formed by habit, as in the caſe of our ideas. Of any two movements, therefore, if the former tend to introduce the ſucceeding, the ſecond muſt take place, unleſs it be prevented by ſome interpoſing force. Hence it is manifeſt that robuſtneſs of conſtitution, principally conſiſts in the ſtrength of connexion between the ſeveral members of the ſeries, and pronenеſs to diſeaſe in the facility with which the ſeries may be broken. On this principle we may underſtand why brutes are more robuſt than the human ſpecies. Their actions both of body and mind are leſs diverſified than ours; and being in conſequence more frequently

quently repeated in the ſame order, they acquire greater force of union, or, as it has been lately termed, *ſtrength of catenation*. It may deſerve to be conſidered whether the remarkable exemption of negroes from the contagious fevers that have lately raged in America and the Weſt-Indies, and the comparatively ſmall mortality among them depend on their uniform life (*d*).

Perſons who have enjoyed uniformly good health, are ſaid to be in greater danger when they become ill; and in caſes where the opinion is juſt, we may deduce an explanation of the apparent paradox from the ſame principle; for the diſturbance of the functions betrays the intervention of a powerful cauſe.

(*d*). "Although the contagion ſeemed to vary much in "different deſcriptions of people, it is highly probable that "the virus of the contagion itſelf was uniformly the ſame, "only variouſly modified by peculiar conſtitutions, habits, or "modes of living. Thus among ſailors, perhaps a ſcorbu-"tic taint, joined to extreme irregularity and imprudence, "rendered the diſeaſe infinitely more fatal than among any "other claſs of men. On the other hand, among field-ne-"groes, who certainly poſſeſs an idio-ſyncracy peculiar to "themſelves, and whoſe mode of living is generally tempe-"rate and regular in a remarkable degree, the virus of the "contagion was ſo blunted as to act in the mildeſt form.— "Why, however, it ſhould operate with moſt violence on "Europeans juſt arrived, and who had never entered the tor-"rid zone before, is a ſingularity I do not pretend to ex-"plain." Chiſholm on the malignant peſtilential fever which raged at Grenada in 1793, p. 130-1, one of the moſt fatal diſeaſes on record.

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Are not the embryons of organized beings placed in their peculiar receptacles, that they may be ſecure againſt violent impreſſions, till the movements of their organs, by repetition, come to proceed with a ſteady pace, and the animal machine is mounted?

Pregnant and puerperal women are among the perſons moſt liable to be affected by the ſlighter cauſes of diſeaſe. In the former, from the great change of the ſanguiferous and glandular ſyſtems, new irritative and ſenſitive motions are perpetually introducing themſelves; and at the time of parturition, there is a ſudden diſſolution of all the newly formed aſſociations; at this critical period they require to be guarded with the niceſt vigilance from all ſudden changes of temperature, irregularities of diet, and exertions of body and mind.

In the tranſition from climate to climate, it is obvious that our habitual movements, eſpecially thoſe of the cutaneous veſſels of all denominations, muſt be thrown into total confuſion. In this ſtate of diſordered action, there can be no power of aſſociation or connection to protect the ſyſtem. It has alſo been univerſally obſerved, that contagious fevers are liable to make their attack after intoxication, when the whole internal man is tumult.

In the account of the Grenada fever, there is a ſcale to ſhew the gradation in which the na-

tives of different countries, Africans, Americans, Creoles, and Europeans, aſſembled in that iſland, were liable to be infected and deſtroyed. This ſcale will ſerve as an illuſtration of the two laſt mentioned cauſes; a thouſand otheas are at hand.

" It is curious," ſays the writer, " and may " be uſeful to obſerve the gradation of this fa- " tal malady, with reſpect to the various de- " ſcriptions of people expoſed to its infection. " Neither age nor ſex were exempted from its " attack, but ſome were more obnoxious to it " than others, and the colour had evidently " much influence in determining its violence. " The ſcale of its violence, or the gradation it " obſerved with reſpect to the different claſſes " of the inhabitants, appeared to be the follow- " ing:

" I. Sailors, more eſpecially the robuſt and " young, thoſe leaſt accuſtomed to the climate, " and thoſe moſt given to drinking new rum.

" II. Soldiers; more eſpecially recruits, late- " ly from Europe, and the moſt intemperate.

" III. White males, in general, lately arrived, " more eſpecially young men from Europe.

" All other white males, more eſpecially the " lower claſſes; and of them, the moſt intem- " perate, thoſe debilitated by recent ſickneſs.

" V. White females, more eſpecially thoſe

" connected

"connected with the ſhipping, and thoſe late-
"ly from Europe.

"VI. People of colour, from Muſtees to Ca-
"bres," (that is, I think inverſely as the dark-
"neſs of complexion.)

"VII. Negro men, more eſpecially ſailors and
"porters.

"VIII. Negro women, more eſpecially houſe
"wenches.

"IX. Children, more eſpecially thoſe of co-
lour.

Infants, whoſe organic movements are not yet regulated by habit, ſeem to afford an exception to the rule of prediſpoſition. They are, it is ſaid, leſs liable to ſome contagious fevers; and when infected, their chance of recovery is much greater; the latter circumſtance has been noticed by various obſervers (*e*). If children were only leſs liable to be infected, the difference might be fairly ſuppoſed to depend on their not coming ſo often within the infecting diſtance; but after infection they are protected by ſome unknown peculiarity. Is the contagion weakened, when firſt ſwallowed by a diarrhoea, as was the caſe with ſome perſons who received the dangerous infection at the Black aſſizes at Oxford? Or has the gaſtric liquor of chil-

(*e*) See for inſtance, Campbell's *Obſervations on Typhus*, 1785, p. 55.

dren,

dren, ſome power to render the poiſon inert? This inferiority of power in one or two particular contagions, to enfect and deſtroy children, deſerves further enquiry.

*Of the Depreſſing Paſſions.*

There are ſeveral other opinions, which, in a complete reviſal of the Brunonian ſyſtem, would require particular examination; ſuch are his doctrine concerning hereditary diſeaſes, the peculiar ſeat of ſthenic inflammation, and the nature of the paſſions. This laſt ſubject is of great importance, and if, in treating it, Brown has failed, he has but ſhared the fate of other writers. The *mechaniſm of the paſſions*, or the ſtate of our different organs, while we are under their influence, has never been explained. If any proof be required of the general want of information on this ſubject, it may eaſily be produced. Writers, educated in different ſyſtems, and who cannot be ſuppoſed to have been miſled by the undiſtinguiſhing ardour of youthful enthuſiaſm, have found no better reſource than to adopt Brown's theory (*f*).

In fear, grief, and anxiety, ſome parts manifeſtly betray, by their paleneſs and coldneſs, di-

(*f*). See Dr. Ruſh on the fever of Philadelphia, p. 31. "Fear debilitates only becauſe it abſtracts its antagoniſt paſſion of courage."

miniſhed

miniſhed exertion. Now as no two parts, according to our author, can be in oppoſite conditions at the ſame time, what could he in conſiſtency do, but aſſert that the doctrine of heat and cold is exactly applicable to the paſſions (Part I. Chap. iii. n. )? In high ſpirits, therefore, we are to ſuppoſe ourſelves animated by ſomething correſponding to the warmth of ſummer; in tranquillity we are lowered by a ſubtraction of this mental ſtimulus down to temperate, and in grief we ſink to the freezing point; how far the common opinion varies from this of Brown, I cannot exactly ſay, becauſe I do not underſtand what particular change the words *depreſſing* or *ſedative* paſſions, are deſigned to indicate. When I try to aſſiſt my apprehenſion by ſome analogy, I find nothing in nature to help me out, but am obliged to think of certain paſſages in books of romance, where the enchanter is deſcribed as inducing a ſtate of permanent torpor by the motion of his wand. To diſcover whether any of the paſſions have a *benumbing* operation, does not appear very difficult; let us take a tranſient look into the mind of a mother ſorrowing for the loſs of her ſon, I aſk whether her ideas are more vivid than ſual? whether ſhe does not exert herſelf to recollect all he ſaid or did between the cradle and the grave? whether

after

after minutely conſidering what he has been, ſhe does not ſet herſelf with equal earneſtneſs to fancy what he would have been? and whether every picture formerly drawn by hope, does not paſs again before her imagination, with the figures more ſtrongly illuminated, and more diſtinctly imbodied?

" Grief fills the room up of my abſent child;
" Lies in his bed; walks up and down with
" me;
" Puts on his pretty looks; repeats his words;
" Remembers me of all his gracious parts;
" Stuffs out his vacant garments with his form;
" Thus have I reaſon to be fond of grief."

CONSTANCE *in the Play of king John.*

If this expreſſion of ſorrow be not too ſtrong, while an happy meeting is ſtill believed poſſible, it may be doubted whether the faculties of Shakeſpeare or Schiller, ſtrained to their utmoſt pitch, are equal to that intenſity of thought which takes place when this hope is finally deſtroyed. Fear and anxiety excite images of equal vivacity with grief, and on conſidering the ſubject, it will appear that for theſe ſtates of mind, *perturbation*, which occurs in the writings of the ancient philoſophers, is a far more apt term than *paſſion*. Had it not been for inaccurate language, which the author of the *Enquiry into the State of medicine* juſtly

ly calls the greateſt of all plagues in ſcience, the opinions I am inviting the reader to compare with nature, would probably never have exiſted. Neither ſhould we perhaps have been taught, that in grief the mind moves ſlowly—an aſſertion as diſtant from the truth, as if it ſhould be ſaid that animals in full chace of their prey, move more ſlowly than when they are not actuated by any appetite; for the eagerneſs, with which ſome train of ideas are purſued in penſive ſorrow, admits of a compariſon with hunting.

The excitability, therefore, is exhauſted by any paſſion or perturbation, in the ſame manner as by exceſſive excitement in other caſes. Whether temporary wearineſs, or irreparable debility ſhall enſue, depends upon the intenſity and duration of the exertions, made by the organs in action. The explanation of the difference between *weeping* and *tearleſs* grief, with the means of curing either and changing the latter (which is a much more dangerous diſeaſe) into the former, depends on principles, not to be found in the following ſyſtem. In the preſent ſpecimen of criticiſm, it is the leſs neceſſary to enter upon theſe enquiries, as the public may ſoon expect better inſtruction on the pathological part of this ſubject than I am able to give.

*Concluſion.*

*Concluſion.*

The Brunonian ſyſtem has frequently been charged with promoting intemperance; the objection is ſerious, but the view already given of its principles ſhews it to be groundleſs. No writer had inſiſted ſo much upon the dependence of life on external cauſes, or ſo ſtrongly ſtated the inevitable conſequences of exceſs. And there are no means of promoting morality upon which we can rely, except the knowledge of the true relations between man and other beings or bodies. For by this knowledge we are directly led to ſhun what is hurtful, and purſue what is ſalutary; and in what elſe does moral conduct, as far as it regards the individual, conſiſt? It may be ſaid that the author's life diſproves the juſtneſs of this repreſentation; his life, however, only ſhews the ſuperior power of other cauſes, and of bad habits in particular, and I am ready to acknowledge the little efficacy of inſtruction, when bad habits are formed. Its great uſe conſiſts in preventing their formation, for which reaſon popular inſtruction in medicine would contribute more to the happineſs of the human ſpecies, than the complete knowledge of every thing which is attempted to be taught in education, as it is conducted at preſent. But though the principles of the ſyſtem in queſtion did not correct the propenſi-

ties

ties of its inventor, it does not follow that they tend to produce the ſame propenſities in others.

The diſtinguiſhing merit of Brown is obvious; he avoided all falſe analogies, and confined himſelf within the proper ſphere of obſervation for a phyſician. Hence at a time when I could not be ſuſpected of that diſpoſition to diminiſh the faults, and magnify the excellencies of his ſyſtem, which my ſhare in the preſent publication may be ſuppoſed to produce; I was led to remark, that "if he has "not always diſcovered the truth, he is ſeldom "forſaken by the ſpirit of philoſophy (*g*)." Before him inveſtigations relative to medicine, had been carried on juſt as rationally as if to diſcover the qualities of the horſe, the naturaliſt were to direct his attention to the movements of a windmill. There exiſted no ſyſtem which was not either entirely, or in a great meaſure, founded upon the obſerved or ſuppoſed properties of ſubſtances, deſtitute of life. Thus Boerhaave taught that diſeaſes depend upon changes of the blood, ſimilar to thoſe which certain oily, watery, or mucilaginous liquors undergo; and I have already had occaſion to ſhew that Cullen referred the phænomena of life to an imaginary fluid, endowed with the ſame properties as the electric fluid; though

(*g*) Obſervations on Calculus, p. 159.

of this the very exiſtence is ſtill problematical (*b*). His predeceſſors having in this manner left MAN entirely out of their ſyſtems, or aſſigned him an unimportant place, Brown atchieved the important ſervice of reſtoring him to his proper

(*b*). Mr. Hunter, who deſerves ſo much praiſe for Aſcertaining facts, has been led aſtray in ſome of his Attempts to eſtabliſh principles, by a different, but a very curious ſpecies of deluſion. In treating of that obſcure ſubject, for inſtance, the coagulation of the blood, he obſerves that it ſometimes takes place very quickly, as in mortification; but then "it is to an- "ſwer ſome good purpoſe and ariſes from NECESSITY, which "appears to act as a ſtimulus in diſpoſing the blood to coagulate." He adds that by "actions taking place from neceſſity, "effects are meant which ariſe from ſome unuſual or unnatural "change going on in the parts, and become a ſtimulus to action. "The ſtimuli from this cauſe may vary exceedingly among "themſelves: but as we are unable to inveſtigate them, I have "included them under this general term, *ſtimulus of neceſſity*." (*On the blood*, p. 24). It may be laid down as a rule in logic, that general terms ought never to be employed, unleſs we can ſubſtitute particular terms expreſſive of appearances in their place. Mr. Hunter confeſſes his ignorance of thoſe changes, which he comprehends under the phraſe, ſtimulus of neceſſity. It is manifeſt, therefore, that it refers to nothing cognizable by ſenſe; and his poſition amounts ſimply to this, *the blood coagulates becauſe it muſt coagulate*. This is not the only occaſion on which this ingenious anatomiſt has been betrayed into the myſticiſm of occult cauſes; and it would probably create ſome ſurpriſe in an ancient poet to find allegorical beings like NECESSITY and DEATH, figuring in a modern work among the principles of phyſiology. It is eaſy to excuſe Mr. Hunter for miſtaking nominal for real eſſences; but the example deſerves notice as it ſo clearly ſhews the extenſive utility of the philoſophy of words.

ſtation in the centre. We have other obligations to him; but as I have already had occaſion to point out ſome of them in the courſe of theſe preliminary obſervations, and as the reſt will be diſcovered by an attentive peruſal of the following work, I ſhall leave the taſk of ſingling them out and appreciating them to the impartial reader. In forming this eſtimate he ſhould have before him, 1. The difficulty of emancipating the mind from the dominion of inveterate and accredited error. 2. The much greater difficulty of giving a new form to a complicated and obſcure ſcience.

Three years ago I had occaſion to obſerve that the opinions of Brown had been ſo widely diffuſed by oral communication, as to affect the whole practice of medicine in Great Britan. In pamphlets recommending repeated doſes of opium to ſupport excitement, and in other publications, it would be eaſy to detect attempts to purloin his language and ideas; but it is unneceſſary, for though literature has always been infeſted by a race of pilferers, original genius has ſeldom been injured by their diſhoneſt practices. Brown cannot now be defrauded of his juſt reputation. His writings have lately been republiſhed (*k*), and are gaining credit on the continent of Europe. In America his ſuperiority to

(*k*). See *Brunonis Elem. Med. cum Prefatione Petri Moſchati.*

preceding

preceding ſyſtematic authors, appears to be acknowledged alike by ſtudents and profeſſors (*l*).

To ſpeak of the dangerous influence of his Syſtem on practice, I think as uſeleſs now as to detect plagiariſms. His diſciples have ſometimes diſgraced themſelves by that raſhneſs, which was too much the characteriſtc of his ſchool. But a cool peruſal of his work will not produce the effect of his animated and ſometimes frantic prelections. What he has left can only inform or exerciſe the underſtanding: but he retains no power to inflame the imagination from the grave.

(*l*). See Ruſh on the yallow fever, and ſome inaugural diſſertations lately publiſhed at Philaadelphi·

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Since the preceding pages were printed, I have received further indubitable proofs of the aſcendancy which the truths, promulgated by Brown, are gaining over men's minds in different parts of Europe. A tranſlation of his "OBSERVATIONS under the title of *Compendio della nuovadottrina medica di G. Brown* was publiſhed at Pavia in 1792. It has been ſince republiſhed at Venice, and ſo has Moſcati's Edition of the *Elementa*. The tranſlation is by Dr. Raſori, who has prefixed a ſenſible introduction, and added many judicious notes. In a letter accompanying a copy of his tranſlation, Dr. Raſori ſays, "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 late-"ly been publiſhed there. A friend at Genoa aſſures me that

ſeveral

" ſeveral ſurgeons to French men of war have informed him, " that Brown is known and much admired in France. In " the Univerſity of Pavia, Brown is in high eſteem even with " ſome of the moſt reſpectable profeſſors ; and in other parts " of Italy I can aſſert from my own knowledge that old phy- " ſicians have not refuſed their ſanction to many of the Bruno- " nian principles."

A late pamphlet intitled *Jacobi Sacchi in principia Theoriae Brunoniae animadverſiones*, but ſuppoſed to be wtitten by profeſſor Carminati, affords ample confirmation of the account, given by Dr. Raſori. The firſt ſentence runs thus. *Quaerenti mihi cauſas incredibilis prope illius commotionis animorum, atque ingentis fere plauſus, quibus nuperrime ſingularis illa hypotheſis, cui novum univerſae Medicinae ſystema celeberrimus Angliae ſcriptor & medicus Bruno ſuperſtruxit, ab iis optimae ſpei adoleſcentibus excepta eſset, quid in florentiſsimo Ticinensi Archigymnaſio ſalutaris artis ſtudiis omnibus mecum incumbunt perarduum ſane non fuit eas.... invenire.* After ſome pages of introductory matter, the author objects ſtrongly to Brown's definition of *life—quod ideam* vitae *non in proprietate ſeu* incitabilitate, *ſed in* actione *collocarit.* He adduces various inſtances in which organic bodies loſe ſenſe and motion, without loſing their ſuſceptibility of feeling and moving, when differently circumſtanced. profeſſor Carminati, he ſays, having killed a cat by mephitic air, took out the ſtomach with the inteſtines, and expoſed them to the influence of a froſty air in his court yard. They loſt by degrees their periſtaltic motion, and were frozen ſtiff. Next day, they were put into warm water ; and when they were thawed, the periſtaltic motion returned ; and laſted for a long time. This ſeems to be little elſe than a diſpute about terms. The objector next controverts Brown's grand diſcovery —*omnia quae viventium partibus admoventure, ſive interna ſivee externa ſint, perpetuo* incitantia *esse.* He produces the application of cold bodies blood-letting, as examples of effects Produced on the living body otherwiſe than by ſtimulating. He forgets that it is the reſiduary heat and the reſiduary blood which

Brown

Brown regards as ſtimulants, inferior indeed in efficacy but ſtill ſtimulants. The effect of alkaline ſubſtances on acid generated in the ſtomach, and ſome other ſimilar caſes, are afterwards ſpecified, as not comprehended under the general propoſition. The author however ſeems aware that no Brunonian can want the wit to repel theſe objections. He mentions cauſtics as exceptions to the rule; he however allows that they are partly benificial by ſtimulating, and omits to mention that part of their operation which is *not* ſtimulating. During this ſkirmiſhing, in which the adverſary of Brown takes cares to retreat nearly as much as he has advanced, he appears to gain courage, for he now attacks the new ſyſtem in its ſtrongeſt poſt. Opium, he affirms, is a medicine which although it has ſome ſtimulating power, removes irritation *non eo, ſed alio ſibi proprio principio.* So are all ſedatives. Under this head the power of opium to allay excruciating pain and reſtrain irregular motions is copiouſly exemplified; the writer ſeems to ſuppoſe that pain always implies exceſs of action, and convulſions exceſs of general power. He ackowledges that volatile ſtimulants remove *quasdam nervorum aegritudines ſed eas quae vera debilitate procreantur.* At the cloſe of this article an argument occurs, which I know not how the moſt determined Brunonian will anſwer. It is this; if there were no difference but in energy between opium and other drugs, it might be compenſated by increaſing the doſe of theſe, which is contrary to experience.—An acute opponent would not, the reader may be ſure, fail to bring forward the ſpecific action of quick-ſilver, cantharides and other bodies; he even contends that univerſal ſtimulants by no means tend to evince that the *excitability* is one and indiviſible, ſince they are compounds, and their ſeveral conſtituent parts may act upon ſeveral portions of the ſyſtem. Brown was totally inattentive to the aſſociation of motions; and our Italian critic does not omit to take advantage of this imperfection. He quotes ſeveral inſtances of the ſympathy of ſimilar parts (as the decay of correſponding teeth), and argues from them in the following manner: *juxta diverſas aut ſimiles*

*similes partes, sive sensilitas sive irritabilitas aut diversa aut similis seu aequalis est . . . Hinc ubi causa praedisponens, aut idem stimulus seu eadem causa occasionalis, quae in alique corporis sede morbum intulit, ad aliam quoque similem deferatur, nascetur illico causa proxima ejusque effectus, nempe morbus : quod quidem fieri non posset in diversa parte, licet eam quoque idem stimulus pertingat.* Lastly, the author contends that Brown has improperly given the common name of *excitability*, to irritability and sensibility, properties essentially different.—The theory being thus dismissed, the practice of the Brunonian school is brought under examination. Frozen limbs, it is said, are to be warmed gradually, but only lest the vessels should be burst by the sudden expansion of their contents. So also a small quantity of food is to be given to persons who have been long fasting, merely because the digestive powers are weak, and not to avoid violent excitement from accumulation of excitability. The writer protests equally against the use of small stimulants in *direct* debility, and of a stimulus nearly equal to that which has induced *indirect* debility, in cases of an opposite nature. On the latter principle, he thinks, the most powerful stimulants ought to be given in the most violent peripneumonies, and blood-letting to be avoided. Under the former head, he asks ; *Quis ubi siphylis saeirat atrociter ejus sanationem, validioribus posthabitis mercurialibus, committet lenioribus ?*—To prove the reality of contrary indications, the complication of true peripneumony with malignant petechial fever and other diseases, requiring the use of debilitating and strengthening means at the same time are adduced. Several pages are employed to shew that a low temperature is not debilitating and the converse. The Brunonians will easily shew by a few obvious distinctions, to how little purpose the author has laboured here. In conclusion, he points out what he deems absurdities in Brown's opinions concerning the itch, scurvy, epilepsy, and some other disorders.

But whatever justness there may be in some of these remarks, whatever errors Brown may have committed in the application of

of his principles, and however ſhort his doctrines may fall of a perfect ſyſtem of medicine, I will venture to predict that his credit on the continent will remain unſhaken. The introduction of his opinions will have a moſt beneficial influence upon thoſe by whom they are adopted as well as upon thoſe by whom they are rejected. Brunonians will not imitate the ſtupidity of the diſciples of certain antient philoſophers, but exerciſe their reaſon in expunging, adding and correcting, as experience ſhall dictate. With regard to Anti-Brunonians a recent example will explain my meaning. When Lavoiſier firſt announced his ſyſtem, the chemiſts who were moſt ſcandalized by it, found themſelves obliged to reviſe their whole ſtock of facts and deductions; the immediate conſequence was an entire change in their opinions. Though they would not go over to Lavoiſier, they could not adhere to Stahl, but reluctantly abandoned half their errors. The diſſemination of the Brunonian doctrine will bring about the ſame thorough luſtration of opinions in medicine, and the moſt pernicious among the prevailing prejudices will be relinquiſhed without a conteſt.

The reader may eſtimate what it is to have put ſo many nations into the right path of medical inveſtigation. It is true, indeed, that we in Great Britain, ſuppoſe ourſelves to have enjoyed the privilege of being purblind, while the eyes of foreigners were ſealed to the agency of thoſe cauſes that actuate animated nature; and would it not be a pity if we ſhould loſe our diſtinction? But though we ſhould be outſtripped in medicine by the awakened genius of France, or the enlightened induſtry of Germany, we ſhall not be without conſolation: ſince in conſequence of Brown's diſcoveries, our countrymen labouring under diſorders, ſuch as we cannot cure, ſtand a chance of profiting by the collective efforts of human ingenuity.

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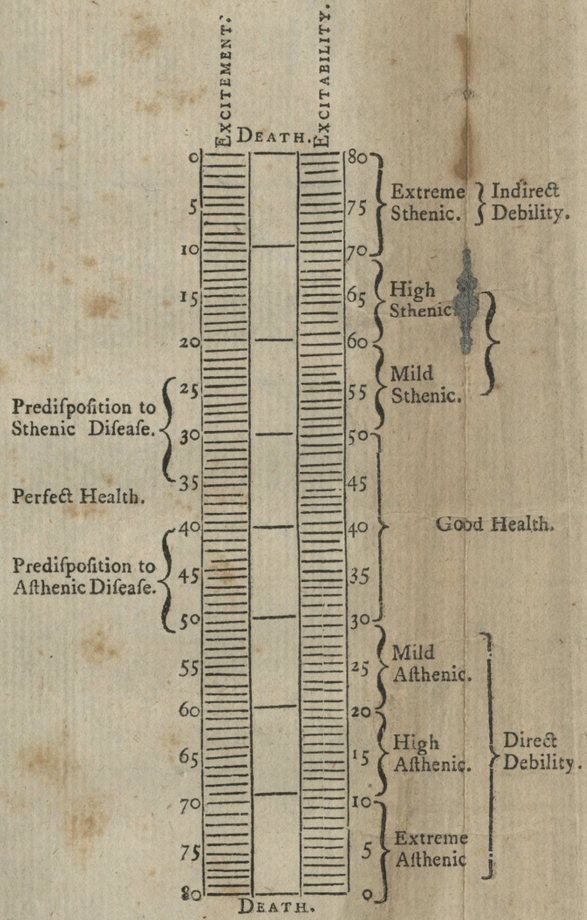
ERRATA.

Page 32 line 3 from bottom for *where* read *were*—p. 36 l. 4 after *with* read *this*—p. 56 l. 20 dele *is*—p. 58 l. 2 after *of* read *the*—p. 60 l. 6 dele *by*—p. 64 l. 19 for *Hoſpial* read *Hoſpital*—p. 70 l. 21 for *Treaties* read *Treatiſe*—p. 72 l. 17 for *how* read *who*—p. 94 l. 11 for *Maſcular* read *Muſcular*.




# TABLE OF EXCITEMENT AND EXCITABILITY.

| DISEASES. | | CAUSES. NOXIOUS | CAUSES. IMMEDIATE | CURE. |
|---|---|---|---|---|
| Apoplexy. | Confluent Small-pox. | 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, ſpirituous, liquors, wine, muſk, cinchona bark, ſnake root, camphor, rich ſoups, and the like. |
| Palſy. | Hydrothorax. | | | |
| Plague. | Phthiſis. | | | |
| Malignant Fever. | Contagious Dyſentery, | | | |
| Gangrenous Cynanche. | &c. | | | |
| Synocha. | Meaſles. | 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. |
| Phrenitis. | Peripneumony. | | | |
| Inflammatory Cynanche. | Dyſentery. | | | |
| Mild Small-pox. | Mania, &c. | | | |
| Synochus. | Miliary Fever. | 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. |
| Rheumatiſm. | Chicken-pox. | | | |
| Catarrh. | Ophthalmia, &c. | | | |
| Scarlet Pyrexia. | | | | |
| 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. | | | | |
| Intermittent Fevers | Hyſteria. | 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, or Direct debility. | 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. |
| Mild Colic. | Epiſtaxis. | | | |
| Dyſpepſy. | Menorrhœa. | | | |
| Hypochondriaſis. | Amenorrhœa, &c. | | | |
| Rheumatalgia. | Rickets. | Defective ſtimuli alone; as cold, diet ſparing and not of good quality, fear, and the like. | | The indication of cure is here the ſame as above, but ſtimuli muſt be applied ſomewhat more cautiouſly. |
| Cholera. | Hæmoptyſis, | | | |
| Epilepſy. | Scrofula, &c. | | | |
| St. Vitus's Dance. | | | | |
| Typhus. | Scurvy. | Defective ſtimuli alone. | | The indication of cure is the ſame here alſo, but ſtill greater caution is neceſſary in the application of ſtimuli. |
| Colica Pictonum. | Diabetes. | | | |
| Gout. | Dropſy. | | | |
| Tetanus. | Jaundice, &c. | | | |

TO

JOHN BROWN, M. D.

THIS TABLE IS DEDICATED, AS A TESTIMONY OF RESPECT,

BY HIS FRIEND AND PUPIL,

SAMUEL LYNCH.

THE

# ELEMENTS

OF

# MEDICINE.

## THE FIRST AND REASONING PART.

## CHAP. I.

I. MEDICINE is the ſcience of preſerving the good and of preventing and curing the bad, health of animals.

II. The application of the ſame profeſſion to vegetables, ſhould be named Agriculture.

III. Good health conſiſts in a pleaſant, eaſy, and exact uſe of all the functions.

IV. Bad health conſiſts in an uneaſy, difficult, or diſturbed exerciſe of all or any of the functions. The latter reſpects diſeaſes.

V. Diſeaſes are either extended over the whole ſyſtem, or confined to a part; the former merit the appellation of Univerſal, the latter that of Local.

VI. The former are always univerſal from their firſt commencement, the latter in their courſe, and that but ſeldom. The former are always, the latter never, preceded by prediſpoſition. The originality of the former pro-

ceeds from an affection of the principle of life, of the latter from local injury. The cure of thoſe is applied to the whole body, of theſe to the injured part.

VII. To the province of the Phyſician belong all the univerſal, and as many of the local, as firſt affect a part, and, in conſequence of that, at laſt injure the reſt of the body with ſome reſemblance to the univerſal ones.

VIII. Prediſpoſition to diſeaſe is that ſtate of the body, that recedes from health, and approaches to diſeaſe in ſuch a manner, as to ſeem ſtill within the boundaries of the former, of which, however, it is only an inſidious and deceiving reſemblance.

IX. Theſe *three* ſtates (*a*) conſtitute the life (*b*) of animals; to which that of vegetables is not diſſimilar, but more imperfect.

## CHAP. II.

X. IN all the ſtates of life, man and other animals differ from themſelves in their dead ſtate, or from any other inanimate matter in this property alone; that they can be affected by external agents, as well as by certain functions peculiar to themſelves, in ſuch a manner, that the phænomena peculiar to their living ſtate, that is, their own functions, can be produced. This propoſition comprehends every thing that is vital in nature, and therefore, *at leaſt*, applies to vegetables.

XI. The external agents in general, are reducible to heat, diet (*a*), other matters taken into the ſtomach, the blood, the fluids ſecreted from the blood, and air. *How* poiſons

(*a*) Of health, diſeaſe, and prediſpoſition,

(*b*) Or living ſtate.

(*a*) Conſiſting of food, drink, and condiment.

poiſons and contagions come under the ſame view ſhall afterwards be mentioned.

XII. The functions of the ſyſtem itſelf, producing the ſame effect, are muſcular contraction, ſenſe, and the energy of the brain in thinking, and exciting paſſion and emotion. While theſe affect the ſyſtem in the ſame manner as the other agents; ſo, with reſpect to their origin, they ariſe both from the other and from themſelves.

XIII. The reſult of withholding either the property diſtinguiſhing living from dead matter, or the operation of either of the two ſets of powers, is the non-exiſtence of life. Nothing elſe is neceſſary to life.

XIV. The property, by which both ſets *of powers* act, ſhould be named Excitability; and the powers themſelves, Exciting powers. By the word "body" is meant both the body ſimply ſo called, and alſo as endued with an intellectual part, a part appropriated to paſſion and emotion, or to the ſoul; the appellation commonly given to it *in medical writings* is ſyſtem (*b*).

XV. The common effect, produced by the exciting powers, is ſenſe, motion, mental action, and the paſſions. Which effect being one and the ſame, it muſt, therefore, be granted, that the operation of all the powers is alſo one and the ſame (*c*).



(*b*) No diſquiſition is here meant to be entered into, as religion is no where interfered with, but left to its proper guardians.

(*c*) That is, ſince ſenſe, motion, mental functions, and the paſſions are the only, and a conſtant, effect of the exciting powers, acting upon the excitability; and ſince that happens, whether one, or more, or all the powers, or which ſoever of them, 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. This mode of reaſoning, which is certainly as juſt as it is new in medicine, will often occur, and, we truſt, will ſtand the teſt of the moſt ſcrupulous ſcrutiny.

XVI. The effect of the exciting powers, acting upon the excitability, is to be denominated Excitement.

XVII. Since, of the same exciting powers, some act by evident impulses, and the identity of the effect of others infers the same mode (*b*) of operation; and since they have all a certain activity in them, they ought to be denominated stimulant, or stimuli.

α. Stimuli are either universal or local.

ϵ. The universal stimuli are the exciting powers, so acting upon the excitability, as always to produce some excitement over the whole system. And their appellation of universal is convenient to distinguish them from the local.

γ. The local stimuli act only on the part to which they are applied; and do not, without previously producing an affection in it, affect the rest of the body.

## CHAP. III.

XVIII. WE know not what excitability is, or in what manner it is affected by the exciting powers. But, whatever it be, either a certain quantity, or a certain energy of it, is assigned to every being upon the commencement of its living state. The quantity, or energy, is different in different animals, and in the same animal at different times. It is partly owing to the uncertain nature of the subject, partly to the poverty of common language, and likewise to the novelty of this doctrine, that the phrases of the excitability being abundant, encreased, accumulated, superfluous; or weak, not well enough sustained, not well enough exercised, or deficient in energy, when enough

(*b*) Or ratio.

enough of ſtimulus has not been applied; ſometimes tired, fatigued, worn out, languid, exhauſted or conſumed, when the ſtimulus has operated in a violent degree; or being at other times in vigour, or reduced to one half, when the ſtimulus has neither been applied in exceſs nor defect, will be employed in different parts of this enſuing work. Both upon this, and every other ſubject we muſt abide by facts; and carefully avoid the ſlippery queſtion about cauſes, as being in general incomprehenſible, and as having ever proved a venemous ſnake to philoſophy.

XIX. As there is always ſome excitability, however ſmall, while life remains, and the action of the exciting powers in one degree or another is never wanting; the concluſion from that *fact* is, that they are all endowed with more or leſs of ſtimulant power, and that this muſt be either exceſſive, in due proportion, or deficient. A great quantity of blood ſtimulates in exceſs, and therefore, produces the diſeaſes that depend upon too much ſtimulus; but an under proportion of blood, though debilitating *in its effect*, and inducing the diſeaſes that depend upon debility as their cauſe, muſt ſtill be underſtood to be ſtimulant; but only ſo much more weakly ſtimulant, as the penury is more conſiderable: The ſame concluſion applies to all the other exciting powers, unleſs that poiſons, contagions, and ſome few other powers, might to ſome ſeem exceptions. But,

XX Poiſons either do not produce the univerſal diſeaſes, which make our preſent ſubject; or, if they do, by operating the ſame effect as the ordinary exciting powers, their mode of operation muſt alſo be allowed to be the ſame (*a*).

XXI.

(*a*) This propoſition of frequent occurrence in this work, that identity of known effect, always produces identity of cauſe though unknown, will be found to be a mode of reaſoning of equal ſervice in guarding

XXI. Some contagions accompany diſeaſes depending on too much ſtimulus (*b*); others thoſe that conſiſt in debility (*c*). If both theſe are the product, not of contagion alone, but, by a conjoint operation, alſo of the hurtful powers that uſually depend upon ſtimulus, which is a fact aſcertained: the effect, therefore, in this caſe being the ſame, the concluſion is unavoidable, that their cauſe is alſo the ſame, and the mode of operation of both the ſame. It muſt, therefore, be admitted that the operation of contagions is ſtimulant (*d*). It makes for the ſame concluſion, that no remedies, but thoſe that cure diſeaſes, depending upon the operation of the uſual hurtful powers, remove thoſe that have been ſuppoſed to be induced by contagions. Finally, the great debilitating energy, *obſervable* in certain contagions, does not more prove a diverſity of action *in them*, than *it does* in *the caſe of* an equal or greater degree of debility, ariſing from cold (*e*).

*. It might appear to ſome, that a certain matter of food, not ſufficiently nouriſhing, and therefore, *of* hurtful *tendency*; as alſo that emetics, and purgatives, and ſedative paſſions, as they are called, might be thought to belong to the number of *powers*, the operation of which might ſeem ſo many exceptions from the ordinary ſtimulant operation.

*. In general all vegetable matter, when depended upon alone for nouriſhment, is hurtful, at leaſt, to thoſe who have

guarding our reader from the deceitfulneſs of abſtract reaſoning, and in leading him into a proper mode of inveſtigating ſolid and uſeful truth.

(*b*) As the ſmall pox and meaſles.

(*c*) As the petechial typhus fever, the plague.

(*d*) This is all that is contended for at preſent; the degree of their ſtimulus will be afterwards conſidered.

(*e*) At the freezing point, or below it, man, and ſimilar animals of warm blood, could not live a ſecond in a denſe medium, ſuch as that of water; but the animals of cold blood can.

have been accuſtomed to better, and that by a debilitating operation; and yet even it, ſince it ſupports life, however incommodiouſly, longer than *a total* want of food, muſt, of courſe, be ſtimulant. But, if aſthenic diſeaſes ariſe from vegetable food, and not, to a certain degree, from want; that circumſtance muſt be owing to a certain change produced in the ſyſtem, by which the ſum total of ſtimuli is rendered leſs fit to act upon the excitability. That ſuch is the caſe, is proved by the moſt ſtimulant matter of food loſing part of its ſtimulus by continued uſe, and requiring the ſubſtitution of another in its place.

ζ. In the ſame manner is the operation of emetics and purgatives to be explained, as diminiſhing the ſum total of excitement; which depends partly on an agreeable relation *that the exciting power bears* to the excitability, or on an agreeable ſenſation. That it is ſometimes the relation, ſometimes the ſenſation, that acts *in this caſe*, is evident from the hurtful effect of things moſt grateful to the ſenſe, as in the examples of the legumina, and other articles of vegetable food; and by the ſalutary effect of diſagreeable things, as the ſeveral forms and preparations of opium: Both which produce their effect, the former by a debilitating, that is, an inſufficiently ſtimulant, the latter by a conſiderably ſtimulant, operation (*g*)

The

(*g*) Suppoſe a certain power, as 40, to mark the degree, in which the ſum total of proper ſtimulant operation conſiſts, and the excitement, produced to that degree, to ariſe from different exciting powers, all of them conducing to the ſame effect, by the operation of each bearing an agreeable relation to the excitability, or producing an agreeable ſenſation on it; the inference to be drawn from that fact is, that a certain ſuitableneſs in the mixture of the whole to the excitability, as well as the degree of ſtimulus, produces the effect. Again, ſuppoſe certain ingredients, which cannot be denied to be ſtimulant, added to this given mixture, the effect of the added article will be one of two: it will either increaſe the excitement firſt produced, without altering the agreeable

ſtate

». The ſedative affections, as they are called, are only a leſſer degree of the exciting ones. Thus fear and grief are only diminutions (*b*), or lower degrees, of confidence and joy. The news of money gained produces joy, and grief *ariſes from* the loſs of it. Here then no operation of a nature contrary to ſtimulant takes place; it is nothing but a diminution, or inferior degree, of ſtimulant operation. The ſubject of the paſſions admits of the ſame reaſoning in every reſpect as that of heat (*i*); and in the ſame manner all the bodies *in nature*, that ſeem to be ſedative, are debilitating, that is, weakly ſtimulant; owing their debility to a degree of ſtimulus greatly inferior to the proper one.

XXII. Since the general powers produce all the phaenomena of life, and the only operation, by which they do

ſtate which that had induced; or it will, ſtill without any reaſon for ſuppoſing it not ſtimulant, diminiſh the excitement that had ariſen from the combination of the agreeable articles. And this will happen merely from the effect of a diſcordant combination of exciting powers, while that, which diminiſhes the exciting effect of the others, as well as theſe others, that conſtituted its given ſum, are both ſtimulant; but the former in a higher, the latter in a lower degree, and therefore acting over all as debilitating powers. Muſtard taken with meat, or onions with beef-ſtakes, are agreeable to moſt taſtes: but they are, though ſtill ſtimulant, diſagreeable to others, and debilitating. Peas-ſoup and peas-pudding, though, independent of the animal juice infuſed into them, they are far from being ſalutary, will be borne by many; while in others, eſpecially thoſe who have been accuſtomed to more ſtimulant meals, and in perſons who are gouty, and liable to complaints of the firſt paſſages, they will produce morbid affection. The ſame thing is to be ſaid of beef-ſtakes with onions, which agree with the ſound ſtate, and diſagree with that of the firſt paſſages juſt now mentioned. With regard to all theſe enfeebling matters, there is no queſtion about their being ſtimulant; the whole effect is to be referred to their rendering a mixture, ſtimulant in a certain degree, leſs ſo.

(*b*) Not paſſions different in kind.

(*i*) The doctrine of cold as an active power, and, oppoſite to heat, is now univerſally rejected, and conſidered as only a diminution of heat.

do ſo, is ſtimulant; it, therefore, follows, that the whole phænomena of life, every ſtate and degree of health and diſeaſe, alſo conſiſt in ſtimulus, and are owing to no other cauſe.

XXIII. Excitement, the effect of the exciting powers, the true cauſe of life, is, within certain boundaries produced in a degree proportioned to the degree of ſtimulus. The degree of ſtimulus, when moderate (*i*), produces health; in a higher degree it gives occaſion to diſeaſes of exceſſive ſtimulus; in a lower degree, or ultimately low, it induces thoſe that depend upon a deficiency of ſtimulus, or debility. And, as what has been mentioned, is the cauſe both of diſeaſes and perfect health; ſo that which reſtores the morbid to the healthy ſtate, is a diminution of excitement in *the caſe of* diſeaſes of exceſſive ſtimulus, and an encreaſe *of the ſame excitement* for the removal of diſeaſes of debility. Both which *intentions* are called Indications of Cure.

XXIV. This mutual relation obtains betwixt excitability and excitement, that the more weakly the powers have acted, or the leſs the ſtimulus has been, the more abundant the excitability becomes; the more powerful the ſtimulus of the agents has been, the excitability becomes the more exhauſted.

XXV. A mean ſtimulus, affecting alſo a mean or half conſumed excitability, produces the higheſt excitement. And the excitement becomes leſs and leſs, in proportion as either the ſtimulus is applied in a higher degree, or the excitability more accumulated. Hence the vigour of youth, and the weakneſs of childhood and old age. Hence within a more moderate ſpace of time, a middle diet *gives* vigour, and debility is the effect of its being either too full or too ſparing.

XXVI.

(*i*) Of a middle kind.

XXVI. While that is the caſe, every age, every habit, if the excitement be properly directed, has its *due degree* of vigour *accommodated to it*. Childhood, and that weakneſs, which an abundant excitability produces, admits of little ſtimulus, *but*, upon leſs than the middle proportion becomes languid, upon more is oppreſſed. Old age, and that frailty, which is occaſioned by a deficiency of excitability, requires a great deal of ſtimulus, becomes enfeebled by leſs, and overſet by more. The reaſon for the latter is, that the excitability, without which no vital action is produced, does not exiſt in that degree, by which vigour of the functions is produced; while the former is to be explained from the exciting or ſtimulant power, without which the excitability is of no effect, not being applied in that degree, which is requiſite to the vigour that it ſhould give. The impotency of ſtimulus may riſe to ſuch a degree, as to produce death from its extreme under proportion. On the contrary, the exhauſtion of excitability may go ſo far, as to extinguiſh life by the extreme exceſs of ſtimulus.

XXVII. The circumſtances, under which excitement is produced, have two confining boundaries.

XXVIII. The one of theſe circumſtances is, exhauſtion of the excitability from violence of ſtimulus. For all the ſtimulant powers may carry their ſtimulant energy to that degree, under which no excitement will ariſe. The reaſon for which is, that the body becomes no longer fit to receive the operation of ſtimulus; another expreſſion for which is, that the excitability is conſumed.

XXIX. The termination (*t*) of excitement, from the exhauſtion of the excitability by ſtimulus, may be either temporary or irreparable, and may ariſe either from a ſhort continuance of a high degree of ſtimulus, or a long application of one the exceſs of which is more moderate. Both circum-

(*t*) Or ceſſation, or extinction.

circumſtances come to the ſame thing; the high degree of ſtimulus compenſating for the ſhortneſs of its application, and the ſhortneſs of its application for its greater moderation in degree (*l*). The effect of the former is ſudden death; of the latter a more gradual death preceded by diſeaſes. And though a moſt exact meaſure of excitement were kept up, yet death at laſt, however late, ſupervenes.

XXX. Ebriety, debauch in eating and drinking, ſweat, langour, heat, either *operating* alone, or overcoming the effect of cold, dulneſs in mental exertion from exceſſive thinking, or ſinking of the ſpirits in conſequence of violence of paſſion, finally, ſleep; all theſe are the conſequences of a ſhort application of a high degree of ſtimulus, operating an exhauſtion of excitability. The long continuance of a more moderate exceſs in the force of ſtimulus, is followed by the frailty of old age, prediſpoſition to diſeaſes of debility, as well as thoſe diſeaſes themſelves. The ultimate termination of both is death.

XXXI. When the excitability is waſted by any one ſtimulus, there is ſtill a reſerve of it, capable of being *acted upon* by any other. Thus a perſon, who has dined fully; or is either fatigued in body, or tired with intellectual exertion, and therefore under a great diſpoſition to ſleep, will be recruited by ſtrong drink; and, when the laſt has produced the ſame ſleepineſs, the more diffuſible ſtimulus of opium *will arouſe him* (*m*). Even after opium fails, and leaves

(*l*) A force of ſtimulus as ſix, operating for a ſpace of time as one; and a force of ſtimulus as one, operating for a ſpace of time as ſix, will produce the ſame effect in wearing out the excitability,

(*m*) A gentleman, engaged in a literary compoſition, which required an uninterrupted exertion of his mental faculties for more than forty hours, was enabled to go through it with alacrity, by ſupporting himſelf in this manner. After dining well and ſetting to buſineſs, he took

a

leaves him heavy and oppreſſed by the ſame propenſity, a ſtimulus ſtill higher and more diffuſible, if there be any ſuch, will have the ſame effect. A perſon fatigued with a journey will be rouſed by muſic to dance and ſkip; and he will be enabled to run after a flying beauty, if her flight encourages him with the hope of overtaking her.

XXXII. The waſte of excitabilility, firſt exhauſted by ſtimuli, and then recruited by new ones, is moſt difficultly repaired; becauſe the more a ſtimulant operation has been employed, that is the more the ſtimuli have been applied; there remains the leſs acceſs to freſh ſtimuli, by the operation of which the failure of excitement may be removed.

XXXIII. The reaſon of the difficulty is, that no means of reproducing the healthy ſtate, that is, the proper *degree* of excitement, is left; but the very circumſtance that occaſioned the waſte, that is, already an exceſs of ſtimulant operation, not admitting of more ſtimulus.

XXXIV. Such, in fine, is the nature of the ſame loſs of excitement, that it ruſhes to inſtant death, unleſs proper meaſures be taken to preſerve life by a great ſtimulus, but leſs than that which occaſioned it, and then by a ſtill leſs, till by means of the moderate ſtimulus, that is ſuitable to nature, or a ſomewhat greater, life may at laſt

a glaſs of wine every hour. Ten hours after he ate ſomething nouriſhing, but ſparing in quantity, and for ſome hours kept himſelf up with punch not too ſtrong. And, when he found himſelf at laſt like to be overcome by an inclination to ſleep, he changed all his ſtimuli for an opiate; and finiſhed his buſineſs in forty hours. What he had wrote was now to be put to the preſs. He had next to watch and correct the proofs, which coſt him between four or five hours further continuance of vigilance and activity. To effect this he took a glaſs with the Maſter Printer, while his men were going on with their part of the work. The ſucceſſion of ſtimuli in this caſe was firſt food, next the ſtimulus of the intellectual function, then wine, then the food varied, then punch, then opium, then punch and converſation.

laſt he preſerved. The difficult cure of drunkards and gluttons, already affected with diſeaſes, ſufficiently evinces, that the ſame conſideration applies to all the exciting powers that ſtimulate in exceſs (*a*).

XXXV. The excitability, thus exhauſted by ſtimulus is debility, which ſhould be denominated indirect, becauſe it does not ariſe from defect, but exceſs of ſtimulus (*b*).

XXXVI. Through the whole progreſs to indirect debility, the ſecond impreſſion of every ſtimulus has leſs effect than the firſt, the third leſs than the ſecond, and ſo forth to the laſt, which gives no more excitement; and the effect takes place in proportion to the degree or duration of *the ſeveral impreſſions*, though every one always adds ſome excitement. The inference from this propoſition is, that, before the eſtabliſhment of indirect debility, and, when it is now upon the eve of being eſtabliſhed, the ſtimulus which produces it, ſhould be withdrawn; a debilitating power ſhould be applied, as in giving over drinking wine at the end of an entertainment, and ſubſtituting water in its place, and applying refrigeration to a perſon who has been expoſed to an exceſſive degree of heat (*c*).

XXXVII. The ſame progreſs to indirect debility is

(*a*) This propoſition applies to the moſt difficult part of the practice for the cure of diſeaſes, that is, thoſe that depend upon a certain ſpecies of debility, which in the very next paragraph will be denominated *indirect*.

(*b*) Like another debility, by and by to be ſpoken of.

(*c*) A convaleſcent, from a diſeaſe of debility, was preſcribed wine, but not to carry it to exceſs. A hiccup was the ſignal, by which he was to underſtand, that he had carried that ſtimulus too far. He deſiſted, and ended his jollity with two or three tumbler glaſſes of water; which prevented the eſtabliſhment of the indirect debility into which he was about to fall.

is retarded by diminiſhing the excitement from time to time, and proportionally encreaſing the excitability, and thereby giving more force to the action of the ſtimuli. Take, for example, cold bathing from time to time, lowering the diet from time to time, and a ſimilar abatement of all the *other* ſtimulant powers.

9. If cold ſometimes ſeems to ſtimulate, it produces that effect, not as actual cold, but either by diminiſhing exceſſive heat, and reducing it to its proper ſtimulant temperature (*d*), or by rendering the body acceſſible to air, or by accumulating the excitability diminiſhed by exceſſive ſtimulus, and communicating energy to the ſtimulus of the exciting powers, now acting too languidly. An inſtance of this operation of cold occurs in the Torrid Zone, where actual cold is ſcarcely to be procured, in the uſe of refrigerants, as they are called, in fevers, and in the contraction, by means of cold, of a ſcrotum previouſly relaxed by heat. Nay, the effect goes ſo far, that ſthenic diſeaſes

(*d*) The principle upon which the operation of the cold bath depends has never been underſtood, and therefore all reaſoning, as well as practice, with reſpect to it, has been conducted in quite a vague and random manner. Suppoſe a range of excitement, the middle and healthy point of which is 40 degrees of excitement, the ultimate degree of its exceſs 70. It is, therefore, the intermediate degrees between theſe extremes, to which the practice of cold bathing is applicable. From 80 to 70, the former of which is the head of the ſcale, and conſtitutes the range of indirect debility; and likewiſe through all the intermediate degrees from 40 down to 0, the cold bath, which is a weakening power, as well as every other, is improper. It is a miſtake prevalent among ſyſtematic writers and lecturers, that cold is of ſervice in the fevers and other diſeaſes of the Torrid Zone. The truth is, that, in that country, there is no acceſs to the uſe of actual cold. All, that can be done there, is, by various means, to diminiſh the exceſs of heat, which is conſtantly ruſhing from thoſe degrees of it which ſtimulate and excite, to thoſe, in which its ultimate ſtimulant power deſtroys excitement, and leaves nothing but indirect debility.

diſeaſes may ariſe more certainly from cold, alternating with heat, and either preceding or following it, than from pure heat.

XXXVIII. The other condition *or circumſtance*, limiting excitement, is, an energy of the exciting powers too ſmall, and therefore inſufficient to produce excitement. As this caſe ariſes from a deficiency of ſtimulus, and an abundant excitability, it ought to be diſtinguiſhed from the other, which ſuppoſes an abundance of the former, and deficiency of the latter. The ſame diſtinction is required alſo for the purpoſe of practice. All the exciting powers may fall ſo ſhort of ſtimulant force, as to produce that effect. They all, therefore, equally ſerve to illuſtrate and confirm this *propoſition*.

XXXIX. In this caſe, the excitability is abundant, becauſe, in conſequence of the ſtimuli being withheld, it is not exhauſted. Thus, in the cold bath, the excitement is diminiſhed, becauſe the ſtimulus of heat, and, therefore, the ſum of all the ſtimuli, is deficient; and the excitability, as being leſs exhauſted by ſtimulus, is encreaſed (*e*). The

(*e*) This is altogether a negative circumſtance. The accumulation, encreaſe, or abundance of excitability, take any term you pleaſe, is not occaſioned by any action or operation, but by the want of action, the want of operation. To form an adequate idea of it, ſuppoſe a ſcale of excitability of 80 degrees, as in the line here drawn.

EXCITING POWER.

0 10 20 30 40 50 60 70 80

EXCITABILITY.

80 70 60 50 40 30 20 10 0

At the commencement of life, the ſum total aſſigned is underſtood to be 80, becauſe no part, as yet, is waſted by the action of ſtimuli. Next it is waſted in proportion as theſe are applied from the beginning to the end of the ſcale. Its waſting is, therefore, owing to action and operation, but its accumulation to the reverſe, the want of the action or operation of the exciting powers, as is expreſſed by the numbers placed above

The ſame concluſion applies to famiſhed perſons, to water drinkers, to thoſe who are in a ſtate of refrigeration from other cauſes, to thoſe who have ſuffered evacuations of any kind, to thoſe who have *neglected the ſtimulus of exerciſe, and* given themſelves up to indolence, to thoſe who have neglected the uſe *of that ſtimulus, which* exerciſe of the mind affords, and to perſons in low ſpirits. The effect of withdrawing any ſtimulus is the more liable to produce direct debility, the more any perſon has been accuſtomed to a higher operation of it (*f*). Take, for an example, the gout, and many other diſeaſes, under the ſame circumſtances, affecting ſome, and ſparing others (*g*).

XL.

bove thoſe firſt mentioned. Thus one degree of exciting power applied takes off one degree of excitability, and every ſubſequent degree impairs the excitability in a proportion exactly equal to its degree of force. Thus a degree of ſtimulant or exciting power equal to 10, reduces the excitability to 70; 20 to 60; 30 to 50; 40 to 40; 50 to 30; 60 to 20; 70 to 10; 80 to 0. And, on the contrary, the ſubtraction of ſtimulant power allows the excitability to accumulate. Thus, when the excitement is at 79, conſtituting only one degree of life, take off one degree of exciting power, and 2 degrees of excitability will ariſe. As 80 degrees of exciting power leave no excitability, ſo 70 degrees of exciting power leave 10; 60 20; 50 30; 40 40; 30 50; 20 60; 10 70; 0 80. Hence death takes place from nothing poſitive, but from the negation of the only means by which life is ſupported; which are the ſeveral exciting or ſtimulant powers, now fully explained.

(*f*) For inſtance, perſons accuſtomed to drink wine, and eat well-ſeaſoned nouriſhing animal food, will be more hurt by a water and vegetable regimen, than thoſe who have not lived ſo high in that reſpect. The inhabitants of Britain could not live long upon the diet of the Gentoos. Perſons in genteel life could never undergo the work of day labourers upon their fare,

(*g*) Vegetable aliment, and fruits and cold roots, as cucumbers, melons, acid drinks, and many other things not ſufficiently ſtimulant, will bring on a fit of the gout, all or any one of them, at any time; while there are other perſons free from the taint which diſtinguiſhes that diſeaſe,

who

XL. As, during the encreaſe of excitability, the excitement decreaſes, and in proportion to the encreaſe of the former; ſo that that proceſs may go all the way to death, is a fact from which nature exhibits no exception. It is confirmed by the effect of all the debilitating powers mentioned above; every individual of which, as often as it proves urgent, has a rapid tendency to death.

XLI. The defect of any one ſtimulus, and the proportional abundance of excitability, is, for the time, compenſated by any other, and often with great advantage to the ſyſtem. So a perſon, who has dined inſufficiently, *and therefore not well enough ſtimulated*, is recruited by a piece of good news. Or, if during the courſe of the day, he has not been ſufficiently invigorated by the ſtimulant operation of corporal or mental exerciſe, and conſequently likely to paſs a ſleepleſs night, he will be laid aſleep by a doſe of ſtrong liquor. When the latter is not at hand, opium will ſupply its place. The want of the venereal gratification is relieved by wine, and the want of the latter is made amends for by *the uſe of* the former, each baniſhing languor occaſioned by the want of the other. The ſame concluſion applies to the uſe of ſtimuli, for which we have an artificial, rather than a natural, craving. The longing for ſnuff, when it cannot be got, is gratified by the practice of chewing tobacco; and, when any one is languid for want of tobacco, ſmoaking ſupplies the place of it. Nay, when the functions, as they often are, have undergone a temporary leſion, and on account of that, there is no acceſs to the uſe of certain accuſtomary and natural ſtimuli; the ſubſtitution of others, leſs accuſtomary, and leſs natural, ſupports life, till the deſire for the natural ſti-



who can uſe them with impunity, or, at leaſt, with much more freedom and leſs harm. Something ſimilar to this obſervation applies to moſt diſeaſes.

muli is reſtored, and theſe are now in a condition to ſupport the natural vigour as uſual, and the health *finally* eſtabliſhed (*u*).

XLII. As, in this manner, the ſuperabundance of excitability, proportioned to the deficiency of ſtimulus, may through all the degrees from its ſmalleſt to its greateſt quantity, be worn out to a certain extent, by one ſtimulus, and then another, and the danger *of its morbid* accumulation awarded, till the ſum of it be brought down to that, which is ſuitable to health; ſo, the more abundant the *ſame* excitability is, that is the more ſtimuli are withdrawn, or the greater the penury of the moſt powerful ſtimuli is, the leſs recourſe can be had to that mediocrity of excitability on which the vigour of life depends; and the weakneſs may go to that pitch, the excitability arrive at that degree of abundance, that the *loſs of* excitement may at laſt become irreparable. This propoſition is both illuſtrated and confirmed by the uſe of every debilitating power; as is exemplified by cold, famine, thirſt, and *the progreſs of* fevers.

XLIII. This ſuperabundant excitability proceeds with ſuch rapidity to death, that the only means of reſtoring health, is firſt to encounter it with a very ſmall *doſe of* diffuſible ſtimulus, *a doſe* ſcarcely exceeding the ſcanty (*w*) proportion of ſtimulus, that occaſioned it; then, after waſting a part of the ſuperabundance, to proceed to ſomewhat a ſtronger doſe *of the ſtimulus*; and in that manner to be conſtantly taking off whatever ſuperfluity ſtill remains, till at laſt

(*u*) This propoſition is of the utmoſt importance, as holding out the true principle, upon which ſo many actions and feelings of human life, both in health and diſeaſe, are to be explained, and particularly as laying down an indication, which applies to $\frac{19}{20}$ths of all the febrile diſeaſes, and include our artificial as well as our natural deſires and appetites.

(*w*) Or under-proportioned.

laſt the ſalutary mediocrity is regained. This ſtate is the converſe of that debility, which ariſes from a worn out excitability (*x*), and the danger of death occaſioned by it. *To give examples*, a famiſhed perſon is not immediately to be gratified with a full meal; a perſon afflicted with a long duration or high degree of thirſt, is not immediately to be indulged with a large draught: but the former ſhould be given bit by bit, the latter drop by drop, then both of them gradually more plentifully. A perſon benumbed with cold ſhould gradually receive the cheriſhment of heat. Every perſon, thoroughly penetrated with grief, ſorrow, or any high dejection of mind, ſhould have good news gradually communicated to him. The news of the ſafety of the Roman ſoldier, who ſurvived the diſaſter his countrymen at Cannae, ſhould have been communicated to the mother in a round-about way, at firſt as having no better foundation than doubtful report, then as being ſomewhat more to be depended on, afterwards as having ſtill a greater appearance of certainty, finally, as not admitting a ſhadow of doubt: and laſt of all, before her ſon was introduced to her, the woman ſhould have been at the ſame time fortified (*y*) both by other ſtimuli, and a glaſs of Falernian wine.

XLIV. Since all life conſiſts in ſtimulus, and both the over-abundance and deficiency of it is productive of diſeaſes, and in *exact* proportion to the over-abundance or deficiency; it follows, that the remedies of both theſe deviations from the *proper* ſtandard ſhould be accommodated to their degree;



(*x*) An inſtance of worn-out Excitability is that debility which ariſes from intoxication; one of an accumulated excitability is that which dram-drinkers experience the day after a debauch, in conſequence of which their hands ſhake till they are re-excited by their favorite cordial.

(*y*) Had a part of her abundant excitability taken off,

and that a high ſum total of ſtimulus, through the courſe of the diſeaſe, ſhould be applied to a high degree of debility, or, what comes to the ſame thing, to a very abundant excitability; but, that the quantity to be applied at any *particular* time ſhould be in the ſame proportion ſmall that the excitability is abundant.

XLV. The debility ariſing from defect of ſtimulus, merits the appellation of DIRECT; becauſe it happens in conſequence of no poſitive hurtful power, but from a ſubduction of the neceſſary ſupports of life.

XLVI. Through the whole courſe of direct debility every deficiency of ſtimulus is encreaſed by a ſecond, the ſecond by a third, the third by a fourth, till the effect at laſt comes to be a ceſſation of any further excitement. This laſt, therefore, is never to be leſſened, and the debility encreaſed, with the view, forſooth, that in conſequence of encreaſing the excitability, the addition of a new ſtimulus may act more ſtrongly. For, as often as that is put in practice, the morbid ſtate is encreaſed; and, if the debility ſhould happen to be great, any *further* encreaſe of it may induce death, but *never* encreaſe the ſtrength. For, while great debility, and, indeed, at pleaſure, may, *in that way*, be produced; *any* excitement to be obtained from a ſtimulus to come after, is confined within narrow boundaries (z). Take for an example, cold bathing in dropſy

(z) Suppoſe, that in place of an excitment of 40 degrees, the excitement is gone down to XXX, and the excitability mounted up to L, and a debilitating power, ſuch as the cold bath, or any of thoſe that are juſt now to be mentioned in the text, has been ſuperadded, reducing the excitement to XXV, and accumulating the excitability to LV. Suppoſe alſo, that any ſtimulus is next employed, with a view to raiſe the excitement, and ſink or reduce the excitability; what will be the reſult? As an accumulated excitability admits of a very ſmall degree of ſtim-

dropſy, in the gout, in fevers (*a*), in perſons who, previous to this, have undergone refrigeration, and in every ſort of debility. And who would treat *the caſes of* famine, of deep ſorrow, of weakneſs of the mental function, of languor from inactivity, of penury of blood, *which are all caſes of direct debility;* who would treat them by ſuperinducing *more* direct debility, with a view to his gaining ſome advantage from the very ſcanty ſtimulus, *that can be admitted?* The accumulation of excitability, applies only to the prediſpoſition to indirect debility, or ſthenic diatheſis.

XLVII. With reſpect to every ſort of debility, *it is to be obſerved, from all that has been ſaid upon both forms of debility*, that, as indirect debility is never to be cured by direct, ſo neither the latter by the former, nor either by the other, in the vain hope of obtaining benefit from the after employment of any ſtimulus (*b*).

CHAP.

ſtimulus at any given time, while the accumulation of excitability, and ſinking of excitement, even to death itſelf, can be effected in the ſhorteſt ſpace of time, and by any one of the debilitating powers; conſequently, the loſs of vigour by the firſt practice, and the reparation of it by the laſt, will bear no proportion to one another; there will be no poſſibility of regaining the vigour thrown away, much leſs any hope of procuring more than exiſted before it was lowered.

(*a*) By fevers here are meant thoſe diſeaſes, ſo named, which depend on evident debility, and not any of thoſe, which, though moſt injudiciouſly ſo named, depend upon an oppoſite cauſe. Inſtances of the former we have in all the fevers of the intermitent or remittent kind, in ſynochus, typhus, and the plague itſelf, with others that have never been conſidered as fevers. Examples of the latter occur in ſynocha, or the common inflammatory fever in the ſeveral diſeaſes of the ſame ſtamp accompanied with inflammation in a part, as in the throat, lungs, and various parts of the external ſurface.

(*b*) Indirect debility appears in the range of a ſcale from 70 up to 80; the direct, in all the degrees below 40 to 0. The only caſes, that admit of debilitating operation, are thoſe of exceſſive excitement from 40 up to 70. For the cure of diſeaſes within this latter range, all the directly

## CHAP. IV.

### *Of the Seat and Effects of Excitability.*

XLVIII. THE ſeat of excitability in the living body (*a*), is medullary nervous matter, and muſcular ſolid; to which the application of nervous ſyſtem may be given. The excitability *is* inherent in it *but* not different in different parts of its ſeat. This fact is proved by the production of ſenſe, motion, the mental function, and paſſion (*b*), immediately, inſtantaneouſly, and not in a ſeries of ſucceſſive operation (*c*).

1. Diſ-

rectly debilitating powers are proper, and, for the moſt part, they only; becauſe there is no acceſs to the uſe of the indirectly debilitating powers till they have run their full courſe of ſtimulant operation from 40 to 70, at which laſt only they become debilitating; and, though ſometimes, and under certain circumſtances, they may be employed, the ſafeſt general rule is to avoid them.

(*a*) Called ſyſtem by medical writers.

(*b*) That is, all the functions which diſtinguiſh living animal ſyſtems.

(*c*) If a ſmall quantity of an opiate, or a large one of any ſtrong ſpirit taken into the ſtomach, can inſtantly alleviate an excruciating pain in a part the moſt diſtant from that to which the remedy is applied, and, in a ſhort time after, remove it altogether, as is now well known, how is that to be explained but by the above propoſition: it being impoſſible to pretend that it is carried in the veſſels? Nor is any other of the many hypotheſis, that have been thought of for the ſolution of this fact, more admiſſible. Should it be imagined, that it moves along the nerves according to the laſt opinion, we demand proof of that aſſertion; which has not yet, and will not eaſily be produced; while the fact juſt now aſſigned carries its own demonſtration in its boſom. The queſtion reſolves itſelf wholely into the following ſolution; Why does opium at once relieve the gout in the ſtomach, on the internal ſurface, and in the remoteſt extremity of that ſurface? Becauſe the property in the living ſyſtem, upon which and by which it acts, is one and the ſame over all

ι. Different exciting powers are applied to different parts of the nervous ſyſtem, none at once to the them all; but *the mode* of their application is ſuch, that, wherever they are applied, every one immediately affects the whole excitability.

XLIX. Every one of the ſame powers always affects ſome part more than any other, *in which reſpect* one power *affects* one part *more than any other*, another another, *with the ſame* inequality. The affected part is generally that to which any of the powers is directly applied.

κ. And beſides that, the more excitability has been aſſigned to any part from the beginning *of the living ſtate*, that is, the more vivid and ſenſible it is, the operation upon it of each exciting power, whether acting with due force, or in exceſs, or in defect, and through all the intermediate degrees *of its action*, becomes more powerful (*d*). Thus the brain and alimentary canal poſſeſſes more vivid excitability, that is, more propenſity to life, than other internal parts; and the parts below the nails, than other external parts. Again, while the fact juſt now related is ſuch, as it has been ſtated, the affection of the part bears no proportion to that diffuſed over the whole body.

L. An eſtimate may be formed of the degree of affection in the part more affected *than any other*, and of that which is diffuſed over the whole body, by comparing the affection of the former with as many leſſer affections, taken together, as equal the number of parts in all the reſt of the body. Suppoſe the greater affection of a part (*f*) to

(*d*) That is to ſay, if the exciting power acts with that force which produces health, the degree of its action is greater upon the given than any other part; as alſo when its action is either greater or leſs than that of the middle ſalutary degree.

(*f*) As the inflammation of the lungs in peripneumony, the inflammation of the foot in the gout, the effuſion of water into a general or particular cavity in dropſy.

to be as 6, and the leſſer affection of every other part to be 3, and the number of the parts leſs affected to amount to 1000 (*g*); then *it will follow, that* the ratio of affection, confined to the part, to the affection of all the reſt of the body, will be as 6 to 3000. This eſtimate, or ſomething very like to it, is proved by *the effect of* the exciting hurtful powers, which always act upon the whole body (*h*); and by *that of* the remedies, which always remove the effect of the hurtful powers from the whole body (*i*), in every general diſeaſe (*k*)

LI.

(*g*) Which is keeping greatly within the truth.

(*h*) The hurtful powers, which produce peripneumony, in common Engliſh, the inflammation of the lungs, are exceſs in eating, drinking, expoſure to heat, or to the alternation of heat with cold, an over proportion of blood from inactivity, or an encreaſed velocity of its motion from violent labour, &c. the effect of any or all which muſt fall as much upon every other part of the ſyſtem as upon a ſmall portion of extreme veſſels in the lungs, and therefore the morbid affection produced cannot be confined to the latter, but muſt be extended to the former. The whole body muſt partake of the morbid change; it muſt be one common affection prevading the whole. If this is not probation, let any thing left on record by authors, or any living phyſician, produce a ſingle hurtful power, that, without affecting the ſyſtem over all, can penetrate into the inmoſt receſſes of the lungs, and there produce an inflammation. I ſhall be content with one ſuch hurtful power, and in exchange for it, when produced, give up my whole doctrine.

(*i*) Here too I throw the gauntlet. Find a ſingle remedy which removes the diſeaſe by an operation confined to the lungs. There is not one.

(*k*) A wound in the lungs, among other effects of it, may produce an inflammation. But that is not a peripneumony, or a general diſeaſe at all. It is, on the contrary, a local one, ariſing from a local cauſe, and to be removed by local remedies, if acceſs could be had to them. And though nothing has been more common than blending ſuch caſes of local and general diſeaſe, at the ſame time no error that has hitherto crept into the art, needs more to be corrected. Such an accident is as much a peripneumony, as an inflammation from a contuſion in the foot is a gout, or the ſwelled legs of women heavy with child is dropſy. But of all this more hereafter.

LI. In this way temperature affects the ſurface of the body; diet the ſtomach, and the reſt of the ſame canal; the blood and other fluids their reſpective veſſels; labour and reſt the veſſels again, and fibres of the muſcles: paſſion and exertion in thinking, the brain; all theſe affect the parts mentioned, each that upon which its action is exerted, more than any other equal part.

LII. Inſtances of a greater excitement of a part than *of the reſt of the body*, are found in ſweat in a perſon in health, flowing firſt from the brow under exerciſe, in checked perſpiration, in inflammation or an affection analagous to it in diſeaſes, in head-ach and delirium. Proofs of a leſſer excitement in a part, are exceſſive perſpiration and ſweat not occaſioned by labour or heat, eſpecially when it is cold and clammy, profuſion of the other excretions, ſpaſm, convulſion, partial palſy, weakneſs or confuſion of intellect, *and again* delirium.

LIII. As the operation of the general powers, whether exciting in exceſs, in due proportion, or in defect, is directed to ſome one part a little more than to any other equal part; *it is next to be obſerved*, that it muſt be of the ſame kind in that part as in the reſt, and as well as the general *operation*, be either in exceſs, or in juſt proportion or deficient, but never of an oppoſite *nature*. For as the exciting powers are the ſame, and the excitability every where the ſame, it is impoſſible that the effect ſhould not be the ſame. The excitement, therefore, is never encreaſed in a part, while it is diminiſhed in the general ſyſtem—nor diminiſhed, while the general excitement is encreaſed. There is no difference here, but one of degree; nor can different effects flow from one and the ſame cauſe.

λ For though, on account of the great ſenſibility of

certain parts, (for inſtance, the ſtomach (*l*), and the forcible energy of the exciting powers, either in ſtimulating or debilitating, exerted on them, theſe parts run ſooner than moſt others either into direct or indirect debility, or into a great encreaſe of excitement; that however is only *a matter* of ſhort duration, and it is not long before the reſt of the functions are hurried into the ſame ſtate. Thus, nauſea, vomiting, diarrhœa, and other ſimilar ſymptoms, produced by ſtrong drink and opiates; as well as the ſame affections apparently, and the gout, colic, gripes, and other ſimilar ſymptoms, occaſioned by abſtinence and water drinking; likewiſe good appetite, and the removal of the turbulent ſymptoms of the ſtomach and inteſtines, which we have mentioned, taking place in the convaleſcent ſtate, in conſequence of a proper adminiſtration of food, drink, and diffuſible ſtimulants: *all theſe* are ſhortly followed by a ſimilar ſtate of the reſt of the body, and the eſtabliſhment of indirect debility is the conſequence of the firſt caſe; that of direct debility *ſucceeds* to the ſecond, and health over all is the termination of the laſt.

LIV. A part, therefore, is the ſeat of no general affection; the whole body is the ſeat of them all; becauſe, with the inequality *above* related, the whole excitability is affected in them all.

LV. Neither is the affection of the more ſuffering part the firſt, and afterwards propagated over the ſyſtem; for this good reaſon, that, as ſoon as the excitability is affected any where, it is alſo and immediately affected every where. Both facts are confirmed by the operation of every exciting power, affecting the whole body as quickly as any one part; by general morbid affections appearing equally ſoon over

(*l*) For the ſame reaſon, i. e. the ſenſibility of the genital ſyſtem, wine and other ſtrong liquors, as well as opium, operate indirect debility ſooner upon theſe parts than others.

over all the ſyſtem as in any part, and for the moſt part ſooner (*m*). Therefore,

LVI. Every affection of a part, however formidable, *occurring* in general diſeaſes, is to be conſidered as only a part of the affection inherent in the whole body, and the remedies are not to be directed to a part, as if the whole diſeaſe lurked there, and was thence to be taken off only, but to the whole body, to all which it belongs (*n*).

## CHAP. V.

### *Of Contraction and its Effects.*

LVII. THE entire and vigorous contraction with which muſcular fibres are endowed, is in proportion to the degree of excitement on which it depends (*a*). This is proved by all the phænomena of health and diſeaſe, and by the operations of all the exciting powers and of all the remedies. Force and propenſity to motion are the ſame. We muſt judge from facts, not from appearances. Conſequently

(*m*) The pain of the thorax in peripneumony, which is the ſign of the inflammation within, never appears ſo ſoon as the general affection, and in more than in one-half of many hundred caſes, where this fact has been painfully ſcrutinized, it did not appear till one, two, or three days after the commencement of the general affection. Likewiſe the pain of the gout is not the firſt of the phænomena of that diſeaſe. But all theſe, and many more particulars, will be brought in with more advantage in their proper places afterwards.

(*n*) When the affection of a part is external, and, therefore, acceſſible, the application of a remedy over it, in conjunction with the uſe of the internal remedies, is of ſervice, in conſequence of their mutually aſſiſting each other. A rag drenched in a liquid opiate, helps the operation of that remedy taken internally; but that is ſtill by operating upon the excitability over all.

(*a*) It has already been proved, that all the functions depend upon excitement and therefore contraction among the reſt.

ſequently, tremor, convulſion, and every affection comprehended under it, are to be imputed to debility as their cauſe. The hurtful exciting power is a ſtimulus uncommonly irritating to the part.

LVIII. The degree of contraction, that conſtitutes ſpaſm, is not an exception from this *propoſition*. It is a continued and deficient function, rather than a great and exact one; and in ſo far as it is a great contraction, it depends upon the local ſtimulus of diſtention, or of ſomething reſembling diſtention, it conſiſts in diminiſhed excitement, is devoid of force, and removed by ſtimulant remedies. The appearance of ſymptoms, which is ever miſleading, is never to be truſted in forming any judgement. Take now both the fact and the explanation of it.

LIX. As the degree of contraction, in ſo far as it is a ſound function, is connected with force; from that we are to hold it as a certain and demonſtrated fact, that the denſity of muſcular fibres conſidered as ſimple ſolids, is proportioned to the degree of their contraction.

LX. It muſt therefore be admitted, that excitement is the cauſe of denſity. And the denſity is rendered greater and greater by the excitement in proportion to the degree of the latter: Which it is eaſy to perceive through all the intermediate degrees *of ſtrength*, from *the higheſt*, *or that* which takes place in madneſs, and the denſity correſponding to it, to *the loweſt*, or that debility which is diſcerned in the article of death, in death itſelf, and after death, with a laxity correſponding to it. That this is the fact, is proved by the weakneſs of the ſame fibres in their dead, and their ſtrength in the living ſtate; the only cauſe of which difference, we know for certain, is excitement (*b*).

LXI.

(*b*) Experiments have been made by Baron Haller and others, to aſcertain the comparative ſtrength of muſcular fibres, and the criterion of

LXI. Hence the cavities of the veſſels, through their whole tracts, over the whole body, are diminiſhed in *a ſtate of* ſtrength, and encreaſed in weakneſs. This is the true cauſe of diminiſhed preſpiration (*c*).

## CHAP VI.

### *The forms of Diſeaſes and Prediſpoſition.*

LXII. EXCITEMENT, the effect of the exciting powers, when *of* a proper *degree*, conſtitutes health; when *either* exceſſive or deficient, *it proves the occaſion of* diſeaſe, and, of prediſpoſition previous *to the arrival of diſeaſe*. The ſtate both of the ſimple ſolids and fluids follows that of health as conſtituted by the excitement, and a given ſtate (*a*).

$\mu$. The firſt cauſe of the formation of ſimple ſolids, and the ſole one of their preſervation after, is the excitement. Under the direction of the excitement, the living ſolids produce the blood from an external matter taken into *the ſyſtem*, keep it in motion, form its mixture, ſecrete from it various fluids, excrete them; abſorb others, and circulate and expel them from the body. It is the excitement alone, thro' its varying degrees, that produces either health, diſeaſes, or the return of the ſound ſtate. It alone governs both univerſal and local diſeaſes. Neither of which

of judgment was their greater or leſſer diſpoſition to break by appended weights; but the power by which any body reſiſts ſtretching, is the denſity of that body. Thoſe experiments ſhow that the fibres in the living body are prodigiouſly ſtronger than the dead.

(*c*) and not any of the hypothetical ones, as conſtriction from cold, or ſpaſm, which are to be conſidered afterwards,

(*a*) This propoſition overturns the principal ſyſtems that have ever appeared in the profeſſion of medicine. But more of it after,

which ever ariſe from faults of the ſolids or fluids, but always either from encreaſed or diminiſhed excitement. The cure of neither is to be directed to the ſtate of the ſolids or fluids, and only to the diminution or the encreaſe of excitement. But.

LXIII. Affections peculiar to parts, or organic maladies, being foreign from this place of the work, in which the treatment of the general ſtate of the body is only conſidered, muſt be paſſed over at preſent.

LXIV. That the excitement governs all life is proved by the exciting powers, acting always by ſtimulating, and thereby producing excitement; it is proved by the greater or ſmaller activity of the functions being proportioned to the force of the exciting powers; it is proved by the effect of the remedies, which always oppoſe deficient, to exceſſive, and exceſſive, to deficient excitement, in *effecting* the cure of diſeaſes.

LXV. The notion of health and diſeaſe being different ſtates, is diſproved by the operation of the powers which produce them, and thoſe that remove them, being one and the ſame.

LXVI. The general diſeaſes, ariſing from exceſſive excitement, are called ſthenic (*b*); thoſe that originate from a deficient excitement, aſthenic. Hence there are two forms of diſeaſes, and both are always preceded by prediſpoſition.

LXVII. That the origin of diſeaſes, and prediſpoſition *juſt now* mentioned, is the only one and true, is proved by the ſame powers which produce any diſeaſe, or pre-

(*b*) Their old name is phlogiſtic; but as that word is abſurdly metaphorical from an old notion of that ſort of diſeaſes depending upon fire or flame; and becauſe it was not a proper contraſt to the term here to be oppoſed to it; as alſo becauſe it is ſtill more ridiculous when applied to plants, which are comprehended in this doctrine; for theſe reaſons it has been thought proper to reject it, and ſubſtitute the other in its place.

prediſpoſitiou, alſo producing the whole form of diſeaſes to which it belongs; and by the ſame remedies, which cure any diſeaſe, or prediſpoſition, alſo curing all the diſeaſes and prediſpoſitions of its reſpective form (*c*). Betwixt theſe oppoſite ſets of diſeaſe and prediſpoſition, perfect health is the mean, leaning to neither extreme.

LXVIII. The exciting powers, which produce prediſpoſition to diſeaſes, or thoſe diſeaſes themſelves, ſhould be denominated ſthenic, or ſtrictly ſtimulant. Thoſe that pave the way to aſthenic diſeaſes, or produce the latter, ſhould be called aſthenic, or debilitating. The ſtate of the body producing the former or the prediſpoſition to them, is to be called Sthenic Diatheſis; that which occaſions the latter, with the prediſpoſition peculiar to it, receives the new term of Aſthenic Diatheſis. Each of theſe diatheſes are a ſtate of the body, the ſame with prediſpoſition and diſeaſe, varying only in degree. Diſtinguiſh the powers that raiſe both the diatheſis to the degree (*d*) of diſeaſe, by the term exciting hurtful powers. The ſthenic diſeaſes, in which the pulſe is turbulently affected, ſhould not be de-



(*c*) The ſame hurtful powers produce, and the ſame remedies remove, both Catarrh and Peripneumony, only differing in degree. The powers producing them are exceſs in the uſe of ſtimulants, and the remedies whatever moderates that exceſs. Evacuation, cold, and ſtarving, are the means. All the difference is, that more of the means are employed for the cure of Peripneumony than for that of Catarrh. The hurtful powers producing indigeſtion and fevers, are alſo the ſame, to wit, debilitating; and the remedies the ſame, to wit ſtimulant. Only a ſmall degree of the remedies, proportioned to the ſlightneſs of the degree of the cauſe, is ſufficient for the cure of indigeſtion; while the moſt diffuſible ſtimuli are required to effect the cure of fevers. Stimulants, in one degree or other, make the cure of all aſthenic diſeaſes; evacuants and other weakening means in different degrees, form the whole cure of the ſthenic form of diſeaſes. Might not this have been known long ſince?

(*d*) or full meaſure.

nominated fevers or febrile diſeaſes, but, for the ſake of diſtinguiſhing them from the aſthenic diſeaſes that diſturb the pulſe, to which fever is a proper name, they ſhould be cold Pyrexies.

## CHAP VII.

### *The Effect of both the Diatheſes, and of the moſt perfect Health itſelf.*

LXIX. THE common effect of the ſthenic hurtful powers upon the functions, is, firſt to encreaſe the functions, then partly to impair them, but never by a debilitating operation (*a*). The effect, in common to the aſthenic hurtful powers, upon the ſame *functions*, is to diminiſh them, in ſuch a manner, as ſometimes to exhibit an appearance, but a falſe one (*b*), of encreaſing them.

LXX. If the juſt degree of excitement could be conſtantly kept up, mankind would enjoy eternal health. But two circumſtances prevent that. Such is the nature of the ſthenic diatheſis, that it waſtes the ſum total of excitability aſſigned to every being upon the commencement of its living ſtate, and, thereby ſhortening life often by the interpoſition of diſeaſes, ſooner or later induces death. Which is one cauſe of mortality.

LXXI. the aſthenic diatheſis is hurtful by not ſupplying that degree of excitement, which is neceſſary to life, and

(*a*) The inability to perform motion in peripneumony, ariſes not from debility, for two good reaſons; firſt, no powers but thoſe that produce all the other ſymptoms produce it; and the ſame remedies, that remove the other ſymptoms, are equally effectual for the removal of it.

(*b*) Spaſm and convulſion, ſuppoſed to ariſe from encreaſed influx of the nervous power, are both occaſioned, and cured, by the ſame powers, as all the other ſymptoms,

and thereby allowing the ſtate of life to approach more nearly to that in which death conſiſts. Which opens another gate of death to mankind.

v. Further diſeaſes and death are the conſequences of the change of either diatheſis into the other. Either diatheſis, by means of the hurtful powers producing the other, when theſe are employed as remedies(*c*), may, either from accident, inadvertence, or deſign, be completely converted into the other; and when that has been done, and oppoſite remedies *to thoſe, that in this manner* proved hurtful, are employed; it may, *by a contrary exceſs*, be turned back to the ſame ſtate from which it ſet out (*d*). This

D obſervation

(*c*) Stimulants are the proper remedies for curing the gout; but they may be carried ſo far as to produce ſo much ſthenic diatheſis as to border upon indirect debility. A conſequence of which is vomiting, purging, a feeling of burning in the inteſtines, intermiſſion of the pulſe, and ſtrangury; which are only to be cured by ſubſtituting watery drink and low diet in place of thoſe oppoſite remedies: Nay, the ſtimulants may be carried ſo far, as to effect the eſtabliſhment of indirect debility. Hence, will ariſe paralytic affection, anaſarca, dropſy, &c. The evacuants and other debilitating remedies, by which the diſeaſes of ſthenic deatheſis are removed, may, by being puſhed to exceſs, produce the laſt mentioned diſeaſes, as depending on direct debility.

(*d*) Puſhing the remedies of ſthenic diſeaſes too far, may reduce the patient to an incipient dropſy; and the remedies of the latter may be urged to ſuch exceſs, as to paſs the range of ſthenic diatheſis, and terminate in indirect debility. A is affected with a diſeaſe of debility, where the excitement has gone down to 10, the excitability mounted up to 70, degrees in the ſcale. What is to be done? By a proper uſe of high ſtimulants the 30 degrees of loſt excitement may be reſtored, and as many of ſuperfluous excitability diſcharged, and the excitement and excitability made to meet again at the middle point of 40. If the remedies are carried up to any degree betwixt 40 and 55, they have gone too far, and produced prediſpoſition to ſthenic diſeaſes; if ſtill farther, but not exceeding 70, they will have produced one or other of theſe diſeaſes, But carried beyond 70, the diſeaſes, which their opera-

tion

obſervation will be found of the greateſt conſequence in the cure of both prediſpoſitions and diſeaſes (*e*). What is wanting to a further illuſtration of it ſhall be given afterwards. An illuſtration of the change of ſthenic diatheſis into aſthenic is *found in* hydrothorax ſucceeding peripneumony. Again, the immoderate uſe of ſtimulants may convert any aſthenic affection into a ſthenic one; as when a violent cough, a catarrh, or an inflammatory ſore throat, are induced in conſequence of the cure of the gout, though proper in kind, being carried to exceſs in degree.

ξ. Though excitement governs all the phenomena of life; yet the ſymptoms of diſeaſes, which either its exceſs or deficiency produces, do not of themſelves lead to any proper judgment reſpecting it; on the contrary, their deceiving appearance has proved a ſource of infinite error.

LXXII. From all that has hitherto been ſaid, it is a certain and demonſtrated fact, that, life is a (*f*) forced ſtate, that the tendency of animals every moment is to diſſolution; that they are kept from it (*g*), by foreign powers,

tion produces, are thoſe of indirect debility. Any diſeaſe of this ſort, when treated according to a rule lately delivered, will be cured. But if the ſtimulants adapted to this purpoſe be urged further; the ſthenic diatheſis will again be produced; and the debilitating power, ſuited to the removal of it, may carry down the excitement below 40 into the range of prediſpoſition betwixt 40 and 25; and then, by a further abuſe of remedies, which ſhould only be uſed in the range betwixt 40 and 70, the excitement may return to the ſame point from which it ſet out, to wit, the point of 10, and the excitability riſe to its original point, that of 70.

(*e*) It muſt never be forgot, that we are nothing in ourſelves, but, while we have any excitability remaining in proper capacity to be acted upon, we entirely depend on the exciting powers acting on it,

(*f*) not a natural, but,

(*g*) not by any powers in themſelves, but

ers, *and even by theſe* with difficulty and only for a little; and then, from the neceſſity of their fate, give way to death.

## CHAP. VIII.

### *Of Prediſpoſition.*

LXXIII. Prediſpoſition is a middle ſtate betwixt perfect health and diſeaſe. The powers, producing it, are the ſame with thoſe which produce diſeaſe.

LXXIV. The period of prediſpoſition will be ſhorter or longer, according to the greater or leſſer force of the hurtful powers *that have induced it;* and the interval between health and actual diſeaſe will be more quickly or ſlowly got over.

LXXV. That prediſpoſition neceſſarily precedes diſeaſes, is evident from the fact of its ariſing from the ſame exciting powers, acting upon the ſame excitability, from which both health and diſeaſe ariſe, and of its being an intermediate ſtate betwixt them both. And, as the excitement of health differs much from that of diſeaſe; it is not, therefore, to be ſuppoſed, that the former immediately mounts up to the latter, and ſkips over the boundaries of prediſpoſition: nay, the contrary is certain and beyond a doubt.

LXXVI. Contagious diſeaſes are not an exception from this obſervation; becauſe, whether the matter of contagion act by a ſtimulant or a debilitating operation, its operation is the ſame with that of the ordinary powers, that is to ſay, its cauſe is the ſame (*a*). If, as it ſometimes happens, no



(*a*) The ſmall-pox and meaſles are cured by the ſame means as peripneumony or any other ſthenic diſeaſe; and, excepting the contagious matter, ariſe from the ſame ſtimulant hurtful powers; they muſt, therefore

general affection follows the application of contagion, if no undue exceſs or defect of excitement is the conſequence;

fore, with the ſame exception, be the ſame. The only difference is, that they are accompanied with a contagious matter, and the other ſthenic diſeaſes are not. The amount of which is altogether unimportant. For, if the ordinary powers have not operated, the affection does not come under the definition of general diſeaſe; none of the functions receding from their natural ſtate, and the eruption amounting to no more than a ſlight local complaint. It is, therefore, only of uſe to regard the general circumſtances of theſe diſeaſes, making no more account of the local part, than to conſider, arrange, and treat it as ſuch. It is well known, that, when by the means uſed for the cure of ſthenic diſeaſe without contagion and their ſequel, eruption, the ſthenic diatheſis is prevented or removed, the local part gives no trouble; and that the diſeaſe is never dangerous but from the neglect of that management. But the management is nothing elſe but the ordinary one in any ſthenic caſe. If it ſhould be contended, that, all that being granted, ſtill the eruption may contribute a little: Be that ſo, and it can be but very little; what is the effect? The cure ſhows it; which is exactly the ſame as in ſthenic diſeaſes without eruption. The diſeaſe, therefore, being the ſame (for its mere local part is out of the queſtion, as only requiring a peculiar expoſure to cold, which is equally proper in every ſthenic diſeaſe); every part of reaſoning reſpecting it, and, conſequently that affecting the queſtion about prediſpoſition, muſt alſo be the ſame. If, therefore, other general diſeaſes have their prediſpoſition, ſo muſt the ſmall-pox, the meaſles, and the plague itſelf. If it ſhould ſtill be ſaid, that the eruptive diſeaſes, though in other reſpects the ſame with the non-eruptive, differ, in ſo far as prediſpoſition is required as a common circumſtance between them; the anſwer is, that that difference only reſpects their local part, which, without the powers producing the diſeaſe, is inſignificant and a mere local complaint. As general ſthenic diſeaſes, the ſmall-pox and meaſles, and as general aſthenic ones, contagious fever and the plague, to the full extent of their generality, have their period of prediſpoſition; we may have occaſion afterward to eſtabliſh the queſtion about prediſpoſition to them even as local diſeaſes, but this is not the place for it; all that was required here being to ſettle the queſtion about prediſpoſition to them as general diſeaſes. In the ſame point of view all that has been ſaid of contagious diſeaſes, will apply to diſeaſes in which perſons may have been concerned.

quence; in that case, the affection is altogether local and foreign from this place.

LXXVII. If poisons communicate any sort of morbid affection without predispositon, such an affection, for that very reason, is not to be considered as a general disease, as also for this additional reason, that *the affection* is neither removed nor relieved by the usual cure of general diseases; and the diversity of the effect proves, that both the cause and exciting hurtful power are different from the general ones. In one word, since predisposition and disease are the same, varying only in degree, the unavoidable conclusion is, that whatever, with a given force, produces the latter, *the same*, with a lesser force, will produce the former. The only cure of most poisons is their early discharge from *the system*. And if, as often happens, others, by wounding an organ necessary to life, are not curable, but fatal; the effect of both is foreign from our present subject, and to be referred to local diseases.

LXXVIII. The only thing to be regarded in the powers producing either predisposition to general diseases, or those diseases *in their full force*, is the degree of the former (*c*) compared with *that of* the latter (*d*), or of the individual powers compared with one another; for the purpose of discerning the degree of hurtful power that each possesses, and the degree of curative means to be employed in order to remove the hurtful effect (*e*).

LXXIX.

(*c*) those that produce the predisposition,

(*d*) those that produce the disease,

(*e*) The distinctions of the powers producing predisposition, and of those that excite disease, under the general appellation of predisponent or occasional causes have been multiplied and refined upon without end. But the whole system of remote causes, as they have been called, is false in its first idea. The hurtful powers, whatever they be called, that produce diseases, also produce the predisposition to them. Which being once admitted, as it henceforth must, the whole fabric of aitiology

or

LXXIX. The knowledge of prediſpoſition is of great importance; as enabling the phyſician to prevent diſeaſes (*f*), comprehend the true cauſe of them founded in prediſpoſition, and to diſtinguiſh them from local affections, which are widely different from them (*g*).

LXXX. As the prediſpoſition, to diſeaſes, and the diſeaſes themſelves, are the ſame ſtate; a great criterion, by which general diſeaſes may be diſtinguiſhed from local ones, will be *found in this ſingle circumſtance*, that general diſeaſes are always, local never, preceded by prediſpoſition (*h*).

LXXXI.

or of the doctrine of remote cauſes muſt fall to the ground: Conſequently, ſimply remote cauſes, not diviſible into prediſponent and occaſional; relative remote cauſes, or ſuch as are ſo diviſible; internal and external prediſponent, internal and external occaſional cauſes; approaching cauſes, or cauſæ propriores proximate cauſes, of which, not only one, but often ſeveral, are aſſigned to every diſeaſe, muſt ceaſe in medical language, and the ſtudent's attention be turned away from the endleſs purſuit of diſtinctions without a difference, to the ſtudy of the ſolid and uſeful facts that nature holds up to his contemplation in great abundance, when once his eyes are fairly opened to behold them,

(*f*) from his acquaintance with the powers that lead to them,

(*g*) Such is the ſimplicity to which medicine is now reduced, that when a phyſician comes to the bed-ſide of a patient, he has only three things to ſettle in his mind. Firſt, whether the diſeaſe be general or local; ſecondly, if general, whether it be ſthenic or aſthenic; thirdly, what is its degree? When once he has ſatisfied himſelf in theſe points, all that remains for him to do, is to form his indication or general view of the plan of cure, and carry that into execution by the adminiſtration of proper remedies.

(*h*) An inflammation in ſome part of the ſtomach, or as it has been commonly called, "the Inflammation of the Stomach," as if it were always of the ſame kind, produces many ſymptoms, that bear ſo great a reſemblance to general ſthenic diſeaſes, ſuch as peripneumony, that by ſyſtematics and noſologiſts, it, as well as many other inflammations of internal cavities, have been united into an order of diſeaſes, ſuppoſed all to partake of one common nature. The Gaſtritis, however, which is its

LXXXI. As the affection of a part is always the original ſource of local diſeaſes, and as the diſtinctions, we have related are eſtabliſhed upon the ſolid baſis of truth; it follows, that the following diſorders muſt be rejected from the number of general diſeaſes, how great ſoever their reſemblance to them may be, and however much they may conceal their own nature. Whatever affections, then, ariſe, from any ſtate of a part, from ſtimuli, from debilitating circumſtances (neither of which laſt produce any commotion in the whole body, or only do ſo in conſequence of the force of the local cauſe), from compreſſion of a part, from obſtruction, from other diſeaſes (*i*), and not from the exciting powers which produce general

its noſological name, is eſſentially different, both from Peripneumony and all the other general diſeaſes of the order with which it is aſſociated, both in other reſpects, and in that of which we are ſpeaking. As ariſing from certain local hurtful powers, it is not preceded by prediſpoſition, So when I come to the bed-ſide of a patient under theſe circumſtances, though I had no previous knowledge of the nature of his diſorder; whenever I hear that he has ſwallowed ground glaſs, ſmall fiſh-bones, or, perhaps, a great quantity of Caien pepper, I can be at no loſs to diſcern the nature of the diſeaſe, and to find, that it is altogether local; and that for two of the beſt of all reaſons; firſt, the perſon having been in perfect health immediately before that accident; and ſecondly, that the ſubſtances which he had ſwallowed were ſuch as would naturally divide a ſound part, or, in the language of our profeſſion, produce a ſolution of continuity in it. From this, again, inflammation is an inſeparable conſequence. And it is equally an univerſal fact in the animal economy, that, when any part, whether internal or external, which poſſeſſes great ſenſibility, is wounded or otherwiſe injured in its ſubſtance, the pain ariſing from the inflammation ſuperinduced, ſpreads ſymptoms of diſorder over the whole ſyſtem, which are liable to miſlead thoſe, who are not in poſſeſſion of the criterion we here point out. As ſuch a caſe, then, is not preceded by prediſpoſition, ſo peripneumony as well as every other ſthenic, every aſthenic, diſeaſe muſt, from the proofs of the univerſality of the fact, be allowed to be, it muſt be local. And here again we throw the gauntlet.

(*i*) whether general or local,

neral diſeaſes (*k*); all theſe muſt be rejected from the number of general diſeaſes: and *that for the moſt ſolid* reaſons; to wit, their differing from them in the hurtful powers that produce them in their *true* cauſe (*l*), in their cure (*m*), and in every *eſſential* reſpect, agreeing with them in nothing, but in a deceitful and deceiving *ſuperficial* appearance.

CHAP.

(*k*) Let it here be added, that the powers producing general diſeaſes, are thoſe that act upon the excitability, and are, thereby, quickly communicated over the whole ſyſtem; while thoſe, that act upon the ſolid texture of a part, ſo as to cut, prick, bruiſe, or contuſe it, &c. are the powers productive of local diſeaſe.

(*l*) The cauſe of the inflammation of the ſtomach has been mentioned. To concentrate it into a definition; it is a ſolution of the continuity of a ſolid part in the ſtomach, by mechanical or acrid means, followed by inflammation and pain, and in conſequence of the great ſenſibility of the part, propagating ſymptoms of diſorder over all the ſyſtem. The cauſe of the general diſeaſes here alluded to is an encreaſe of excitement, and the inflammation accompanying thoſe diſeaſes ariſes from that encreaſe.

(*m*) The cure of Gaſtritis, or the inflammation of the ſtomach, is to contrive means to keep the hurtful, and all rude matters, from coming into contact with the inflamed part, and leave that part to heal; taking care, neither to encreaſe the local affection by too ſthenic a diet, nor to produce a tendency in the inflammation to run into gangrene, by the abuſe of evacuations and other debilitating powers; and if, than which nothing is more likely, the acuteneſs or continuance of pain ſhould at laſt bring on a ſtate of general debility, then to uſe the palliative means of preventing that bad conſequence. The cure of Peripneumony is to weaken the ſyſtem, from the very commencement of the diſeaſe, by diminiſhing the energy of all the exciting powers; that of the abundance of the blood by bleeding, that of the over-proportion of the other fluids by purging, ſtarving; that ariſing from the ſtimulus of heat and other exceſſive ſtimuli by cold, &c.

# CHAP. IX.

## *The general diagnoſis.*

LXXXII. THE violence and danger of univerſal diſeaſes is in proportion to the degree of exceſſive excitement (*a*) or its indirect or direct deficiency (*b*); as is proved by all that has been ſaid above: conſequently, their principal variety turns upon this variation of the degree of excitement.

LXXXIII. The only diagnoſis (*c*) of any importance is that, by which general diſeaſes are diſtinguiſhed from local, or ſymptomatic affections, throwing the whole ſyſtem into diſorder, with a certain reſemblance to univerſal diſeaſes. To execute which, *the following marks* are to be underſtood *to ſuffice for* the detection of every general diſeaſe; firſt, its being preceded by a diatheſis, and this followed by one ſimilar to it, and removed by an operation

(*a*) The exceſs is contained between 40, the point of health in the table, and 70.

(*b*) The caſes of indirect deficiency or debility are comprehended betwixt 70 and 80. The direct are all the degrees below 40. Betwixt 40 and 55 conſiſts prediſpoſition to ſthenic; betwixt 40 and 25 the prediſpoſition to aſthenic diſeaſes.

(*c*) Diagnoſis is the doctrine of diſtinguiſhing diſeaſes from one another. It was naturally thought to be of the greateſt importance, when diſeaſes were ſuppoſed very numerous, and as different from each other as their names and the various appearances of their ſymptoms. That, however, has been found to be altogether a miſtake in this work, in which the endleſs variety of general diſeaſes is reduced to two forms, a ſthenic and aſthenic one, without any other difference but what conſiſts merely in degree. The huge volumes of diagnoſtics are then in this chapter ſuperſeded; and much labour, not only irkſome to the artiſt, but worſe than uſeleſs, often pernicious to patients, is proved to be ſuperfluous.

ration of the remedies of an oppoſite nature to that which occaſioned the diſeaſe: while on the contrary, local affection is diſtinguiſhed, firſt, by the affection of a part, and the diſorder of the ſyſtem (*d*) being ſuch as may be traced back to that affection; and by the abſence of the diatheſis of the diſeaſe which *the local affections* reſembles, or only its accidental preſence.

LXXXIV. In order to attain to this uſeful knowledge learn what is neceſſary from anatomy, waſte no time in ſuperfluous ſtudy in it; peruſe the works of the illuſtrious Morgagni; diſſect ſubjects; diſtinguiſh remaining effects from cauſes that have paſſed away; examine diligently very many bodies of perſons who have been hanged, or have died of wounds, and are otherwiſe ſound: compare theſe diligently with the bodies of thoſe who have died by lingering and often repeated diſeaſe; compare every particular with every other, the whole with the whole; guard againſt the raſhneſs of forming opinions, and, if you can, you will be among a very few, who have ever been able to do ſo; never expect to diſcover the cauſe of diſeaſe *in dead bodies*; be circumſpect in forming a judgment.

LXXXV. As internal local affections are often a certain taint that remains after general diſeaſes have paſſed away, it is therefore a matter of ſound judgment *to underſtand*, that there is leſs or more reaſon to ſuſpect the former, in proportion as the latter have ſeldomer or oftener preceded them.

## CHAP. X.

*The general Prognoſis, or general Judgment of the Event.*

LXXXVI. SINCE the powers producing ſthenic and aſthenic diatheſis, always act upon a part with more force than any other equal part; it follows, therefore, that the danger of diſeaſe during the prediſpoſition, and of death during

(*d*) not ariſing from any change in the excitement, but

during the diſeaſe, ariſes in proportion to the degree of diatheſis, or to the importance of the part eſpecially affected. But, its degree being given, the more equal the diatheſis is, the more ſafe it is. Nor does it ever fall heavy upon an organ neceſſary to life, without inſtant danger. And hence it is, that peripneumony, apoplexy, phrenitis, eryſipelas, and the gout, when the two latter affect the head with violence, are chiefly formidable.

LXXXVII. Local and ſymptomatic affections ought to be diſtinguiſhed from general diſeaſes, and the remarks made in the LXXXIII. LXXXV. transferred to this place.

## CHAP. XI.

LXXXVIII. THE indication for the cure of ſthenic diatheſis is to diminiſh, that for the cure of the aſthenic diatheſis, is to encreaſe the excitement, and to continue to encreaſe it, till that degree of it, which conſtitutes the mean betwixt its extremes, and which is ſuited to good health, be replaced. This is the only indication of cure that univerſal diſeaſes admit of.

LXXXIX. As both diatheſes ariſe from an operation of the exciting powers, the ſame *in kind* but varying in degree; ſo they are both prevented and removed by an action of the remedies, alſo the ſame *in kind*, but oppoſite in degree, to that which produced them. As their cauſe, ſo is alſo their plan of cure, confirmed by an induction of proof (*a*), drawn from the whole courſe of facts and phænomena (*b*). The ſame debilitating remedies, which remove

(*a*) not one or two, but

(*b*) Suppoſe the ſthenic diatheſis mounted up to 60 in the ſcale; to reduce it to 40 it is evident, that the 20 degrees of ſuperfluous excitement

move any one ſthenic diſeaſe, remove that whole *form diſeaſes*: and the ſame ſtimulant means, which cure any one aſthenic diſeaſe, remove all the reſt (*c*). Are not palſy, in ſo far as it is curable (*d*), and dropſy, in ſo far as it is a general affection (*e*), as well as the gout, and fevers, both relieved and removed by the ſame remedies? And are not peripneumony, the ſmall-pox, the meaſles, rheumatiſm,

ment muſt be taken off, and therefore, that remedies operating with a ſtimulus, weak enough to produce that effect, muſt be employed: they are ſtill, however, ſtimulant, and of conſequence, though they remove it, ſtill the ſame in kind, as the powers that produced the diatheſis; it having been proved, that they are not to be ſuppoſed ſedative, both for the reaſons already given, and for this additional one, that proof has not been yet brought of a ſingle ſedative in nature. As their ſtimulus, however, is leſs than that which is required to ſupport the ordinary ſtate of health, they are underſtood to be debilitating, and, therefore, proper remedies of ſthenic diatheſis.

(*c*) Suppoſe the aſthenic diatheſis to have ſunk down to 20; to raiſe it up to the ſtandard of health, it is plain, from all the propoſitions hitherto laid down, that the 20 degrees of deficient ſtimulus muſt be reſtored, and, therefore, that remedies operating with a degree of ſtimulus adequate to the production of that effect, muſt be uſed. All the difference betwixt this force of ſtimulus and that of the other, is only a difference of 40 degrees. As, therefore, the debilitating powers, though ſtimulant, employed in the firſt, removed the morbid ſuperfluity; ſo the ſtimulant powers uſed in this caſe, called ſtimulant by way of eminence, remove the morbid deficiency, and thereby, reſtore the degree of excitement, that conſtitutes the ſtandard of health.

(*d*) When the prevalence of debility, and that to ſuch a degree as to deſtroy the connection that ſubſiſts betwixt the fibres of muſcles, and that function of the brain which we call will, takes place in parts of the ſyſtem, not only remote from the center of activity, but beyond the circulation, it muſt be of difficult cure; becauſe the moſt powerful means of effecting that operation, act moſt powerfully when taken internally, and much more feebly when applied to the ſkin.

(*e*) What is called dropſy conſiſts of a caſe which is a general diſeaſe, and a number of others, which are only ſymptoms of local internal diſeaſes, and to be treated in the laſt part of this work: Theſe ariſe from

obſtr-

tiſm and catarrh, removed by the ſame remedies (*f*)? But all theſe remedies in the aſthenic caſe encreaſe, in the ſthenic diminiſh, the energy of life. In both caſes the operation is a common one *over all*, nor is there any diverſity but in degree.

XC. The remedies, therefore of ſthenic diatheſis are powers, exciting by a weaker ſtimulus, than that which is ſuited to health; and are in this work to be denominated, for the ſake of brevity, Debilitating or Antiſthenic Remedies.

XCI. The remedies of aſthenic diatheſis are powers, exciting with more force, than ſuits the beſt health; to be named here in the practice ſtimulants or ſthenic, for the more convenient diſtinction of them from the other remedies.

XCII. Theſe are to be employed with more or leſs freedom in proportion to the higher or lower degree of *each* diatheſis, and of the local affection depending upon it. And ſuch a choice of each ſhould be made in ſuch a way as that the moſt powerful may be adapted to the moſt violent caſe. But the cure of any diſeaſe of conſiderable violence, and ſcarce of any at all, is never to be entruſted to any one remedy. The uſe of ſeveral remedies is preferable to that of one; becauſe, thereby, their direct energy is applied to the ſyſtem to a greater extent, and the excitability is

oſſifications in the large veſſels next the heart, from tumors, whether ſchirrous or ſteatomatous, impeding by their preſſure the return of the blood by the veins to the heart. It is the general caſe that is here alluded to, and the public may depend upon it, that it is to be cured, but not by evacuant means, and, on the contrary, by the high diffuſible ſtimuli, neceſſary to the cure of diſeaſes of high debility, ſuch as the extremity of typhus fever, and an expiring gout. All theſe are cured by high ſtimulants.

(*f*) to wit, evacuants, cold, and ſtarving.

is more completely and more equally affected. The perſon, who means that his remedies ſhould go to a particular part (*h*), is equally wiſe, as *any* one *would* be, who, by cropping a twig, expects to eradicate a tree. What remedies are *of* general, what *of* local *operation*, ſhall next be mentioned.

XCIII. General remedies are thoſe, which, acting upon the excitability, by an operation diffuſed over the whole body, reproduce the ſtate of health.

XCIV. Local remedies are thoſe, which act by a ſimilar operation on a part, and by an operation confined to that, reſtore the ſound ſtate.

XCV. Since every univerſal diſeaſe, every prediſpoſition, depends upon encreaſed or diminiſhed excitement, and is removed by the converſion of that into the degree *which conſtitutes* the mean betwixt both; for that reaſon in order both to prevent and cure diſeaſes we muſt always uſe the indication propoſed, and ſtimulate or debilitate; never lay by, nor truſt to the ſuppoſed powers of nature, which have no real exiſtence.

XCVI. In the indication of cure, the only regard to be had to morbific matter, is to allow time for its paſſing out of the body. For whether it acts, like all other exciting powers, ſometimes by a ſtimulating (*i*), ſometimes by a debilitating operation (*k*), or whether *its action conſiſt in* only giving the peculiar form of its reſpective diſeaſe, and, thereby, adding a local affection to a general one; in either caſe there is no room for a new indication.

XCVII. For if the diſeaſe, as a general one, be properly managed, every eruption, and its conſequences, every

(*h*) and there, from a local operation, and not by an affection of the excitability, ſerve the purpoſe,

(*i*) as in the ſmall pox and meaſles,

(*k*) as in contagious fevers and the plague,

every ſpecies of inflammation, every ſpecies of ulceration, give way to the happy effect of the general plan of cure. And, when a contrary event takes place in conſequence of a bad method of cure, the local ſymptoms are proportionally aggravated. This is proved in the ſmall-pox long ago, and in the meaſles lately (*l*), but, with equal certainty; it is proved by the plague, *at leaſt*, as often as it has been treated with any judgment, and by remedies proper in kind and adminiſtered in due proportion; it is proved by the malignant, or gangrenous ſore throat (*m*), and by other

(*l*) After the diſcovery of the nature of the catarrh, the catarrhal ſymptoms in the meaſles came naturally to be enquired into. A full trial was given to the refrigerant debilitating plan, in the author's own family, as well as among ſeveral patients, and laſtly among near an hundred patients in England, treated by the father of one of the author's pupil's; who all did well, while others, who were kept warm, according to a practice that Dr Sydenham had left as he found it among his Alexipharmac cotemporaries, many died, and all had a bad recovery. The Author's own ſon and name-ſon, a boy about ſix years of age, was ſtript half naked and allowed to go out and play as he pleaſed. The only check upon him was, his being allowed nothing but fluid vegetable matter, when he returned home with a keen appetite. This matter will be further explained, and in a more proper place afterward. But, what has been ſaid, was in illuſtration of the hint in the text.

(*m*) This caſe of diſeaſe has been conſidered, as wholly and ſolely ſeated in the throat, and therefore conjoined with other diſeaſes, where that local affection was underſtood to be the eſſential ſymptom, and a ſymptom that connected all the caſes. But the other caſes are ſthenic or to be cured in the ordinary way of bleeding and evacuation; while ſuch a practice is certain death in it, as being not only an aſthenic caſe, that is a caſe of debility, but one of the higheſt; and, inſtead of depending upon the affection of the throat, the affection of the throat depends on it. Give ſtimulants to the patients labouring under the inflammatory ſore throat, and you kill them; bleed, purge, vomit, and ſtarve, in the gangrenous caſe, and you enſure the ſame fate. Such, however, are the diſeaſes, that ſyſtematics, noſologiſts, and other ſtrangers in the city of nature, have, from their ignorance of the place, in ſpite of their natural

other cases of typhus, with a similar affection of a part. In the two last, the danger to life depends upon the degree of the general affection, without which there is no occasion for *any* apprehension from the local. And the same proposition is so true, with respect to the *three* former, that, though the *contagious* matter has been applied, yet without the general hurtful powers preceding, no true general disease arises, the danger encreases in proportion to their violence, and the whole cure depends upon the general remedies. These are *so many* facts, that show, that no matter, whether of a contagious nature or not, contributes towards the cause of the general disease, which it accompanies or distinguishes, or, if it contributes any thing, that in that it differs not from the usual hurtful powers.

XCVIII. As, both in overabundant and deficient excitement, the sound perspiration is diminished during the predispoſition, and suppressed in the course of the disease (which has been already hinted, and will more fully be demonstrated afterwards); it is, therefore, proper that it should be carefully supported and kept up, for the purpose of discharging every hurtful matter from the body. But neither does that suggest a new indication of cure; since the only means of effecting it are those, which otherwise remove both the diathesis in proportion to their force, and which are not serviceable as local, but as general remedies (*n*).

XCIX.

natural distance, brought all together. (See Dr Cullen's Genera Morborum, all the three editions, genus VII.) As soon will Mile-end and Knightsbridge meet; as soon will London place itself on the Calton-hill, and become an elevataed suburb of Edinburgh.

(*n*) The discovery of the support of perspiration upon a principle, which extends to all the phenomena of the subject, was reserved for this work. The heating remedies of the Alexipharmic physicians were intented to support the perspiration, and thereby, throw out a morbific matter: Which was a very unlucky thought in the sthenic diseases, the principal of which were pe-

XCIX. When any one, who, during the former part of his life has lived luxuriouſly, has now, at an advanced age, either from intention or compulſion, abated a good deal of his uſual indulgence, and *yet* preſerves ſome appearance of an abundance of fluids and of vigour; he muſt not, therefore, as is commonly done, be ſuppoſed to labour under plethora (o) and exceſſive vigour; but, on the contrary, unleſs there be a recent and evident cauſe for it, which is poſſible, he muſt be held for one who labours under indirect debility; and ſo much the more, if to hurtful powers already too invigorating, in the number of which are all thoſe which fill the veſſels, directly debilitating powers have ſucceeded: and it is not a debilitating or aſthenic plan of cure, which would increaſe the direct debility, nor one too ſtenic (p), which would increaſe the indirect

peripneumony, of which we have already ſo often ſpoken; phrenitis, in which the brain was ſuppoſed to be inflamed; and the ſmall-pox and meaſles; becauſe the nature of thoſe diſeaſes, and the tendency of all the powers producing them, was to check the perſpiration, (ſee N°. LXI.) from the exceſs of their ſtimulus; conſequently, the addition of more ſtimuli, by way of cure, was to check it ſtill more. But thoſe diſeaſes are only three out of the hundred of general diſeaſes: whereas the followers of a great man who corrected that abuſe through a fiery perſecution, ως δ' α πυρος, againſt himſelf, went all into a much worſe extreme. Their imitation of their maſter tranſported them into a rage to carry the plan of promoting perſpiration, by the ſame means, through the remaining 97 of the hundred. And they ſucceeded with a vengeance. For, as it is here the nature of thoſe diſeaſes to tranſmit too great a quantity of fluids through the perſpiratory pores, in conſequence of the debility which conſtitutes their cauſe; certainly the encreaſe of that debility, that is to ſay, the encreaſe of the cauſe, ſhould encreaſe the effect. Which it moſt certainly did, through all the ſyſtems that have appeared for more than a century paſt. This is intended only as a hint, to enable our intelligent readers to underſtand the fuller explanation of perſpiration, which will ſoon follow.

(o) or an over proportion of blood.

(p) or ſtimulant.

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indirect debility, the principal part of the cauſe, and, conſequently, increaſe the force of the diſeaſe: But it is a middle method, which is commonly called tonic, that ſhould be purſued (q).

C. Since to the degree of diſeaſes (under which, to make few words, let prediſpoſition, alſo be comprehended, the degree of curative force ſhould be accommodated; in the indication, therefore, of cure, regard ſhould be had to age, ſex, habit, conſtitution, climate, ſoil, in fine, to the operations of all the exciting powers in general, of all the hurtful ones in particular, of all the remedies, whether they have previouſly been adminiſtered properly, or improperly.

CI. The ſubjects of direct debility are women, under inanition

(q) The blood is made from the food, and elaborated by the powers of digeſtion; that is, the more nouriſhing food is taken in, and the more ſtrength there is in the ſyſtem to convert it into real blood, the more, and alſo better, blood will be produced. The quantity of blood, ſo produced, may go to exceſs, as well as every other exciting power, the principal of which is. But the queſtion is, when, in whom, and under what circumſtances, is an over-proportion of blood generated? Common ſenſe would ſay, not at the beginning or the end of life, when the degree of nutriment uſed is far from being ſo conſiderable, as at the middle and vigorous period of life. Again, which of the two ſexes are ſuppoſed moſt liable to generate this morbid redundancy of the vital fluid? A ſimple creature aided by nothing but natural ſagacity, would be apt to ſay, the men; both becauſe they eat more, and, from the greater variety of the modes of promoting digeſtion to which they are addicted, digeſt better. How medical ſyſtematics would laugh at ſuch ſimplicity? How contrary that would ſeem to myſtery, their Lydian ſtone under which they think all wiſdom ſo ſafely lodged, as to fear it would be dangerous to turn it up, and examine what was under it! What ſort of habits are moſt liable to it? Not thoſe, who have the greateſt bulk of ſimple ſolids, whether they eat or not, much leſs thoſe, who are liable to bleeding diſcharges, who can neither eat nor digeſt; but all thoſe who eat and digeſt well.

inanition (f), thoſe who have had an inſufficient ſhare of ſtimulus; thoſe who have a delicate ſet of ſolids; thoſe who have been accuſtomed to moiſture, whether from the climate or ſoil; finally, all perſons in a languid ſtate, without a preceding vigorous one, either from the powers that produced their diſeaſes, or from the mode of cure employed to remove theſe.

CII. On the contrary, the perſons in whom indirect debility is prevalent are adult males; thoſe who are full and over ſtimulated, and ſo much the more, the longer the latter has been the caſe; thoſe who have formerly had vigorous habits; thoſe who have been overheated, whether with moiſture, without it, or from whatever ſource; in one word, all whoſe former vigour, either from the ordinary hurtful powers, or improper methods of cure, is now converted into *a ſtate of languor*.

CIII. In the cure of indirect debility, whatever be its degree, from whatever ſort of exceſſive ſtimulus it has ariſen; of the ſtimulus, which is to be employed as the chief remedy, not much leſs than that, which produced the diſeaſe, ſhould at firſt be uſed; and then leſs and leſs, till the diſeaſe is cured.

CIV. When the firſt part of the cure is completed, and the convaleſcent now can uſe the more permanent and natural ſtimuli, he ſhould gradually be confined to them, and drop the uſe of the more diffuſible; with this diſtinction, that if he has been in the habit of uſing a conſiderable deal of ſtimulus, he may be indulged in ſomething extraordinary in that way for ſome time (t).



(f) or an empty ſtate of the veſſels,

(t) This indulgence is chiefly intended for thoſe, who have gone to ſome exceſs in the uſe of the ſtimulus of drink, and who ſtill, without it altogether, are not capable of taking enough of food and other durable ſtimuli

CV. The cure of the hurtful effect of any ſtimulus ſhould firſt be ſet about by changing it for a leſſer one, this for a ſtill leſſer; and the intention of cure ſhould be always to paſs from the uſe of the more violent and diffuſible, which nature in her ſound ſtate rejects, to that of the more durable, and more ſuitable to nature when unoppreſſed, till the healthy ſtate can at laſt be upheld by the uſual ſupports (u).

CVI. In the caſe of indirect debility, when the view is to reſtore vigour, a debilitating plan of cure ſhould be avoided; becauſe no ſort of debility is to be cured by another, nor any degree of it by any degree of another. It is

ſtimuli for their ſupport. The aim, however, of all ſuch perſons (with the exception only of thoſe who are of an advanced age, or of thoſe whoſe debility threatens to run a certain courſe), ſhould be to lay aſide the daily uſe of drink altogether, and to indulge in occaſional approaches to exceſs as ſeldom as poſſible. Some perſons, even beyond the fiftieth year of their age, when they found they could eat and perform all their other functions with vigour, have had the reſolution to abſtain from all ſort of ſtrong drink, not only with impunity, but with a moſt wonderful improvement of their health and vigour. Another advantage, ariſing from this management, is, that, whenever any diſeaſe, to which a perſon may be liable, ſuch as the gout, various affections of debility, chiefly prevalent in the alimentary canal; in a word, the diſeaſes of either form of debility), either returns, or threatens to return; a return to the uſe of wine and other ſtrong drink will then become an excellent remedy, and even ſupercede the uſe of the high diffuſible ones. That practice would be attended with this further advantage, that, when the occaſion that called for it was over, and the diſeaſe prevented or removed, the perſon might again lay aſide the uſe of drink, with all the good conſequences he had formerly experienced from the practice, and thereby both prolong his life, improve his health, and enjoy the proper and vigorous uſe of all his functions.

(u) In many diſeaſes of debility ariſing from a former exceſs, the ſtimulant effects of which have paſſed away, the uſe of cold water, though in gratification of the patients craving, and of other thin potions, as well as of vegetable aliment in a fluid form, and of evacuation of every kind, is moſt hurtful.

is only in the progreſs to indirect debility (x), that directly debilitating powers are ſuitable for the purpoſe of ſupporting the vigour, in that caſe, in danger of being worn out (y); ſuch as cold bathing, lowering the diet, weak drink, and a ſimilar abatement in the uſe of the other ſtimuli.

CVII. For the cure of direct debility, we ſhould begin with the ſmalleſt degree of ſtimulus, and then riſe to the uſe of a greater and greater, till the morbid abundance of exciteability be gradually worn off, and the health at laſt reſtored.

CVIII. When the diſeaſe ariſes from the want of any one ſtimulus, the return to its uſe ſhould be gradual, and facilitated by other ſtimulants more powerful *than itſelf*.

CIX. Alſo in this part of the general method of cure, debilitating, either directly or indirectly ſhould be abſtained from; both for the reaſon formerly given, and alſo, becauſe the ſtimulant plan of cure, which is the only proper one, when carried to exceſs, converts the ſthenic diatheſis

(x) Betwixt 40 and 70,

(y) At 65 there are only 5 degrees of vigour left, which, either by a continuance of the ſame exceſſive ſtimuli that produced them, or, by the addition of a degree proportioned to that effect, would be worn out. Remove ſome of the ſtimulant powers, the exceſs of excitement will be diminiſhed, ſuppoſe to 60; remove more of the former, and the exceſs of the later will be further diminiſhed, till the excitement is reduced to its natural healthy ſtandard of 40. The ſtate of excitement, then, within this range, that is, between 40 and 70, eſpecially in proportion to the approach of the exceſs to 70, is that, to which only directly debilitating powers ſhould be applied. In all caſes above 70 where the excitement is gone, and below 40 where it conſtantly decreaſes all the way, till it is loſt at 0, directly debilitating powers are pernicious. How bad then muſt the only practice be, that we find in books and lectures, a practice tranſmitted from the firſt accounts of our profeſſion, and which deals in the uſe of no other means but directly debilitating ones? Bad, indeed, muſt it be!

theſis (x) into the aſthenic (a), and the latter into death (b). For which reaſon, while on the one hand, the debilitating powers, mentioned before, are to be avoided; it muſt on the other, not be forgot, that the force employed in the cure ſhould be accommodated to the degree of morbid ſtate. The thirſt, which is occaſioned by debility, is increaſed by draughts of cold water, is hurried on to (c) nauſea, and vomiting; is quenched by pure wine or ſpirit, which prevent the troubleſome ſymptoms that would otherwiſe follow. Pure wine (d) encreaſes the thirſt which proceeds from a ſthenic cauſe, and excites the ſame troubleſome ſymptoms, which cold water does in the other caſe; cold water ſates it, and prevents the future tumult.

CX. Since, therefore, the ſame powers excite all the phænomena of life, and produce ſometimes an exceſs, ſometimes a juſt proportion, ſometimes a deficiency, of life, according to the various degrees in which they are applied; and ſince the ſame obſervation extends to the ſame powers, when they are applied as remedies of diſeaſes; let it, therefore, be an univerſal rule, never unguardedly to convert either diatheſis into the other. And as every diſeaſe, that debilitating powers remove, is ſthenic, every one, that is cured by ſtimulant means, aſthenic, the knowledge of that may furniſh the proper means of caution againſt miſtake.

THE

(x) that between 40 and 70,
(a) between 70 and 80,
(b) at 80.
(c) the higher ſymptoms of
(d) which is one of its principal cauſes.

THE

# SECOND PART.

## CHAP. I.

*Of the hurtful Powers, which produce either Diatheſis, Sthenic, and Aſthenic.*

CXI. THE powers producing the ſtate of the body, upon which the prediſpoſitions, to ſthenic or aſthenic diſeaſes or thoſe diſeaſes themſelves, depend, that is, that produce the ſthenic or aſthenic diatheſis, are thoſe which were mentioned before (a).

*The hurtful powers producing both Diatheſis.*

CXII. Heat, which is neceſſary to the production, the growth, and the vigour of animals and vegetables, as alſo to the form of the elements (a) from *its action* upon the ſurface of the animal body, directly ſtimulates the whole; an effect which it alſo exerts upon vegetables. From this action of heat there is no exception when it keeps within a certain range of ſcale; but when it is either deficient, where it takes the name of cold, or exceſſive,

(a) XI. XII.

(a) In a certain degree of diminiſhed heat water freezes; but if ſuch a diminution of it could be found as to freeze air, the whole fabric of the univerſe would ruſh into diſſolution.

ſive, its effect varies(b). This ſtimulus, in a moderate degree, produces its effect in due proportion, in a degree above that *the exceſs of* its action is ſuch as to produce more or leſs of ſthenic diatheſis.

CXIII. Becauſe the action of heat is increaſed ſomewhat more upon the ſurface than in the internal parts, where the temperature is nearly ſtationary, it, therefore ſtimulates more in the former than in the latter. Hence, in the phlegmaſiae (c), the inflammation is always external. The ſame *agent* encreaſes the tone of the muſcular fibres every where, and conſequently their denſity (d). Hence, as the diameters of all the veſſels are diminiſhed, ſo thoſe of the extreme veſſels every where, and eſpecially in the ſkin, where a greater force of the cauſe is *exerted*, are often entirely effaced. But actual ſuppreſſion of the perſpiration is incompatible with prediſpoſition, and ariſes only from the diatheſis, when it ariſes to the juſt meaſure of diſeaſe (e).

CXIV. Hence in the meaſles and ſmall-pox, the irritating matter, together with the perſpirable, is detained. And not only in theſe, but all other ſthenic diſeaſes, the perſpiration is ſuppreſſed, the excitement both upon the ſurface and in the reſt of the body is encreaſed, and catarrh particularly induced (f).

CXV.

(b) as ſhall be ſhown by and by.

(c) diſeaſes with inflammation of a part.

(d) See Chap. V. Which produces a ſuppreſſion of perſpiration by ſome imputed to conſtriction from cold, by others to conſtriction from ſpaſms; both erronouſly.

(e) The perſpiration is diminiſhed during the prediſpoſition; but the condenſing power is not ſufficient to ſuppreſs it, till it attains the degree of producing the diſeaſe.

(f) Calefacients, or heating things, were one of the means that the Alexiph rmic phyſicians employed to free perſpiration; but the principle is now laid down, that ſhows they produce the oppoſite effect.

Hence

CXV. Heat, in extreme exceſs, whether it acts hurtfully by its duration or intenſity, conſtantly debilitates by diminiſhing the tone, and producing laxity inſtead of denſity. Which effect is ſomewhat greater upon the ſkin, to which the direct energy of heat is applied, than in the interior part, in which there is little change of temperature. Hence ariſes ſweating as in the torrid zone; hence the diameters of all the veſſels, and particularly of of the perſpiratory veſſels are enlarged. Hence proceed the colliquative ſweats in fevers, and a ſimilar ſtate of the belly. Hence, alſo corruption of the fluids, and not from a ſtate of them directly produced by corrupting powers(g).

CXVI. The ſame power in the violent meaſles, in the confluent ſmall-pox, in fevers, and in every kind of aſthenic(h) diſeaſe, in which the perſpiration is deficient, does not leſſen the deficiency (i), though it expands and enlarges the veſſels, but on the contrary, encreaſes it(k).

CXVII.

Hence the merit of Dr. Sydenham in recommending cold both in the ſmall-pox and in peripneumony, in which diſeaſe he took his patients out of bed, and placed them in an eaſy chair. Happy had it been for the profeſſion, and happier for the ſick, had he extended his improvement to the meaſles and catarrh, and all the reſt of the few ſthenic diſeaſes, and ſtopt there; but by extending his antiphlogiſtic and refrigerant doctrine to the whole form of aſthenic diſeaſes, the harm and good he did were in the proportion of 97 of the former to three of the latter.

(g) The idea of certain powers of a tendency to corrupt our fluids, and of certain others to correct that effect, and take off the degeneracy long prevailed in the minds of ſyſtematics, and is not among many of their followers yet laid aſide. Heat was one of the number; but that it acts ſo, is diſproved not only by the explanation here given, but by the certainty of the fact, that the ſame effect is produced by cold, as well as every other debilitating pow.

(h) or diſeaſe of debility,

(i) that is, does not encreaſe the perſpiration,

(k) i. e. diminiſhes perſpiration,

CXVII. Cold, inimical to animals, vegetables, and the elements, weakens the reſt of the ſyſtem, and ſtill more the ſurface, the temperature of which it almoſt only diminiſhes, *and it produces that effect* always by a direct operation, always in proportion to its degree. Cold equally as exceſſive heat, produces atony and laxity of the veſſels, grangrene, and the other effects of exceſſive heat (l).

CXVIII. That theſe effects of the extremes of temperature ariſe from debilitating not generating putrefaction, from an affection of the excitement, not of the fluids, plainly appears from this; that other exciting hurtful powers, ſuch as famine, an overbundance of blood, as in the caſe of thoſe who die of peripneumony, and ſimilar hurtful powers, which neither have been, nor can be, believed to affect the fluids by any direct operation upon them(m), produce both the ſymptom of corruption, and all the reſt of the ſymptoms, and the ſame ſtimulants, which remove the latter, remove the former. Nay, the ſuppoſed antiſceptics, ſuch as wine, Peruvian bark, acids, and

(l) In Siberia the phænomena of cold on the human body very much reſemble thoſe of heat.

(m) Famine, acids, and cold, have all the ſame effects upon the fluids that the putrefying ſubſtances were ſuppoſed to have; but ſurely acids produce no putrefactive proceſs; neither can want act as poſitive matter; nor cold be ſuppoſed to produce any ſuch effect. In a word, any corruption that is produced, ariſes only from the weakneſs by the heart and arteries, predominant in their extremities. They ceaſe to act; the fluids within ſtagnate, and, under the heat of the body, degenerate. This is the true cauſe of the corruption. And the remedies are not correctors of the corrupted maſs; but whatever invigorates the whole body, and conſequently the heart and arteries. Nothing can be more abſurd than to ſuppoſe that a glaſs or two of wine and water, a little bark, and ſo on, after being blended in the whole maſs of fluids, ſhould go to a portion of fluids in the extreme veſſels, even without the circulation, and, by mixing with it, change its qualities,

and other things of that kind, are either entirely deſtitute of that operation, or they neither are given, nor can be given, in that quantity, by which they can have any tendency to effect the mixture of the fluids: In fine, the effects of inanimate matters upon one another are never, with any propriety, transferred to living ſyſtems. Tho,' then, the fluids are frequently corrupted, the corruption is the effect of weak veſſels not giving a ſufficient mixture or diffuſion to them, but is never the cauſe.

CXIX. The diſagreeable ſenſation both of cold and of heat in extreme, is alſo hurtful, by diminiſhing the ſum total of ſtimulant operation, which, in ſo far as it is agreeable, is ſerviceable by ſtimulating (n).

CXX. As cold is naturally ſo debilitating, and all debilitating powers diminiſh excitement, it is therefore, never of ſervice but in ſthenic diſeaſes, that is, in thoſe which are in their progreſs towards indirect debility (o): becauſe the excitability, already too abundant, can never be rendered more abundant, nor, when too much waſted, rendered more accumulated, without an aggravation of the diſeaſe(p); excitability admitting of leſs ſtimulus in proportion as it is either more abundant, or more ultimately waſted. When the debility is moderate, a miſtake of this kind is leſs evident: but in' a high degree of debility of either ſort, a violent diſeaſe, or even death itſelf, may be the conſequence of the ſmalleſt encreaſe of debility (q).

CXXI.

(n) See note (r in par. XXI.

(o) See CVI.

(p) XLVI. XLVII.

(q) When the debility of the direct kind is very moderate, that is, the excitement has not ſunk much below XL. in the ſcale, the ſhort ſuſpenſion of a few degrees more would not do much miſchief. Suppoſe the excitement at 30 inſtead of 40, and a dip in cold water has brought it down to 25, the effect even of that is not of a trifling nature; the debility by this

CXXI. As cold, as well as exceſſive heat relaxes, a fact that is ſeen in the cure of the ſmall-pox, and of every ſthenic diſeaſe, from that we are to underſtand, that the property of cold in conſtricting(r) inanimate matter does not extend to living matter (ſ). The diminution of the bulk of the ſurface (t) ariſes from debility of the veſſels, not ſufficiently propelling the fluids, and filling the veſſels. In this way does cold produce aſthenic diatheſis.

CXXII. But, as always leſs and leſs excitement ariſes in proportion as ſtimulant operation has been applied, till at laſt no more at all is added; cold (u), as well as any other directly debilitating power may, according to various degrees of it, produce health, and all the degrees of ſthenic diatheſis (x); *in the following way, however, only.* It ſtops the waſte of excitability, makes the body more ſuſceptible of ſtimulant operation, checks the progreſs to indirect debility, and ſtems the latter. But it only

this means has paſſed the whole range of predispoſition, and arrived at the degree where diſeaſe commences. It is true the excitement will riſe the moment the perſon is taken out of the bath; but ſtill ſomething is loſt. The very accumulation implies a reduced diſpoſition in it to be acted upon by ſtimuli. A perſon, who has abſtained from any one ſtimulus for a given time, when it is again applied, will not bear near ſo much of it as he did formerly. If he abſtain longer, he will bear ſtill leſs, till, at laſt, he will be fit to bear none at all. If, on the other hand, the excitement ſhould have fallen to 10, an addition of debilitating power would be attended with the utmoſt danger, not only of encreaſing the diſeaſe, but of inducing death.

(r) or condenſing,

(ſ) It has been alledged, that the diminution of the bulk of the body by cold, furniſhed an argument in favour of its being an aſtringent to it, as it certainly is a condenſor of dead matter.

(t) or ſhrivelling of the ſkin,

(u) on that footing of action,

(x) from the higheſt to the loweſt, from that degree of it, which, under the circumſtances here mentioned, produces a moderate catarrh, o that, where the modification of its action riſes to the degree of being adequate to the effect of producing a peripneumony.

ly effects that by checking the career of heat and other ſtimuli, which accelerate indirect debility, and by keeping the excitement within the boundaries of vigour. And hence vigour in cold countries, when the body is defended by clothes, the ſhelter of a houſe, the warmth of a fire, as well as by its own proper motion. Hence alſo the bracing, by cold, of parts that have been relaxed by exceſſive heat. Laſtly, hence a remedy for the corruption of the fluids, which conſiſts in invigorating the veſſels, not correcting the degeneracy of their contents. This effect of cold upon the ſurface, which is nearly the only part of the ſyſtem ſubject to refrigeration, is ſomewhat greater than in the internal parts.

CXXIII. The debilitating effect of temperature, and therefore alſo its hurtful tendency, is encreaſed by moiſture.

CXXIV. Of the articles of diet, the only food in danger of being too ſtimulant, is fleſh and land-animal food, uſed in great quantity. Meat too ſalt, and hardened, eſpecially when it has now begun to ſpoil, is an exception.

CXXV. The ſame thing is to be ſaid of condiment; of which a very ſmall portion, upon account of its high degree of ſtimulus, is ſufficient.

CXXVI. Spirituous or vinous drink, in which the alkahol is always diluted, ſtimulates, more quickly, and more readily, than ſeaſoned food, and its ſtimulus is in proportion to the quantity of alkahol that it contains.

*c*. But there are ſtimuli, which poſſeſs an operation as much quicker, and more powerful (y), than theſe juſt now mentioned, and which are the agreeable *and proper ones* in health, as their operation is of ſhorter duration. To theſe the name of diffuſible is to be given. They rank above ſtrong drink in the following order:



(y) than that of the articles of diet.

π Next to ſtrong drink, and immediately above it, *ſtands* muſk; above it volatile alkali; higher than this æther; and the higheſt of all, as far as experiments have yet reflected light on the ſubject, is opium (z).

ρ Theſe according to their degree, poſſeſs the property of converting the aſthenic diatheſis into a ceſſation of all diatheſis in health; this into ſthenic diatheſis, the ſthenic diatheſis into indirect debility, and the laſt into death: all which they accompliſh with as much more eaſe and promptitude, as they are more powerful than all the reſt of the ſtimuli (a).

CXXVII. The ſtimilus of the articles of diet, not excluſive of the diffuſible ſtimuli, ſhould be denominated direct, becauſe it acts directly and immediately upon the excitability of the part to which it is applied. The direct ſtimulus, at leaſt in ſo far as it regards the food, is aſſiſted by another, depending upon a diſtenſion of muſcular fibres, on which account, for the ſake of diſtinction, the latter ſhould be called indirect. As the latter is afforded by the bulk of animal and vegetable food, ſo the former is produced by a relation of the ſtimulus to excitability.

(z) We are prety certain of the exactneſs of that place in the ſcale which we have aſſigned to opium. Nor is our arrangement of the others uncountenanced by the ſame kind of criterion; but having not yet made all the trial neceſſary to eſtabliſh the propoſition, we defer any final deciſion of this point to an after oportunity.

(a) In the uſe of the diffuſible ſtimuli great care ſhould be taken to apply them only to the caſes that require them: which are only the diſeaſes of the higheſt debility, or of which the intolerable pain, beſides tormenting the patient, threatens the worſt conſequences. All from the end of CXXVI. is an addition in the MS. this moſt valuable part of the exciting powers, whether conſidered as a part of diet, as the chief of them are among the Turks, or as uſed for the prevention of diſeaſes, to which there may be a ſtrong bias in the habit, or as remedies of theſe diſeaſes when they have come on, or as hurtful powers when improperly employed, having been left out in both the editions of the Latin Work that have yet been preſented to the public.

tability. The indirect acts upon the living solids in so far as they are to be considered as simple; the direct acts upon them as living only. From a long and habitual excess in food and drink, at last indirect debility arises and the group of diseases depending upon it (b).

c. All these stimuli have also a tendency to produce asthenic diathesis.

CXXVIII. All the vegetable food (c), and too sparing an use of animal, as also meat too salt, and deprived of its native juices by keeping, when better nourishing matter is withheld, constantly weaken, and thereby produce asthenic diathesis through all its degrees. Hence *arises* that remarkable imbecility both of body and mind, which distinguishes the Gentoos, who follow the Brahminan ceremonial of religion. Hence the diseases of the poor(d) every

(b) When I make a meal of animal food, much less bulk is requisite to give the same nourishment, than when the vegetable matter is the only one made use of. What makes the difference is, that there is something in the animal matter which affords a nourishing stimulus independent of its bulk; and though the vegetable matter is not altogether devoid of that kind of stimulus, it, however, possesses it in a much smaller degree. Both stimuli are necessary, but chiefly the direct, by which animal food chiefly acts; and therefore is the vegetable the worst and weakest sort of aliment, because it chiefly acts by its bulk of matter. A small portion of the indirect stimulus is necessary; hence the very general use of bread. But our vigour of mind and body depends upon the direct.

(c) take in any quantity.

(d) The nourishment of animal food needs only a little support of tension from a moderate quantity of bread but the vegetable food, even when supported by strong condiments, in no quantity whatever, ever gives due support, appears plainly from the instance brought in the text. Of the poor labouring people in Scotland, who chiefly live on vegetable matter, it would take three to go through the work that one Yorkshire man nourished by bolting fat pork, can easily execute. And among the Gentoo servants a dozen is not able to perform as much work as a single English servant. A year's experience of vegetable food, and its pernicious consequences (vide the Preface) has now put the question, about

every where; hence ſcrofula(e), fevers(f), epilepſy, cough, with profuſe expectoration and hemorrhage, and the whole band of aſthenic diſeaſes. The direct debility *flowing* from this hurtful power, affects the ſtomach ſomewhat more than any other equal part(g); *the conſequences of which affection are* loſs of appetite, ſtomach ſickneſs, vomiting, very looſe belly, and ſimilar diſturbances of the firſt paſſages.

τ But *while improper aliment produces ſuch effects*, theſe will alſo be induced by an ultimate exceſs in *the uſe of* food, *conſiſting* of the proper material; which muſt be inferred from the univerſal effect of all the other ſtimulant powers, *when their operation has been puſhed to the ſame exceſs*(h). The mean betwixt the extremes of the hurtful powers, in ſo far as diet is concerned, is abſtinence(i).

CXXIX.

about the ſuppoſed ſalutary effects of low living, and the pretended virtue of a rigid obſervance of it, beyond all doubt, and brought irrefragable proof of its weakening effect.

(e) Scrofula, though ſuppoſed hereditary, produces its worſt effects, not from that circumſtance, but the method of management, both for the prevention and cure.

(f) Various particular, and ſometimes ſpecific cauſes, have been aſſigned for the production of fevers; but it ſhall be proved, that, whatever debilitates in a high degree, is adequate to that effect.

(g) Chap. IV.

(h) It will now appear how far an aſſertion of the oppoſers of this doctrine is juſt or calumnious: low living and ſtarving are condemned for the facts and reaſons aſſigned; but can it now be ſaid, that the doctrine is friendly to intemperance? On the contrary, it has reduced the fact to its proper ſtandard, reprobating the extremes, and eſtabliſhing the mean under which virtue takes her poſt. It is certainly as immoral or irreligious, if you will, to hurt health, and haſten death by abſtinence, as by a luxurious exceſs. There is a gloomy luxury in ſuperſtition, a chearful one in ſenſuality; both bad.

(i) At leaſt it ſtands at the foot of the ſcale of directly debilitating powers,

CXXIX. The withholding alſo of the uſe of condiments, which, without animal food (*k*), are not ſufficient to give ſtrength, gives an additional weakneſs.

CXXX. Strong drink, and the diffuſible ſtimuli, are never neceſſary to young and ſtrong people, upon account of their rapid tendency to indirect debility, from their high ſtimulant power; nor are they even ſafe. But, in perſons who have been accuſtomed to them, in the *caſe of thoſe who are* advanced in age, and of thoſe who are weak from that or any other circumſtance, cold, watery, acid, or fermenting drink, has a great influence directly, and exceſs in the uſe of ſtrong drink indirectly, in producing aſthenic diatheſis.

*v.* If the diffuſible ſtimuli, after they have been employed, are too quickly withdrawn, they, in the ſame manner as the more durable, allow the excitability to accumulate, and indirect debility to come on, and conſequently may be ſaid to produce aſthenic diatheſis. But aſthenic diatheſis is never the conſequence of withdrawing their operation at leaſt worth ſpeaking of, but when that has been habitual. And all the hurtful effects which they have moſt untruly, to the great detriment of mankind, been ſaid rather, than are now ſaid, to occaſion, ariſe not from themſelves, but from the want of knowledge how to manage them. And as this operation of diffuſible ſtimulus ought to be ſupported by that of a durable; at the ſame time, it muſt not be confounded with debilitating powers. What diſturbances, during the operation of opium, will not a breath of cold *air*, affecting the body, create? And how

 eaſily,

powers, if they are to have the rank of ſtanding uppermoſt, as being moſt hurtful and to be followed by the enumeration of the indirectly debilitating powers, as being next ſo, which by the way, is the rank that nature ſeems to point out for both.

(*k*) as in the caſe of the Gentoos, who make uſe of a great deal of condiment with their vegetable aliment,

caſily, as well as quickly, are they all removed, by carefully covering up the body ? (*l*).

φ. Both the other diffuſible ſtimuli, as well as opium, and the more durable one of ſtrong drink, by an indirectly debilitating operation, produce aſthenic diatheſis.

CXXXI. A further ſtimulus is an abundance of chyle and blood; by this the excitement is encreaſed every where, and particularly in the blood-veſſels, and *encreaſed* in degrees proportioned to its degree of abundance. The quality of the blood, at leaſt, as a cauſe, is of no effect, it is the quantity only that is. The quantity, by *its action of* diſtending the muſcular fibres of the veſſels, acts with a conſtant impulſe (*m*). The doctrine of plethora, ſo noted

(*l*) As there are caſes of indirect debility from an habitual abuſe of ſtrong drink, there are alſo others from a miſtaken or intemperate uſe of the diffuſible ſtimulus, particularly opium. Both of them require nicety and ſkill in the management of them for their cure; for which conſult Chap. XI. from par. CIII. to CX. The management is out of our preſent queſtion; but what affects that is, that, from this obſervation, we can clearly find, as it was to be expected from the analogous operation of the other exciting powers, that the diffuſible ſtimuli, when their operation is carried to exceſs, will alſo produce an aſthenic diatheſis of the indirect kind.

(*m*) The blood by its quantity diſtends the muſcular fibres of the veſſels; that diſtention ſtimulates the excitability in the fibres, and produces excitement, commonly called their irritability; thus excited, the fibres contract; the contraction of each portion ſends the wave onward to another portion: when the wave has paſſed any given portion of veſſel, its fibres again relax, and make way for the next, which is puſhed along in the ſame manner. In this way the circulation goes on in all caſes while life remains; contraction and relaxation conſtantly alternate; the former propelling the wave before the latter opens to receive the next. But the veſſel may be in different ſtates with reſpect to its power of either contracting or relaxing. When it is weak, which every part of the vaſcular ſyſtem is as often as all the reſt of the ſyſtem is weak, both the contraction and relaxation of each portion of veſſel is imperfect. The contraction from its ſmallneſs, and the relaxation from its being more owing

ted *in the* medical ſchools, is only applicable to ſthenic diatheſis, and takes place in proportion to its degree (*n*).

CXXXII. The effect of diſtention (*o*) is encreaſed by the velocity of the blood, both as ariſing from other ſources, and eſpecially from that motion of the body which its own muſcles perform, a motion, which, by compreſſing the veins, carries the blood more quickly back to the heart.

CXXXIII. Nothing is more effectual than theſe two *laſt mentioned ſtimuli*, in producing ſthenic diatheſis, and the diſeaſes depending upon it. Thoſe diſeaſes are violent in proportion to the over proportion of the blood, and the rapidity of the force with which it flows; a fact, that is proved by all the exciting powers, all the ſymptoms of thoſe diſeaſes, and, eſpecially, the pulſe of the arteries;



owing to the paſſive ſtate of the ſimple, the active ſtate of the living fibres, leave betwixt them a large diameter upon the whole. But, in a vigorous, or ſthenic, ſtate of the whole ſyſtem in general, and of that of the veſſels in particular, the contractions are ſtrong and forcible, and the relaxations active and in conſent with the contractions. Hence the diameter of each portion of veſſel is diminiſhed upon the whole, and while the quantity of the blood is at the ſame time encreaſed, the action and re-action are great; the blood diſtends with mechanical, the veſſels reſiſt with vital energy; the mutual effect of both upon the excitability is conſiderable; all is activity, all is force, and theſe are in exact proportion to their cauſe over all the ſthenic diatheſis. This ſtate of the veſſel, in ſo far as it reſpects the muſcular fibres, is its tone; in ſo far as it reſpects them as ſimple ſolids, its denſity. It is a ſthenic ſtate of the veſſel, oppoſed to the aſthenic firſt deſcribed, which is diſtinguiſhed by the epithets of atony and laxity; which, however, oppoſed to tone and denſity are only relative terms, employed for convenience, not abſolute: like the term cold, uſed for diminiſhed heat, they only ſignify a diminution of tone and denſity.

(*n*) It is a curious fact, that, while the truth of this propoſition is demonſtrated, the plethora of the ſchools is only underſtood of a ſtate of the veſſels diametrically oppoſite to a juſt idea of plethora.

(*o*) that we have been deſcribing.

it is alſo proved by the great efficacy of bleeding, purging, abſtinence from food, and reſt, in the cure of the diſeaſe (*p*).

CXXXIV. While an over-proportion and velocity of blood is a chief cauſe of ſthenic diatheſis; there is nothing more powerful in producing the aſthenic, than that penury of blood which the greateſt celerity of motion accompanies. Hence, the ſmallneſs, weakneſs, and quickneſs of the pulſe: Hence the excitement is diminiſhed every where, and in preference to other equal parts, in the whole ſanguiferous ſyſtem, and that in exact proportion to the penury.

χ. *From this ſtate of the veſſels* ariſes the diſcharge of blood from the lungs, from the uterus, from the anus, or around the anus, from the urinary paſſages, and through the perſpiratory pores. Hence ariſe diſturbances of the ſtomach, want of appetite, loathing of food, and, therefore, upon account of want of nouriſhment, and the langour of the digeſtive organs, always leſs and leſs blood ariſes in the ſyſtem. So great a penury of blood is the principal origin of bleeding diſeaſes; which never happen but in the aſthenic ſtate. The ſame *penury of blood* acts in ſuch a manner, and chiefly affects its own veſſels, becauſe, according to a law ſo often mentioned, its debilitating energy chiefly falls upon them. In ſthenic diſeaſes, that have advanced to their height, or a little beyond it, a few drops of blood from the noſe, or a dropping of blood from the ſame or any other part, demonſtrate only a prediſpoſition to indirect debility, but not an eſtabliſhment of it,

(*p*) Relief from bleeding and other evacuations is certainly a good argument for the cauſe of the diſeaſe being ſo far owing to an over-proportion of blood; and reſt is as good for the proof of agitation of the veſſels being concerned in the cauſe: beſides, exerciſe is otherwiſe a noted cauſe of quickneſs of the pulſe: and the hurtful powers and ſymptoms are equally deciſive.

it, and that the matter ſtill remains within the operation of exceſſive ſtimulus (*q*).

4. Thus

(*q*) Who ever heard of a flood of blood coming from the lungs in a peripneumony? Or, who has not heard of it in conſumptive caſes; which are the diſeaſes depending upon the laxity of veſſels of which we are ſpeaking. What vigorous woman, ſound in all her functions, as a woman, ever fell into perpetual floodings? What had been the ſtate of theſe women before the diſeaſe? Did they eat and digeſt ſo completely, as that there was any reaſon for ſuppoſing their veſſels were filled with blood? No; long before the arrival of the diſeaſe their eating was puny, and conſidering the kind of matter they made uſe of, to wit, vegetable, it was not to be ſuppoſed more beneficial from its quality than its quantity. What was the idea to be gathered from their ſymptoms, and particularly the pulſe? The pulſe had all the marks of an aſthenic one; being weak, ſmall, and quick, like that of a new born infant. What was the ſtate of their habit? Was it vigorous and robuſt? It was the reverſe; ſoft, delicate; the habit lax; a falling off in fleſh, with weakneſs over the whole ſyſtem, and total loſs of appetite. What were the remedies employed to remove this ſuppoſed offspring of plethora? Bleedings, repeated without end; other evacuations with the ſame freedom, and vegetable food in a fluid form, and a horizontal poſture, with their head lower than their body and under-extremities. Miſerable are the reſources of ignorance, and contemptible their execution? Fill a rigid tube full of water, open at both ends, and the fluid, no doubt, will run out at the end which is moſt below an exact horizontal poſition. But that is not the caſe with the fluids in living veſſels. The excitement, diſtinguiſhing them from all rigid inanimate tubes, counteracts the effect of gravity, while its living ſtate remains: In proportion to the degree of which, the ſides of the veſſel will embrace their column of fluids, and prevent the flowing out of the fluids, in proportion to the degree of excitement; and before the gravity can act, the excitement muſt be extinguiſhed, and the living ſyſtem reduced to a lumpiſh maſs of dead matter. It is the latter, that enables them to produce that effect. And therefore, bleeding diſcharges can never happen, either in health or ſthenic diatheſis, unleſs in that very high degree of it that approaches to indirect debility, and even then, only in the forced, ſcanty, manner deſcribed in the text; whereas, after the eſtabliſhment of indirect debility, or in the caſe of direct, the great diſcharges only can happen, and that without force, in great plenty, but ſtill ſhort of what would happen if no excitement reſtrained it.

ϟ. Thus it is not an exceſs in the quantity of blood, but laxity and atony from its deficiency, that upholds the affair of bleeding diſcharges; which proceed *in their courſe* not with *any* effort (*r*), but a dimunition of tone: They are all aſthenic, and the aſthenic diatheſis, as far as it depends upon them, conſiſts in direct debility.

ω. But, as every other exciting hurtful power may be converted into indirect debility, ſo, alſo may an over-proportion of blood. For the veſſels, ultimately diſtended, and beyond all bounds, may (*f*), by the exceſs of *that* ſtimulus, exhauſt their own excitability, and, thereby, put an end to their excitement. Upon which the forcible contractions are converted into languid ones, or *ſuch as could* ſcarce *be called* contractions at all; the diameters formerly effaced, are converted into an extremely patulous ſtate. The finer parts of the fluids flow through the patulous extremeties of the arteries, wherever they find an outlet, and carry with them, ſometimes ſerum, ſometimes red blood.

In the aſthenic, diatheſis *as well as the ſthenic*, it is not the quality of the blood, but its quantity, which is to be found fault with, *and the fault in quality here* is deficiency. The deficient quantity produces the ſymptoms of the pulſe, that have been mentioned above, by not ſufficiently diſtending the veſſels, and giving them ſufficient excitement. Plethora, which has been thought to belong to this form of diſeaſes only, has abſolutely no exiſtence in it. The ſtate of the veſſels, with reſpect to the quantity of blood in them, that is pleaſant and ſuitable to health, is the mean betwixt the extremes that have been ſpoken of.

CXXXV. This ſtate (*u*) is the chief origin of aſthenic diſeaſes,

(*r*) or active impulſe, (*f*) under the high ſthenic diatheſis,

(*u*) of the blood and veſſels, that we have been deſcribing, that is, penury of blood, and atony and laxity of the veſſels, chiefly from direct, ſometimes from indirect debility; though the latter caſe is exceedingly rare.

diſeaſes, of which the ſo very hurtful effects of evacuation, eſpecially bleeding, as well as vomiting, purging the belly, and every other *mode of diminiſhing the bulk and quantity of fluids*, give full proof. This proof *has of late* received *a further* confirmation, in the *ſingular* ſucceſs of *the cure by* other ſtimulants firſt, and then by every mode of filling the ſyſtem (*x*).

CXXXVI. The different fluids ſecreted from the blood in different ways, are, by the diſtention which they give to their reſpective veſſels, alſo underſtood to ſtimulate. In that reſpect the milk and ſeed, by the abundance of each in its reſpective veſſels, and likewiſe the perſpirable fluid, have the chief effect, the commotion of the ſecretory organ (*y*), by means of excitability, which is one and the ſame undivided property over all, is eaſily diffuſed over the whole body, and, when it riſes to exceſs, is capable, with other powers that communicate an exceſs of excitement, to produce ſthenic diatheſis.

CXXXVII. The ſame *ſecreted* fluids, when they do not ſufficiently diſtend their reſpective veſſels, when they do not communicate enough of excitement, make no inconſiderable

(*x*) Syſtematics allow that there are many diſeaſes, which are a reproach to their art, from their never yielding to their method of cure, but, on the contrary, becoming worſe and worſe in proportion to the time and pains taken about it. Of theſe opprobria medicinæ (it would be better, I believe, to call them opprobria medicorum) few are more ſo than the bleeding diſeaſes; which ſeem uniformly to have proceeded from evil to worſe under the evacuant debilitating plan; while it has now been found, that the high ſtimulant plan removes them with the greateſt ſucceſs.

(*y*) It has been ſaid above, in chap. IV. that the excitability is one uniform undivided property over the whole living ſyſtem; and that, wherever it is acted upon in any part of its ſeat, it is affected over all. This fact, which is ſtrictly true and univerſal over every part of living matter in nature, with the utmoſt eaſe explains many things, that were confeſſedly inexplicable upon every other medical doctrine; and, among the reſt, the ſeveral affections of the ſecretory ſyſtem.

derable part of the hurtful powers, that conſtitute aſthenic diatheſis.

A. For which reaſon vomiting, purging, and every other evacuation, are powerful inducers of aſthenic diatheſis, which they effect in proportion to the debility that attends their operation. The ſame thing is to be ſaid of exceſs in venery, which is partly an indirect, partly a direct, always a great, debilitating power (*a*).

B, Sometimes the ſecretory veſſels ſeem ſo crammed with a colluvies of fluids, that indirect debility may poſſibly ariſe from that ſource, as is exemplified in that overflowing of bile, which diſtinguiſhes the yellow fever (*b*). Here too the debilitating effect, by means of the excitability, tends to diffuſe the diatheſis over all.

From this ſource, ariſe, a languid action of the extreme veſſels (*d*), a ſlow, then no, motion of the fluids, a ſtagnation

(*a*) Nothing is more effectual in haſtening of death than a love marriage betwixt an old man of worn out excitability, and a young beautiful virgin: I need not explain to any reader on which ſide, that of the man or the wife, either the love or the danger lies.

(*b*) of the Torrid zone. I have been ſo often, and by perſons of good enough ſenſe to make juſt obſervations, informed of the neceſſity of purging off the redundancy of that fluid, which not only fills the inteſtines, but diffuſes itſelf over the whole alimentary canal; and, then, of following out the cure of the diſeaſe by the uſe of wine, ſpirits, and the diffuſible ſtimuli, that I have, though at firſt with ſome reluctance, admitted the fact. The reaſon of the flowneſs of my aſſent to it was, that, upon every other occaſion of any accumulation of matter in the firſt paſſages, even in the colic itſelf, I had always found the practice of invigorating the periſtaltic motion, by ſtimulants, ſufficient to clear away all ſuch extraneous matter; while vomiting and purging, by their relaxing effect upon the veſſels, ſerved to generate more, and increaſe the cauſe of the diſeaſe, which is always debility. This I found not an exception to that general principle, but an inſtance of a ſort of local diſeaſe, from an over-repletion of the exhalant mucous and biliary veſſels.

(*d*) Theſe are the exhalants that pour out the ſaline, watery part of the

nation and corruption of them. A diminution, or temporary deſtruction of excitement, over this large ſpace in the ſyſtem (*e*), by means of the ſame excitability, communicates debility to the reſt of the body; and, in conjunction with other hurtful powers that give not enough of excitement, produces aſthenic diatheſis.

r. The various ſorts of geſtation (*f*), and of exerciſe and labour, by rouſing the muſcles into contraction, and thereby accelerating the motion of the blood in the veins towards the heart, while the valves prevent its taking a contrary direction, greatly promote excitement in all the veſſels, and, therefore, over the whole ſyſtem; and *the effect* may go ſo far as to produce ſthenic diatheſis.

Δ. As nothing contributes more to health than moderate and frequently repeated exerciſe, and its exceſs acts in the manner that has *juſt now* been deſcribed; *at the ſame time* a degree

the blood unchanged; the mucous glands that change, by their ſecretory operation, the fluid they receive from the blood; the pori biliarii that change the fluid that they receive from the extremities of the veins of the gate, and of the hepatic artery, or artery of the liver; the little ducts which theſe form by the union of numbers into ſingle veſſels; the hepatic duct or great biliary veſſel of the liver, which receives the bile from all the ducts; and, laſtly, the ductus communis choledochus, or the duct that may be denominated in Engliſh, the general receiver of all the bile, whether from the great duct of the liver, or that which ſends to the gall-bladder a part of the bile that returns in the ſame veſſel to the general receiver. Theſe, and beſides them, the inhalants or abſorbents as they are called, to wit, the ſmall veſſels that take up from the exhalants and other arterial terminations of veſſels, the fluid, called lymph, which is once more to be returned into the circulation; are the veſſels that ſuffer the concourſe of ſymptoms deſcribed in the text.

(*e*) How great the ſpace in the whole ſyſtem is that theſe veſſels occupy, may be eaſily imagined, when it is conſidered, that every evaneſcent artery, over the whole body, terminates in one or more of theſe colourleſs veſſels that have been deſcribed.

(*f*) as riding on horſeback, going in a carriage, uſing an hobby, ſailing.

degree of it, *either* greater or leſs, than the ſalutary degree, by its weakening effect, the former in waſting the excitability, the latter in with-holding a neceſſary ſtimulus; that is the one by debilitating indirectly, the other directly, produces aſthenic diatheſis.

CXXXVIII. Thinking, which acts more upon the brain, to which it is immediately applied than upon any other equal part of the ſyſtem (*h*), encreaſes excitement over the whole body (*i*). Straining and thinking, whether in a high degree for once, or often repeated in a leſſer degree, or habitual may alone prove hurtful; *but*, in conjunction with other powers alſo hurtful from their exceſs of ſtimulus, may become more ſo, and amount to a degree equivalent to the production of ſthenic diatheſis.

CXXXIX. An evident cauſe of aſthenic diatheſis is that ſtate of the intellectual function, in which exceſs in

(*h*) Vide Chap. IV. Part I.

(*i*) None of the exciting powers have more influence upon our activity than the two which are juſt going to be mentioned, the exerciſe of our intellectual function, and that of paſſion or emotion. With reſpect to the former, Homer obſerves of the hero, whom he gives for a pattern of eloquence, that upon his firſt addreſs, that is while he was under ſome agitation, and had not yet got into his train of thought, he was awkward in every motion, and in his whole attitude; he looked down to the ground, his hands hung ſtrait along his ſides as if powerleſs; his whole appearance was torpid. But when he once entered upon his ſubject, his eyes were all fire, his limbs all motion, with force, grace and energy. Upon commencing a lecture, the pupils have often obſerved the ſame torpor in the lecturer, and a ſimilar vivacity and life in a few minutes, when he had now got fairly into his ſubject: the report which a lecturers daughter, upon looking through the hole of a door, while the lecture was going on, made to the family and ſome company then preſent, was, that her father looked, in his lecture, as if he would look through his hearers. A Mr. Donaldſon is one of the few great maſters, in the art of painting, who never fail, with a moſt exact likeneſs, to diſplay the whole influence of the mind upon the features. A miniature of me, done by him, as a preſent, is reckoned the greateſt maſterpiece in theſe reſpects, that ever came from the hands of a painter.

in thinking, by waſting the excitability, ends in indirect debility; or that deficient, weak, vacant ſtate of mind, uncapable of keeping up a train, which produces the ſame hurtful effect by direct debility. This faulty ſtate of the mind contributes greatly to weaken *the ſyſtem* (*k*).

CXL. Violent paſſions of mind, as great anger, keen grief, unbridled joy, going to ſuch a pitch as to deſtroy excitability, have the ſame effect as exceſſive thinking, and admit of all the ſame reaſoning.

CXLI. A force of paſſion riſing to the height of exhauſting the excitability, induces that aſthenic diatheſis, which is occaſioned by indirect debility, and diſeaſes of that ſtamp. Hence epilepſy (*l*), hence apoplexy, and that, when the mind has been ſcrewed up to the height of paſſion, often fatal.

CXLII. On the contrary, when there is a deficiency of paſſion, as in melancholy, grief, fear, terror, deſpair, which are only lower degrees of joy, aſſurance, and hope, and imply no more than a diminution of exciting paſſions, not emotions *of a nature* oppoſite to thoſe, and poſitive; their tendency is to produce the aſthenic diatheſis, which depends upon direct debility. The immediate production of this is loſs of appetite, loathing of food, ſickneſs at ſtomach, vomiting, pain of the ſtomach (*m*), looſe belly without pain, the ſame with pain, indigeſtion (*n*), cholic, the gout, and fevers.

CXLIII. The *exerciſe of* the ſenſes, when it is agreeable, has a very great effect in exciting the whole body, and in

(*k*) It may often be remarked by phyſicians, that their patients, after every other proper part of cure has been executed, are never completely reſtored to their healthy ſtate, till they are again engaged in their uſual occupations both of mind and body.

(*l*) or the falling ſickneſs,

(*m*) called cardialgia by ſyſtematics

(*n*) called dyſpepſia,

in producing emotions, which, together with the hurtful powers mentioned above, may eaſily contribute to the production of ſthenic diatheſis. Thoſe emotions are exemplified in drinking, dancing, in agreeable entertainments where the eye is dazzled with the ſplendour of the diſhes, of the company, and of all the objects around.

CXLIV. The energy of the ſame *exerciſe of the ſenſes*, when it is exceſſive, and carries the effects, juſt now mentioned, too far, produces indirect debility. On the contrary, when the ſenſes are either in part deſtroyed, or in part dulled, or diſagreeably affected (*o*), the mind is dejected, and the whole body thrown into *a ſtate* of languor and direct debility. And, in both caſes, eſpecially when there is a concurrence of other debilitating hurtful powers the aſthenic diatheſis ariſes.

CXLV. The effect of the air (*p*), independent of its qualities, as they are called, or its properties, and its uſe in ſupporting reſpiration, is leſs obvious to obſervation (*q*); at the ſame time it cannot be doubted, that its application to the whole ſurface of the body is a ſtimulus not to be diſpenſed with. The air is ſeldom applied in a pure ſtate: it is commonly blended with foreign matters that diminiſh its force of ſtimulus; and, while its ſalutary ſtimulus depends upon its purity, at the ſame time it is uncertain whether ever its purity goes ſo far as to ſtimulate in exceſs, and thereby produce ſthenic diatheſis. The balloons, lately invented, by which men get above the clouds, would ſerve excellently to throw light upon that matter, if it were not for the cold *that* accompanies

(*o*) Nothing is more clearly diſagreeable than an obſcure light, as when one reads with a ſmall or unſnuffed candle. Hence the luxury of more candles than one, or of wax or ſpermacet candles. This is often experienced at Ranelagh, and may be ſeen in children exquiſitely amuſed.

(*p*) upon the human body,

(*q*) than the other powers that have been ſpoken of.

accompanies this progreſs. Be that as it may; ſince we never live in the pureſt air, and yet live commodiouſly enough, it is, therefore, credible, that too pure an air has a tendency to ſtimulate in exceſs, and therefore, produce ſthenic diatheſis.

CXLVI. But, as nothing is more uſual than impurity of air, and every impurity diminiſhes its ſtimulus, a very impure air, or air blended with impure matters, without doubt debilitates, and produces aſthenic diatheſis. Accordingly, impure air is a frequent cauſe of typhus, as is evident from the fate of thoſe who died in the black hole of Calcutta. Whether ever the air, from an exceſs of purity, produces aſthenic diatheſis, is the more doubtful, that, as has been ſaid, it is as yet undecided whether it produces ſthenic diatheſis or not.

E. Contagious matter, in ſo far as it may have any tendency to produce general diſeaſes, *in* one form produces ſthenic, in another aſthenic diſeaſes, and, therefore, acts like the ordinary hurtful powers of either ſort, and admits of all the ſame reaſoning. But, in ſo far as it only occaſions the eruption, without making any change in the excitement, it is to be referred to the local diſeaſes.

Z. To poiſons, if they act as general ſtimulants, all the reaſoning that has been employed with reſpect to the other hurtful powers, will apply. It is not, however, likely that they are general ſtimulants.

CXLVII. It is ſeldom from the ſeparate, almoſt always from the united operation of all the powers, that both the diatheſis, whether as remaining *within the range* of prediſpoſition, or riſing to the degree of actual morbid ſtate are produced, and from no inherent power in the ſyſtem.

CHAP.

## CHAP. II.

### *The Cauſe of each Diatheſis.*

CXLVIII. The cauſe of ſthenic diatheſis, produced in the way that has now been explained, is, in conſequence of the operation of the powers that have been mentioned, too great an excitement of the living ſyſtem every where, *with the effect of* firſt encreaſing all the functions, then of producing a diſturbance in ſome, and impairing others, but never by a debilitating operation.

CXLIX. The cauſe of the aſthenic diatheſis ariſing from the ſame ſource, is, in conſequence of the debilitating hurtful powers, too little excitement of the living ſyſtem every where, *with the effect of* impairing all the functions, diſturbing ſome, giving a falſe appearance of encreaſing others, but always debilitating (*a*).

CHAP.

(*a*) It muſt now appear to the reader, to what ſimplicity the hitherto conjectural, incoherent, erroneous, myſterious, and enigmatical art of phyſic, is now reduced. It has been demonſtrated, that there are only two forms of diſeaſes, that the deviation from the ſtate of health, in which the morbid ſtate conſiſts, is not either repletion or inanition, or changes in the qualities of the fluids, whether of an acid or alkaline nature, or the introduction of foreign matters into the ſyſtem, or a change of figure of the extreme particles, or a diſproportion in the diſtribution of the blood, or an encreaſe or decreaſe of the power of the heart and veſſels as regulating the circulation, or a rational principle governing the actions of the body, or an alteration in the extreme particles as being of too large or too ſmall a ſize, or an alteration of the pores, as being too narrow or too capacious, or a conſtriction of the ſuperficial veſſels from cold, or a ſpaſm of them producing a reaction, as it is called, of the heart and interior veſſels, or any thing that any perſon has yet thought of reſpecting the cauſe and nature or morbid ſtate. On the contrary, it has been proved that health and diſeaſe are the ſame ſtate depending upon the ſame cauſe, that is, excitement, varying only in

# CHAP. III.

## *The ſthenic Diatheſis.*

CLI. PREVIOUS to the diſturbance (*a*) which never happens till after the arrival of the diſeaſe (*b*), and even then only in a violent attack of it, all the ſenſes are acute: the motions both voluntary and involuntary (*c*), are vigorous,

in degree; and that the powers producing both are the ſame, ſometimes acting with a proper degree of force, at other times either with too much or too little; that the whole and ſole province of a phyſician, is not to look for morbid ſtates and remedies which have no exiſtence, but to conſider the deviation of excitement from the healthy ſtandard, in order to remove it by the proper means. The reaſoning part of this doctrine, it is expected, the reader will find irreprehenſible and unanſwerable; and the practical part, from the aſtoniſhing cures that have upon innumerable occaſions been effected, will ever ſtand in ſupport of the truth and utility, as well as ſimplicity of the whole.

(*a*) of the functions, which, it has juſt now been ſaid, the hurtful effects of both ſets of powers produce,

(*b*) During the prediſpoſition to peripneumony, as well as to every other diſeaſe, neither the ſymptoms of diſturbance, or any other ſymptoms at all appear. And in mild caſes, ſuch as catarrh, the ſymptoms of diſturbance occur not through the whole courſe of the diſeaſe: But, when a diſeaſe is, like the peripneumony or the gout, of a violent nature, then the ſyſtem is commonly diſturbed, and in a moſt conſpicuous degree. The affection of the lungs in the former, from the inflammation within, and of one of the feet, or ſome other part in the latter, from an external inflammation, give extreme diſturbance to the affected parts, while there is a diſeaſe of the ſame nature as the gout, that is dyſpepſia, or indigeſtion, in which the inflammation never appears.

(*c*) The voluntary motions are thoſe that are performed under the influence of the will, ſuch as the motion of the limbs in walking, or in any ſort of exerciſe. The organs, by which they are moved, conſiſt of bundles of moving fibres called muſcles. The involuntary motions are thoſe of the interior parts of the ſyſtem, ſuch as thoſe of the heart and veſ-

ſels

vigorous, there is an acuteneſs of genius, and a great force of ſenſibility as well as of paſſion and emotion. *The ſeveral parts of the body are perceived to be in a ſtate of vigour from the following marks of it;* the heart and arteries from the pulſe; the extreme veſſels on the ſurface of the body from the complexion; all the muſcles from the ſtrength that they exert; the internal ſecretions from the great quantity of milk and ſemen; the digeſtive organs from the appetite, the digeſtion, the vigour of the body, and the manifeſt abundance of blood.

CLII. How far the intellectual faculty, and the force of paſſion, are encreaſed, will be learned from a compariſon of them in this diatheſis, in good health, in the ſecond form of diſeaſes and prediſpoſition to it. In this way it is that the functions are firſt encreaſed.

## CHAP IV.

*The Sthenic Diatheſis illuſtrated by an explanation of its Symptoms.*

CLIII. The encreaſe of *the force of* the ſenſes, of the motions, of the intellectual faculty, and of the paſſions, depends upon the encreaſe of excitement in every one of their organs, among other actions, quickening the motion of the blood *through them.*

CLIV. The coming on of every ſthenic diſeaſe is announced by a ſhivering. It depends upon a diminiſhed perſpiration, by means of the diatheſis being *exquiſitely* ſtrong in the extreme veſſels of the ſkin. The ſame is the explana-

ſels connected with it; the periſtaltic motion in the firſt paſſages, which are the paſſage to the ſtomach, the ſtomach itſelf, and the whole convolution of the inteſtines; as alſo thoſe of the womb, of the bladder, of urine, and ſo forth. None of the latter are under the influence of the will.

explanation to be given of the ſenſe of cold, which commonly accompanies the ſhivering; and the ſame is the explanation of the dryneſs of the ſkin.

CLV. In the ſame diſeaſes the pulſe is ſtronger, harder, and fuller, and ſomewhat more frequent, than in its ſound ſtate. Its fulneſs and hardneſs is owing to taking animal food plentifully during the prediſpoſition. The force and frequency is occaſioned by the ſame and any other ſtimulus, as that of ſtrong drink; that of the diffuſible kind, and that of exerciſe, whether corporeal or mental: Nay all the ſtimulant hurtful powers are participant of the ſame effect.

CLVI. If, in the progreſs of the diſeaſe, the pulſe ſometimes becomes weaker, ſofter, emptier, and quicker, that is a bad ſign, and occaſioned either by the debilitating plan of cure being puſhed beyond the proper bounds; or, in conſequence of a neglect of that ſort of cure, it may be owing to ſome debility induced by the exceſs of excitement. The former of theſe is direct, the latter indirect debility; both to be avoided.

CLVII. The complexion in the veſſels, which is often a conſequence of a previous appearance of paleneſs, and great quantity of ſecreted fluids, is occaſioned by an over-proportion of blood, in conſequence of an exceſſive ſthenic diatheſis obſtructing the perſpiration. The ſame is the cauſe of the head-ach and pains in different parts. For, as the head-ach ſo quickly and eaſily yields to bleeding, it is, therefore, ſeldom to be ſuſpected of being owing to inflammation within the head. And the reaſon for ſo thinking is ſtrengthened by this further circumſtance, that the inflammation ariſing in general diſeaſes always affects an external part, as far as that fact has been enquired into (a).



(a) Vide above, CXIII.

CLVIII. The delirium alſo, that ſometimes ariſes in a violent ſtate of diſeaſe, is not to be imputed to inflammation, and for the ſame reaſon; for it yields ſo much to bleeding and other evacuations, that there is no reaſon for ſuſpecting inflammation within the head. That abundance of blood in the veſſels, diſtending theſe to exceſs, is the cauſe of the whole affair, is proved on the one hand by the redneſs of the face, implying ſuch abundance, and on the other by bleeding, removing the diſeaſe at once.

CLIX. Thirſt and heat, which are alſo remarkable ſymptoms in ſthenic diſeaſes, depend upon the ſthenic diatheſis in the extreme veſſels of the fauces and ſkin; the diatheſis ſo obſtructing the veſſels as not to allow a return of perſpiration, but to ſuffer, however, the blood to paſs into the very neighbourhood of the ends of the veſſels, and by means of the ſuppreſſion of the perſpiration, to accumulate, under the cuticle, the heat generated in the ſyſtem. Thus, in the throat, from an affection of the ends of the veſſels, the ſaliva and other fluids, by the free flow of which the throat is lubricated, and freed from that ſenſe of dryneſs, which is called thirſt, are now confined (b), and thereby produce thirſt.

CLX. Hoarſeneſs, cough, and expectoration, which are ſometimes obſerved in ſthenic diſeaſes, commonly proceed, and ſucceed to each other in the following order. There is firſt often a hoarſeneſs, then a dry cough, then a cough with expectoration. The cauſe of the hoarſeneſs and dry cough is an obſtruction of the exhalants and mucous veſſels, which terminate in the bronchia, ſtill occaſioned by a violent ſthenic diatheſis, and prevented from tranſmitting their contents to lubricate the air-veſſels (c), ſo

(b) and prevented to flow out,

(c) The bronchia are the diviſions of the wind-pipe running through the ſubſtance of the lungs, and blended with the blood-veſſels. In the ſubſtance

ſo as that hoarſeneſs may be removed, and the expectoration proceed with freedom. Again, the expectoration is next freely made, becauſe the diatheſis, being now diminiſhed, and allowing the ends of the veſſels to be relaxed, and the fluids to be poured out in abundance upon the air-veſſels, is the occaſion of the fluids producing a commotion of the excitability over this whole organ, and by the convulſive motion, which is called cough, of being themſelves thrown out.

CLXI. As the greater freedom of expectoration now implies an abatement of the diatheſis: ſo too great a flow, and too long a continuance of it, ſhows, that the diatheſis is now ruſhing into the aſthenic ſtate, either from indirect debility, or when the diſeaſe, in its progreſs, has much exhauſted the excitability; or from direct debility, as when the plan of cure, proper in kind, has been puſhed beyond the bounds.

CLXII. Thoſe ſame ſymptoms (d), while they ſtop ſhort of the range of direct debility, or are not yet changed into the indirect, are occaſioned by heat, and whatever ſtimulates in exceſs, and removed by cold and whatever acts as a weakening power.

CLXIII. Paleneſs, ſhrivelling of the ſkin, clearneſs of the urine, and bound belly, which chiefly happen about the beginning of the diſeaſe, ariſe from a degree of the diatheſis, ſhutting up the ends of the veſſels in ſuch a manner, that either nothing is excreted,



ſubſtance of the lungs, beſides theſe two ſets of veſſels, the air-veſſels and blood-veſſels, there are likewiſe exhalants, ſmall arteries, and mucous glands, coming off from the extremities of the red arteries. The windpipe is covered with the latter; and the great quantity of mucus thrown up from the lungs, often in perfect health, and in innumerable caſes, both of ſthenic and aſthenic general diſeaſe, ſufficiently proves the exiſtence of the ſource from which they flow.

(d) mentioned juſt now,

or the thinner part, as in the urine, only eſcapes. The cure of the affection of the urine, of the obſtructed perſpiration and coſtiveneſs, ſhows that the diatheſis is now gradually abating, the diſeaſe becoming mild, and now upon the eve of being thoroughly removed by emetics, purgatives, and ſudorifics, and the uſe of other debilitating remedies.

CLXIV. In ſthenic diſeaſes, when they are gentle, the appetite is often not much diminiſhed, and oftener more food can be taken than is ſerviceable. But, unleſs the lighteſt vegetable matter only, and that in the form of watery potion, or in a fluid form, be given, every morſel of it will do harm.

CLXV. But, when either from indulgence in food of a rich nature, or from employing a ſtimulant plan of cure, or from the diſeaſe having, from the beginning, ariſen from very violent, hurtful powers, and now attained its higheſt degree of violence; in any, or all theſe circumſtances, both the other bad ſymptoms, mentioned above, break out directly, and the violent diſorders of the ſtomach, or an acute pain of the thorax, ſhow themſelves indirectly.

CLXVI. In a violent diatheſis, therefore, where there is little appetite for food, but a very great deſire for drink; with the latter the patient is by all means to be gratified; but the former ſhould be avoided, as producing loathing, ſickneſs at ſtomach, and vomiting. Thoſe ſymptoms are not uſually of long duration, unleſs when the diatheſis is now going, or actually gone, into the aſthenic ſtate by the means that have been mentioned above (f), and, by remomoving the other ſymptoms by the proper debilitating plan of cure, they go off; but when the ſtomach ſickneſs and vomiting are urgent, and begin now to be a little more obſtinate, and of a little more duration, one may know that they

(f) Vide laſt paragragh and a few immediately preceding it.

they ſtill remain ſhort of the change into indirect debility, by the following mark: if the pulſe ſtill maintains moderation in its frequency, and does not abate much of its fulneſs and force; if artificial vomiting and purging diminiſh the morbid vomiting, and, in one word, if the debilitating plan of cure ſtill ſucceeds. But, it will then at laſt be underſtood that the diſeaſe is altogether changed, and its cauſe converted into the oppoſite, when thoſe ſymptoms every day increaſe; when the pulſe becomes weaker and weaker; when gripes in the inteſtines, and liquid ſtools, are ſuperadded to the ſymptoms that diſturb the ſtomach, and when the antiſthenic or debilitating plan of cure is now of evident detriment (g).

CLXVII. While the ſame ſymptoms (h) ſtill ſtop ſhort of indirect debility, the exceſſive excitement in the ſtomach being of quicker tendency to indirect debility there than any where elſe, upon account of the ſtomach's great ſenſibility, and the force of the moſt powerful ſtimuli being chiefly exerted upon it, produces ſymptoms of diſturbance (i); for the moſt powerful ſtimuli, and thoſe that are ſignally powerful in producing ſthenic diatheſis (k) are firſt

(g) See above, CIX.

(h) of the ſtomach and inteſtines,

(i) See above, LIV.

(k) as high-ſeaſoned animal food, wine, ſpirituous drink, cordials, and the whole train of high diffuſible ſtimuli, ſome of theſe, as meat and wine, have no effect upon the external ſurface, or any other part; others, as ſome of the condiments, ſuch as muſtard and ſtrong ſpirits, and above all the diffuſible ſtimulants, as æther, camphor, and opium in a liquid form, do act upon the ſecond, and by their application to it ſupport their own internal uſe. Thus to prevent or remove the gout, anaſarca, ſprains, and ſo forth, the application of any of thoſe high diffuſible remedies, juſt now mentioned, will greatly contribute, along with their uſe as taken into the ſtomach, to ſupport the general operation. Theſe, and innumerable others, are ſo many facts that have been ſuggeſted by obſervations and trials made in the proſecution of this doctrine.

firſt applied there, and exert a greater force upon the excitability in that than any other part. Thoſe ſtimuli are the ſeveral preparations of animal food, the ſeveral concentrated ſtrong drinks, the ſeveral condiments with which they are ſeaſoned, the various diffuſible ſtimuli, as the different preparations of opium, volatile alkali, camphor, muſk, and æther: and they all act upon the ſtomach with that force which they exert not upon any other part; they do not upon the inteſtines below, becauſe they undergo a change from the firſt digeſtion before they paſs over into the firſt portion of the inteſtinal canal; not upon the lacteal veſſels, becauſe they are not received into them till they are further diluted, and undergo another change from the digeſtive operation, and when ſo changed, they are next carried to be mixed with the blood; not upon the heart and arteries, upon account of the ſame dilution meeting them alſo in thoſe veſſels, and of a conſtant change of mixture occurring through the whole courſe of the circulation; not upon the terminations of the arteries, whether exhalant or glandular, and whether theſe excrete from the body a matter already corrupted, or carry back by the lymphatic veſſels, an uſeful matter to the blood; and that both for the reaſons that have been given, and particularly becauſe ſome great change is made in the exhalants and glands; not upon the lymphatic veſſels, where a new fluid is conſtantly flowing in upon the old in theſe parts by means of anaſtomoſing branches, and chiefly in the thoracic duct; not upon the other blood-veſſels, upon account of the great change that a repetition of the circulation produces; nor upon the muſcular fibres, whether voluntary or involuntary, becauſe the ſtimuli by no means come in contact with theſe; nor upon the brain or medullary ſubſtance for the ſame reaſon (l), as well as for the

(l) to wit, that they do not come into contact with them,

the great diſtance of theſe parts from the part that received the firſt contact of the ſtimuli. In one word, as all exciting powers, whether ſalutary or hurtful, or curative, act ſomewhat more powerfully upon certain parts than upon others, as theſe parts are generally thoſe which they firſt affect, and with which they come into direct contact; thoſe, therefore, in preference to others, are moſt liable to paſs either from ſthenic diatheſis into aſthenic, or from the latter to the former; which, however, happens in ſuch a manner, that, becauſe the excitability is one uniform, undivided property over the whole body; whether the excitement has been increaſed in a peculiar part, or diminiſhed; and, whether its diminution has been owing to direct or indirect debility, and in either way the aſthenic diatheſis produced; all the reſt of the body ſoon follows the kind of change that has taken place; and, ſince the powers that have acted, have been, and are the ſame, that is, either exceſſively (m) or inſufficiently ſtimulant (n), or ſo to an ultimate exceſs; and as the excitability upon which they have acted, and ſtill act, is the ſame, that is, the whole conſideration of the cauſe is the ſame, the effect muſt alſo be the ſame, that is, the ſame ſort of actions, whether in exceſs or defect (o), muſt be eſtabliſhed over the whole body.

CLXVIII. The inflammation which accompanies the phlegmaſiæ (p), occupies an external part, as far as its nature has been yet aſcertained. And the reaſon of that is,

(m) in ſo far as they produced ſthenic diatheſis,

(n) that is, debilitating, in ſo far as they produce the aſthenic diatheſis, that depends on direct debility, or in ſo far as they produce the aſthenic diatheſis that depends upon indirect debility.

(o) whether ſthenic or aſthenic,

(p) diſeaſes that are ſthenic and accompanied with an inflammation of a part, as a portion of the lungs, the throat, ſome of the joints, and in which, as has been formerly ſaid, the inflammation is like any other ſymptom, an effect of the cauſe of the diſeaſe, not itſelf the cauſe.

is, that heat, which is the moſt powerful hurtful agent in thoſe diſeaſes, either alone, or alternating with cold, or ſucceeding to it, has much more power externally, where it is directly applied, than internally, where the temperature is nearly ſtationary, in ſtimulating, and, therefore, raiſing the general diatheſis, to the degree of actual inflammation in a part. Hence the throat, hence the different joints, hence the face, where the form of inflammation is different (q), hence the lungs, which are to be conſidered as an external part, becauſe the air has direct acceſs to them, all theſe are affected with inflammation in preference to other parts. And, beſides the energy of the exciting hurtful power, juſt now mentioned, there is in the part, that is to undergo the inflammation, a greater ſenſibility (r) than in others, or a more accumulated excitability; by which it happens, that, of the parts that have been mentioned, ſometimes one, ſometimes another is affected, more than the reſt (ſ). To this conſideration

(q) as when the inflammation of eryſipelas appears there;

(r) See above, LIII. λ.

(ſ) In the inflammatory ſore throat the inflammation affects the throat, which is alſo ſometimes the ſeat of an eryſipelatous inflammation. In eryſipelas, ſometimes the face, ſometimes one of the legs, ſometimes the ear, ſometimes the temples, are inflamed. I have frequently been affected with an eryſipelas, that begins with an acute inflammation and pain in one ear, which is thickened to four times its uſual dimenſion; from that it ſpreads over the whole hairy-ſcalp till it reaches the neighbourhood of the ear in the oppoſite ſide, never, however, affecting that ear; this progreſs has been ſometimes from the right to the left, ſometimes from the latter to the former, in proportion as either had been more expoſed than the other to heat, or the alternation of heat with cold, or the ſucceſſion to each other. This diſeaſe is ſthenic, but in a mild degree, and to be removed by coolneſs, cold water, low vegetable fluid diet, and a ſlight purge. It was once greatly aggravated by wine, ſpirituous drink, and the high diffuſible ſtimuli. In rheumatiſm, the inflammation attacks a large joint, ſometimes ſhifting from one to another, ſometimes

tion of the cauſe, it is to be added, that which ever of the parts we have mentioned has been injured, in whatever manner it may have undergone the inflammation peculiar to the phlegmaſiæ, that part, in every after attack of a new phlegmaſia, is in more danger of being inflamed than the reſt. This is the true cauſe of the recurrence of ſome of the phlegmaſiæ, as the inflammatory ſore throat, and rheumatiſm (t). Peripneumony is a diſeaſe leſs frequent than any of the reſt of this form, becauſe "the ſeat of its inflammation" is exempted from many ſtimuli, liable to produce ſthenic diatheſis with its accompanying inflammation.

H. As

ſometimes ſeveral at a time, and, in contradiſtinction to the eryſipelatus, is deep ſeated, extending to the interior part of the true ſkin, which is the caſe with every ſuch inflammation, called, therefore, phlegmonic; while its ſeat in eryſipelatus is betwixt the ſcarf-ſkin and the outer part of the true ſkin upon the corpus mucoſum. To theſe phlegmaſiæ, accompanied with an inflammation of a part, depending upon the general cauſe of the diſeaſe, and eſpecially upon the effect of temperature, may be added that which an inflammation in one of the ears accompanies, though this caſe is ſeldom admitted into the number of the phlegmaſiæ. It is, indeed, ſometimes local, ariſing from local injuries, but is as certainly at others, a general diſeaſe, and to all intents and purpoſes a phlegmaſia.

(t) Thoſe two diſeaſes, in young vigorous perſons, are very liable to be exceeding troubleſome by the frequency of their occurrence. In the younger part of my life the violence in degree, and frequency of recurrence, of the ſthenic inflammatory ſore throat, was very diſtreſſing, as the leaſt variation of the external temperature, ſuperadded to a full nouriſhing diet, not without the ſtimulus of a cheerful glaſs, was ready to renew it, not only the inflammation, but the whole phænomena of the diſeaſe. The ſame thing I have often obſerved in the frequent recurrence of the rheumatiſm in perſons of the ſame age and habit, perhaps with ſome difference of temperament. But it is to be obſerved, that, in proportion to the advance of life, and diminution of vigour, both theſe diſeaſes become much leſs frequent, and much leſs violent. Nor is any thing more common than their giving way at this time to a very

oppoſite

H. As the inflammatory fever, catarrh, the gentle ſmall-pox, are unattended by inflammation (unleſs that in the laſt a local inflammation from a local cauſe, quite different from that which makes our preſent ſubject, takes place) and as the inflammation in peripneumony, violent eryſipelas, and ſimilar other caſes of great violence, is found the higheſt in degree; for that reaſon the concluſion is, that the degree of inflammation, which is a ſymptom of general ſthenic diſeaſes, is proportioned to the degree of the ſthenic diatheſis (y).

CLXIX. The inflammation, in this caſe, is nothing elſe, but a ſtate of the inflamed part of a common nature with that in the reſt of the body. And as the inflammation is produced by a greater degree of excitement in the inflamed, than in any other equal part; ſo before the diſeaſe comes on, of which the inflammation is only a part or ſymptom, the excitement of that part is underſtood to be proportionally greater than in any other part (z).

CLXX.

oppoſite diſeaſe, the gout, which depends upon a ſuperaddition of direct debility to the indirect, that laid the foundation of it. I am pretty certain my inflammatory ſore throat, or eryſipelas, never happened ſpontaneouſly, nor without an addition of ſtimulant power, to thoſe that produce that diſeaſe, in conſequence of carrying to ſome exceſs the plan of cure ſuited to the removal or prevention of the gout.

(y) It ſhall by and by be ſhewed, that this ſort of inflammation is only a part of the general diatheſis, ſomewhat higher in degree than any other part, but far ſhort of the degree conſtituted by the whole general affection.

(z) See above, par. L. and LI. Suppoſe the excitement in every part of the ſyſtem to be 45 at ſome point in the period of the prediſpoſition, and 54 in the part to be inflamed; after the coming on of the diſeaſe the ſame proportion will hold; when the excitement has now mounted up to 60, the excitement of a part will be underſtood to have gone to 69; keeping up ſtill the ſame proportion. But this 9 degrees of greater excitement in a part, comes far ſhort of the ſum total of excitement in all the parts affected with the general ſthenic diatheſis; that you may ſuppoſe

CLXX. This inflammation, which for the ſake of diſtinction is to be called general ſthenic inflammation, ſhould be diſtinguiſhed from another, which is a local affection, ariſing from local hurtful powers, and depending upon a fault in the organ, or a ſolution of continuity (a).

CLXXI. To this the term of ſthenic local inflammation applies. The general always depends upon ſthenic diatheſis, is a ſymptom or part of it, never precedes it, always ſucceeds to it ſooner or later, ariſes from the ſame hurtful powers (b), and is reduced by the ſame remedies. In contradiſtinction to which, the local affection, as it ariſes from local injury, producing a ſolution of continuity, or deranging the texture of the part; ſo, if the labouring part is not very ſenſible, the affection extends no further. In the caſe of a part being endued with a high degree of ſenſibility, ſuppoſe the ſtomach, the inteſtines, among the internal parts; among the external, the tender ſubſtance under the nails; in theſe caſes, the effect of the inflammation is propagated over the whole ſyſtem, and, in conſequence of an affection of all the veſſels, excites a tumult every where. The ſame local ſthenic inflammation, whether it be fixed in the part, or from its propagation, gives more general diſturbance, yields to no remedies, but thoſe that act upon the affected part firſt, and heal the ſolution of continuity (c). Let it ſuffice to have ſaid ſo much at preſent upon

poſe 3000: and then the concluſion will be, that the general ſthenic diatheſis conſiſts in a ſum total of morbid affection, as 3000; while the inflammation of the part is only an affection of 3 degrees of excitement.

(a) Solution of continuity in all its forms, whether as being the effect of puncturing, cutting, bruiſing, compreſſion, eroſion from acrid matter, or from heat, or cold, is always followed by an inflammation, which, when it goes on briſkly, and needs to have its violence reſtrained, ſhould be called as is expreſſed in the next paragraph.

(b) which produce the other ſymptoms,

(c) or reparation of united ſubſtance,

upon theſe inflammations, for the ſake of eſtabliſhing neceſſary diſtinctions, as more is afterwards to be ſaid upon the local, in its proper place. There are as many inflammations ſtill remaining, univerſal and local, to be more fully explained in that part of our work where the proper order requires it.

CLXXII. Inflammation, alſo, as often as it affects a vital part, produces ſymptoms of diſturbance. Whether ever the general ſthenic inflammation affects the brain and its membranes, is hitherto not aſcertained (d). And it is more probable, that the commotion of the head, and other diſturbing ſymptoms of phrenitis, do not depend upon inflammation, as the following phænomena ſeem to ſhow: The firſt of thoſe is, the caſe by which the cure is effected, the whole tumult of ſymptoms readily yielding to bleeding, purging and other aſthenic (e) remedies; and, it not being very credible, that the effect of actual inflammation in a part ſo delicate, and ſo neceſſary to life, could be ſo eaſily effaced. Then another argument againſt the ſame opinion is, that there is no certain proof, after recovery, of the exiſtence of inflammation during the diſeaſe. Next, analogy makes for the ſame concluſion which we are diſpoſed to draw; for, it has been ſaid above, general inflammation does not ariſe internally in any ſthenic diſeaſes (f); on the contrary, as often as it occurs, it is always in an external part (g). Nay, all the ſymptoms

(d) Phrenitis has been thought, and commonly even defined, an inflammation of the brain; an opinion that, however univerſal, ſeems to be liable to much doubt: nay, there are many reaſons for adopting an oppoſite one, as will appear from the reaſoning in this paragraph of the text.

(e) What are commonly called antiphlogiſtic, we call debilitating.

(f) See above, par. CXIII.

(g) It was long an opinion, that the inflammation in rheumatiſm might be tranſferred to an internal part, as the ſtomach; but that, alſo,

is

ſymptoms are ſuch as ariſe from the general ſthenic hurtful powers, and that, alſo yield to the general antiſthenic remedies, and in proportion to their degree.

CLXXIII. The ſame (h) is the cauſe of head-ach, redneſs of the eye, as well as of delirium.

CLXXIV. There is, however, no reaſon to doubt, but that inflammation is the cauſe of that diſturbance, which happens to the lungs in peripneumony. To the part where the pain is felt externally, whatever part of the thorax it is, an actual inflammation is oppoſed internally. And, as the inflammation is proportioned to the degree of general ſthenic diatheſis, and never happens but in a high degree of that diatheſis; ſo that the pain is proportioned to the degree of inflammation (i); and the ſtate of the pulſe muſt be eſtimated by paying a due regard to its cauſe. In the caſe of an high diatheſis, and high degree of inflammation, its effects, the pain, ſeated in ſome part of the thorax, ſometimes about the ſternum, ſometimes nigh the nipples, ſometimes farther back on either ſide, ſometimes in the back between or above the ſhoulders, is acute and pungent,

is now laid aſide, and all the caſes where there could be the leaſt appearance of any ſuch transference, have been found to be caſes of the gout, or ſome analogous diſeaſe of debility.

(h) that we have aſſigned as the cauſe of phrenitic affection alſo.

(i) The inflammation was ſuppoſed a chief and primary circumſtance, and its cauſe and ſeat, the cauſe and ſeat of the whole diſeaſe; while the general ſthenic diatheſis, and all the ſymptoms depending on it, was ſuppoſed to be the offspring of the inflammation. But the truth is, in every reſpect, the reverſe of this account. The general ſthenic diatheſis is the effect of the general exciting hurtful powers. As the effect of theſe, in a leſſer degree, it exiſts during the predispoſition, and before the arrival of the diſeaſe; and, after the diſeaſe is come on, it ſubſiſts as certainly as ſuch, for one, two, or three days, as afterwards, when the ſign of the inflammation, the pain, makes its appearance. It is only an increaſe of it, that induces the latter; and it is not to be cured by any contrivance of

pungent, and the pulſe very hard and ſtrong. When the diatheſis, and the part of it we call inflammation is leſs, the pain is leſs acute, more dull, and eaſier to be borne; the pulſe is (k) ſtill hard and ſtrong, though leſs ſo than in the other caſe. Afterwards, in the progreſs of the diſeaſe, the pain abates, becomes dull, the reſpiration, which had been much diſturbed by it, becomes more eaſy and free. The pulſe, now, which formerly was only hard, becomes truly and poſitively ſoft, and that in proportion to the degree of indirect debility, occaſioned by a neglect of the proper plan of cure; or in proportion to the production of direct debility, from the antiſthenic or debilitating plan of cure having been puſhed too far. But the hardneſs of the pulſe, and increaſe of the pain, is never to be imputed to the inflammation being ſeated in the membrane; nor is the ſoftneſs of the former, and dullneſs of the latter to be attributed to its occupying the ſoft parenchymatous ſubſtance (l), it being impoſſible that an inflammation, if it occupied either of thoſe parts, ſhould not affect the next points of the veſſels in the other. The cauſe, therefore, of thoſe ſymptoms that has here been aſſigned, muſt be admitted.

CLXXV. The puſtules, which accompany certain ſthenic diſeaſes,

of throwing any thing into the inflammed part, there being no ſuch thing to be found in nature, but by the ſeveral means of removing the common cauſe, that is, evacuant and other debilitating remedies. Thoſe, while, at the ſame time, they remove the other ſymptoms, by alſo removing the diſeaſe, prove that the common cauſe of the whole is the general diatheſis. The inflammation, therefore, inſtead of being the cauſe of the general diſorder, is a conſequence, like every other ſymptom.

(k) not ſoft and yielding, according to the common notion, but

(l) Such, however, and many other diſtinctions, equally falſe, frivolous, and miſleading in the practice, have been at all times univerſally received by ſyſtematic, and lately by noſological writers.

diſeaſes ariſe from a contagion, taken into the body, diffuſed over the whole, and, in paſſing out of it, detained along with the perſpirable fluid, under the ſcarf-ſkin. The cauſe of the diſtenſion, and, therefore, of the great number of puſtules, is the ſthenic diatheſis, taking place in a high degree over the whole body, but in a ſtill higher in the veſſels of the ſkin, for the reaſons formerly (m) aſſigned. In which operation the muſcular fibres of the veſſels, becauſe they are as much increaſed in denſity, in ſo far as they are conſidered as ſimple ſolids, as they re-receive an increaſe of tone, in ſo far as they are conſidered as living (n), are, on that account ſo ſhortened, as not ſufficiently to tranſmit the imperceptible vapour of the perſpirable fluid. All the ſthenic hurful powers have a tendency to produce this effect, but heat, in a degree within its ſtimulant range, and ſhort of indirect debility, more than any of them. The ſame is the cauſe of coſtiveneſs.

⊖ Sthenic diſeaſes are often followed by debility, ſometimes direct, at other times indirect, as is exemplified in the change of peripneumony into hydrothorax, the explanation of which is evident from what has formerly been ſaid.

## CHAP. V.

### *The Aſthenic Diatheſis.*

CLXXVI. Before the ſymptoms of diſturbance appear, which only ſupervene upon a violent degree of mor-

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(m) See above, par. CXIII. and CXIV.

(n) See Chap. V.

bid ſtate, all the ſenſes are dull; the motions, both voluntary and involuntary, are torpid; the acuteneſs of genius is impaired; the ſenſibility and paſſions become languid. The following functions are all in a ſtate of languor, which is diſcoverable by the annexed marks: The languor of the heart and arteries is diſcernible in the pulſe; as is alſo that of the extreme veſſels on the ſurface, which is evident from the paleneſs, the dryneſs of the ſkin, and the ſhrinking of tumors, and drying up of ulcers (a), and the manifeſt abſence of the ſthenic diatheſis, to produce any reſemblance to thoſe ſymptoms. That the muſcles are in a ſtate of torpor is demonſtrable by their weakened action; and that the internal ſecretions are defficient, is equally certain from the penury of ſemen and milk, and the redundance of fluids in a ſtate of degeneracy. The languor of the digeſtive organs is manifeſted by want of appetite, loathing of food, ſometimes thirſt, ſickneſs of ſtomach, vomiting, weakneſs of the ſyſtem, and evident penury of blood.

CLXXVII. In the ſame diatheſis, whether as not having attained to the height of diſeaſe, and only remaining within the latitude of prediſpoſition, or as raiſed to the meaſure of actual diſeaſe, the intellectual faculties and the paſſions are impaired. In this way are the functions impaired.

## CHAP. VI.

*The Aſthenic Diatheſis illuſtrated by an explanation of its Symptoms.*

CLXXVIII. SHIVERING is not unuſual at the commencement of aſthenic diſeaſes of any conſiderable ſeverity;

(a) Theſe ſymptoms have lately been conſtrued into ſo many marks amounting to a proof of the exiſtence of ſpaſm upon the extreme veſſels; but we ſhall, by and by, find a much better explanation of them,

rity; and that, as often as its cauſe, a very deficient perſpiration takes place. In this caſe the cauſe of the deficiency is, from the weakneſs of the whole ſyſtem, that weakneſs of the heart and arteries, in conſequence of which they propel their fluids every where with difficulty, and in their extremities with ſtill more difficulty, or ſcarce at all. Hence the perſpiration ceaſes. The ſame is the explanation to be given of the ſenſe of cold, when it accompanies the ſhivering.

CLXXIX. In aſthenic affections the pulſe is weak, ſoft, ſmall, and very quick. The ſoftneſs, when it can be perceived for the ſmallneſs, as well as the ſmallneſs, is occaſioned by an under-proportion of blood, ariſing, during the period of prediſpoſition, from a ſcantineſs of animal food, and an exceſs in the uſe of vegetable; or from a deficiency of aliment upon the whole, whether from the one or the other ſource. The cauſe of the weakneſs and very great quickneſs of the pulſe is the ſame deficiency of nouriſhment, as well as of all the ſtimuli, ſuch as that of ſtrong drink, that of mental or corporeal exerciſe, and an under-proportion of blood.

CLXXX. Since the excitability can only be gradually worn down (a) and the ſtrength, thereby, repaired; if, at any time, therefore, the pulſe becomes full and hard too ſoon, and without a proportional relief of the ſymptoms, that is a bad ſign, and happens becauſe the ſtimulant plan of cure (b) has been puſhed beyond the proper rule (c); and it is a caſe of indirect debility ſuperadded to the direct (d).

CLXXXI. The ſame is the cauſe of the paleneſs and dryneſs of the ſkin, as that of a checked perſpiration; that is, the weakneſs of the heart and arteries. Hence the blood is not ſufficiently propelled to the ſurface of the body.



(a) See above, par. XXVI. XLIII. (b) otherwiſe the proper one, (c) See above, par. XLIX. (d) See above, par. CLVI.

CLXXXII. Head-ach, which is a moſt frequent ſymptom of aſthenic affections, and pains in the joints, which are more rare, are occaſioned by a ſcantineſs of blood: for ſuch is the effect of the blood in diſtending the veſſels, that a moderate diſtention, ſuch as takes place in health, excites an agreeable ſenſation; and every thing, either above or below that ſtandard, occaſions an ungrateful one, and, therefore, (e), pain. But, we are much leſs in this caſe, than in that of ſthenic pain (f), to ſuſpect inflammation for the cauſe of the pain; becauſe, not only the pain here, but even delirium, yields ſo eaſily to the ſtimulant method of cure; which would not readily happen, if ſo delicate and ſenſible an organ, and one ſo neceſſary to life, laboured under an affection ſo liable to deſtroy the texture of the affected part.

CLXXXIII. Neither in general, is delirium, and for the ſame reaſon (g) to be imputed to inflammation. It is, on the contrary to be attributed to a ſcantineſs of blood, and a deficiency of other ſtimuli. Nor is that by any means to be doubted; ſince ſtimulant remedies, which have no effect in filling the veſſels, ſucceſsfully and quickly cure every delirium depending on debility (h).

And, when, in conſequence of the removal of the diſeaſe,

(e) when it riſes to a certain degree,

(f) See above, par. CLVII.

(g) that has been juſt now mentioned,

(h) This is a fact as new, and of as much importance as any in this whole work. Phyſicians hitherto, had no diſtinct notion of a variety of inflammations, and had ſcarce any idea of any inflammation, but ſuch a one as was to be treated with bleeding and evacuation; nay, often, when they had no reaſon to ſuſpect inflammation at all, the mere circumſtance of pain was, in their eſtimation of it, ſufficient to warrant a profuſion of bleeding without end. But, the truth is, that pain may not only ariſe from an inflammation, which they had no idea of, and which was to be cured by ſtimulants, but it ariſes from ſpaſms, convulſions, and even from emptineſs.

eaſe, and of the re-production and eſtabliſhment of the healthy ſtate, enough of nouriſhment is taken in and digeſted, then it is that, at laſt the mental function receives a complete and ſolid re-eſtabliſhment.

CLXXXIV. Thirſt and heat, which do not leſs diſtinguiſh aſthenic, than ſthenic diſeaſes, and are not leſs frequent ſymptoms, ariſe from the aſthenic diatheſis in the throat, and on the ſurface of the body, checking, in the latter caſe, the perſpiration; in the former, the excretion of the ſaliva, the exhalable fluid, and the mucus, and that from the atony and relaxation of the extreme veſſels. In conſequence of the former, the throat being not ſufficiently lubricated with a due quantity of its reſpective fluids, is ſcorched with thirſt. The effect of the latter is, that, the perſpirable fluid being detained under the cuticle, together with it the heat, which in a free perſpiration uſually goes off in waſte into the air, and remains nearly of the ſame degree, is accumulated and increaſes. But the increaſe of heat depends not on the ſtate of excitement, or, as it is commonly called, the principle of life, ſince it happens both in the ſthenic diatheſis, and, likewiſe, in indirect, as well as direct debility. But the weakneſs of the veſſels on the ſurface of the body, under which the throat and whatever part is acceſſible to air, is comprehended, is a part of the debility of the heart and arteries; the latter a part of that of the whole ſyſtem.

CLXXXV. This aſthenic thirſt, which is a much more frequent and more violent affection than the ſthenic, is preceded by loſs of appetite; the loſs of appetite by loathing of food; it is ſucceeded by ſickneſs at ſtomach, vomiting, often an acute pain of the ſtomach, and other troubleſome ſymptoms; the explanation of which we next proceed to.

CLXXXVI. Want of appetite, loathing of food (i), depend upon a debility of the whole body; as is proved by all the debilitating antecedent powers that produce them, always acting by debilitating; and by all the remedies, which both prevent and cure them, always acting by a ſtimulant and ſtrengthening operation. The cauſe of the appetite is a ſtrong and ſound contraction of the fibres of the ſtomach, by which digeſtion is ſupported (k), and the excretion of a fluid

(i) Theſe ſymptoms of want of appetite, loathing of food, thirſt, ſickneſs at ſtomach, vomiting, and acute pain of the ſtomach, as well as thoſe that follow to the CXCV. and from that to the CXCVIII. form a chain of ſymptoms depending upon increaſing debility, which, inſtead of being different in kind, are all connected by an uniform operation of nature. And they furniſh an inſtructive inſtance of the erroneous mode of judging of the nature of ſymptoms, and morbid affections, which has been ſo prevalent in all ſyſtems of phyſic, that we are yet acquainted with. However different in appearance they are not only ſimilar, but all unite in forming one and the ſame kind of diſeaſe, one and the ſame morbid affection: which is proved by their ariſing all from one and the ſame ſet of hurtful powers, to wit, debilitating; and by their being cured by one and the ſame ſet of remedies, to wit, ſtimulant. The former powers may vary in degree, but they are all debilitating; and the latter may alſo act with different degrees of force, but they are all ſtimulant. And the ſtate of the ſyſtem, from which the former conſtitute a deviation, as well as that, to which the latter produce a return, is health, which is always the ſame.

(k) The fibres of the ſtomach are muſcular, and partly longitudinal, partly oblique, or approaching to circular. When the food is taken in, the former are contracted and ſhortened, by which they raiſe the under part of the ſtomach, which is unfixt upwards. Theſe gradually relax as the food, after its firſt digeſtion in this organ, and its converſion into a more fluid form, in the ſame gradual manner, paſſes out of the pylorus, or under orifice of the ſtomach. This operation takes off the diſtending weight in the direction from above downward; and, as the food, in proportion to its converſion from a more ſolid to a more fluid form, is more and more collected into the under part of the cavity of the ſtomach, this gives a preſſure in the lateral way, and, therefore, throws the other fibres into contraction, by which the ſides of the ſtomach are ſqueezed together, and, thereby, perform the office of throwing out, by the pylorus, the

fluid, such as the gastric (l) liquor, such as the saliva (m): and to the effect of both a certain emptiness of the stomach is necessary. But none of these circumstances can take place in a state of debility. The fibres do not contract with force; the extreme vessels do not pour out their fluids; the matter of food, formerly taken in, is not dissolved and properly mixed, and in that state thrown out of the stomach; but continues in a great measure unchanged and indissolved. Hence it is, that there is no appetite for food, and in a higher degree of it, that a loathing takes place.

CLXXXVII. In the same manner has thirst been explained (n); and in the same manner is the sickness at stomach, which is a higher degree of affection from the same cause; for when there is strength and vigour, sensation is most agreeable in every part of the system, as well as in the stomach and neighbouring parts.

CLXXXVIII. With respect to vomiting; it is the chief of all these affections, that we have been speaking of; for to such a height has the atony and laxity of the fibres in the stomach gone, when it comes on; to such a degree has the

the remaining part of the alimentary matter. Besides these successive actions, the muscular substance of the stomach is so constructed as to be provided with fibres, the motion of which, when the stomach is full, is upward and downward; when empty downward only. All these motions give the alimentary matter the mechanical agitation necessary to promote its mixture.

(l) or fluid peculiarly secreted and excreted in the stomach.

(m) The gastric fluid, poured into the cavity of the stomach, as well as the saliva that follows it from the palate, and the watery or other drink taken in by the mouth, contribute to change the food more and more into a fluid consistence, which is a change only of its form; but by certain means, a change also of its nature, called in chemistry proper mixture, takes place. This change is chiefly effected by the gastric fluid, to which, perhaps, a certain relation that the other fluids bear to the alimentary matter in this living organ, contributes. Another means of promoting the solution that goes on in this process is the heat of the stomach.

(n) See par. CLXXXIV.

the collection of crude nasty matters proceeded, and the distention of the stomach from these last, and air let loose is become so exquisite, that the fibres are oppressed, and cannot perform their motion from the upper to the lower part, which is commonly called the peristaltic motion. And as in every case, both of health and disease, the tendency of that motion is always from the stimulus in an opposite direction; downward when the stimulus proceeds from the mouth, and upwards when it comes from the stomach, in that way it is that the crudities, and air let loose, of which mention has been made, acting as a local stimulus, direct all the motion, that they excite, towards the upper parts of the canal. This inverted motion, being contrary to nature, can never be agreeable; and hence, before the arrival of the vomiting, stomach-sickness, arises; which when it continues for any time, must be violent, because the local stimulus rouses the muscular fibres into violent aud irregular motions.

CLXXXIX. The cause of pain in the stomach and intestines, and other parts, both internal and external, under a sthenic diathesis, is spasm. Spasm in any internal cavity, that is, in the organs of involuntary motion, is, by means of the debility in common to its seat with the whole body, a relaxation and atony of the fibres, and together with that a distending matter; what constitutes that matter in the stomach is the sordes or foul crudities, in the intestines; hardened excrement: in both air let loose. The effect of this matter in the distention that it gives, does not so much depend upon itself as upon the lax state of the fibres distended by it; for the fibres, when strong and vigorous, easily repel the distending power, which overpowers them in this state: but the relaxed fibres, of which we are speaking, yield more and more, and that in proportion to the urgent force exerted on them, till loosing all power of re-

sistion

ſilition or contraction, all power of relaxation, they continue immoveably contracted. All which happens according to the nature of that property in muſcular fibres, by which, when they are ſtretched, they do not, like common elaſtic matter, only contract when the diſtending power is removed, but even while it remains. During ſuch action and ſuffering the ſenſible fibres undergo a certain violence; and hence the pain. But, that more is to be attributed to their own laxity, than the diſtending matter, is proved by ſtimulants reſtoring the tone and denſity, which are exactly in proportion to each other, as depending upon the ſame cauſe; by which means contracting in the manner of ſound fibres, and powerfully reacting, they, without any aſſiſtance, as has lately been aſcertained, reſtore the periſtaltic motion, and drive downward before them the matter ſtill remaining, and ſtill continuing to diſtend (o). In this way wine, aromatics, and volatile alkali, and, above all the reſt, the various forms of opium, diſlodge from its ſeat all ſuch hurtful matter without either vomiting or purging, and that without any difficulty, and in a very ſhort ſpace of time.

CXC. The pain, which is ſo often troubleſome in the external parts of the body, alſo depends upon ſpaſm, but not with the conjunction of a diſtending matter. And a power takes the place of it, which is not to be referred to any matter, but to a certain effort of the will in moving a limb (p). By means of that the ſpaſm is excited in the ſame manner

(o) The prevailing notion with reſpect to this kind of affection has been, and ſtill is, that its cauſe is the matter here ſpoken of, which is only an effect of the cauſe, and that its cure, when the affection is in the ſtomach, is vomiting to carry off the ſuppoſed cauſe. But its true cauſe is the laxity of the fibres, and their atony from the general debility, yielding to the diſtending force of the matter, and thereby loſing their tone and denſity more and more; while vomiting therefore increaſes, ſtimulating removes the diſeaſe.

(p) See LVIII.

manner as in the other caſe, by diſtention, and often with the moſt exquiſite pain, where, as the effect is the ſame, that is, a ſpaſm, ariſing from debility, and to be removed by reſtoring the ſtrength; for that reaſon the cauſe alſo muſt be the ſame, and be reducible to debility, together with ſomething that altogether reſembles debility, and poſſeſs a power equal to it. In this way of reaſoning (q) we may often ſafely riſe from the contemplation of known effect to that of unknown cauſe. The pain we ſpeak of at preſent is that which reſpects the ſpaſms of the muſcles.

CXCIII. There is another pain, leſs confined to the ſame part, more diffuſed, and equally troubleſome, which is not ſupported by diſtention, but by another local ſtimulus, equally ariſing from debility, of equal tendency to increaſe the debility, and, by its debilitating operation, together with the other ſymptoms of debility, haſtening on death. This pain ariſes from a concentrated acid, which is ſometimes predominant in the alimentary canal, when under the influence of great debility, of which cholera chiefly is a clear example; but, beſides that, all the affections of the alimentary canal, that are accompanied with vomiting and a looſe belly, are more or leſs examples of it.

CXCII. This acid is not the primary cauſe, but only a ſymptom ſupervening upon the diſeaſe, already formed in conſequence of the debility, its proper cauſe, and now fully

(q) a way of reaſoning never made uſe of in medicine before, but which runs through, and influences moſt of the propoſitions in this work. It is further to be obſerved, that, upon no occcaſion, can we ever arrive at an adequate knowledge of abſtract cauſes; that the eagerneſs of mankind to ruſh into wild and fanciful explanations of them, without any regard to real phænomena of nature, has been the cauſe of all the falſe phænomena that ever appeared in the world, and that the only ſure and faithful guide to the ſtudy of cauſes is a cautious and painful inveſtigation of the effects and phænomena of nature that proceed from them. See more upon this important ſubject, and, indeed, a complete diſcuſſion of it, in my book, entitled, "Obſervations on the old Syſtems of Phyſic."

fully eſtabliſhed, ariſing from the ſame ſource as the other ſymptoms, and to be removed by the ſame remedies. When the ſame acid has ariſen, it continues to increaſe all debility that happens to be predominant, either in the firſt paſſages, or in the reſt of the body: And, while it exerts the operation over the whole body, its influence is in the part where it exiſts, and where the diminution of the force of the diſeaſe is moſt wanted.

CXCIII. But, though it be itſelf in that way the offſpring of debility, and of a tendency to create further debility, in the ſame manner as ſpaſm has been ſaid to be; ſtill there is not, either for the ſake of changing, or throwing it out of the body, occaſion for any other indication of cure: For, as it has its riſe at firſt from a general cauſe, ſo upon that it all along depends; whatever has the effect of overcoming the other ſymptoms, has alſo that of overcoming this. For that purpoſe it is, that, as in the caſe of ſpaſm, ſtimulants, not emetics, nor purgatives, nor any other debilitating powers, are required.

CXCIV. As the acid, which has been mentioned, produces the pain in the internal parts, or in the organs of involuntary motion; ſo in the external parts, or organs of voluntary motion, it is occaſioned by ſomething that produces the ſame effect as the acid, that depends upon the will, and acts in conjunction with the convulſive ſtate; and, as in the caſe of ſpaſm, there is no matter that correſponds with the diſtending, ſo in this there is none to correſpond with that which produces the pain. Nay, as the ſpaſmodic caſe is repreſented by any cramp of the muſcles, ſo is the convulſive by any convulſion, but, above all, by epilepſy. Finally, as in the former, the ſame reaſoning from known effect to unknown cauſe proves the ſameneſs of the external and internal caſe, it equally proves their ſameneſs in the latter (r). CXCV.

(r) All this reaſoning with reſpect to ſpaſm and convulſion, ſhowing

CXCV. The ſimple courſe of morbid affection from its ſlighteſt to it moſt violent degree (to take a review of the ſubjects from the place where we ſet out), is, that it begins with loſs of appetite, and is brought on by want of the ſupports of food and of other ſtimuli, or by an over-proportion of ſtimuli, and proceeds through all the intermediate degrees to ſpaſmodic or convulſive pain. For the reaſons lately aſſigned, there is firſt no appetite for food, and if the patient perſeveres in the debilitating proceſs of cure, and food is not adminiſtered, ſuch, ſuppoſe, as can be taken in the form of ſoups, a loathing of it follows. By-and-by, if ſtill nothing is uſed to produce ſtimulant effect, thirſt will come on; there will be the moſt keen deſire for the moſt debilitating power, cold water, which will be preferred to the greateſt dainties, and will be greedily ſwallowed (f). To this ſtomach ſickneſs immediately ſucceeds, which, unleſs prevented by a diffuſible ſtimulus, ſuch as a glaſs of the moſt pure and ſtrong ſpirit, or, failing that, another perhaps,

ing them to be the ſame, and only a part of the whole, a link in the chain of the other aſthenic affections, which have been mentioned, as well as the facts and arguments next to be brought, which will ſerve to prove all that follow to be alſo the ſame, is, of itſelf, of the higheſt importance to mankind. In a particular manner, the whole tribe of diſeaſes of the alimentary canal, and almoſt all thoſe of children, all indeed, but the contagious eruptive ones, are both explained, and their principle of cure aſcertained, with geometrical exactneſs. Here, then, at once is a diſcovery, upon ſcientific principles, of the true nature, and certain cure, of more than one-half of the diſeaſes of the human race; the method of cure ariſing from this doctrine having never failed in any of them, and never ſucceeded upon a contrary plan, the debilitating and evacuant, ſo univerſally recommended by the authority of the ſchools. The ſpaſms and convulſions of the external parts, unleſs when immoderate in degree, are equally certainly removed by the new method, and even epilepſy and tetanus yield to it.

(f) When this aſthenic thirſt comes on, it is the higheſt luxury in nature to be allowed a free indulgence in the uſe of cold water, which is always hurtful in proportion to the degree of its coldneſs.

perhaps, in ſome caſes a third, ruſhes inſtantly on to vomiting. When the affection riſes a little higher, during the vomiting a violent pain ariſes in the ſtomach, giving a ſenſation as if there were a bar of iron in it, forcibly ſtretching and tearing it acroſs (t). When the affection becomes ſtill more ſevere, and the cauſe of the diſeaſe ſtill higher in degree, every kind of torture is undergone; an head-ach comes on with a feeling of ſtrokes like thoſe given by an hammer. Theſe ſymptoms of diſturbance are communicated to the alimentary canal, for the moſt part not immediately, but in conſequence of the diſeaſe remaining, and lurking, with an intervention of intervals of deceitful reſpite. The belly is often affected with gripes and great pains, and exceedingly looſe; but, which will not be wondered at in an inverted ſtate of the periſtaltic motion, it is oftener conſtipated, and, from time to time, undergoes all the viciſſitudes of alternate vomiting and purging. Among the troubleſome ſymptoms, that have been mentioned, are comprehended dyſpepſia, called in common Engliſh Indigeſtion,

(t) A lady, after nurſing her twelfth child for ſeven months, was found by her huſband, a phyſician well acquainted with the new doctrine, very low ſpirited one evening. She was of a delicate, thin, exhauſted habit, and had been ſubject often before, towards the end of her periods of nurſing, to loſs of appetite, colic, dejection of ſpirit, and as often cured by removing the child from her breaſt, and putting her upon a rich ſtimulant regimen. Her friend and phyſician perceiving the cauſe of her dejection, ordered two of their daughters, who happened to be grown up, to ſit up and rock the child in the cradle all night, and alſo watch their mother to adminiſter to her the things he had ordered. They themſelves went to bed. The reader ſhould have been informed, that ſuch was this lady's lowneſs of ſpirits, that tears burſted from her eyes upon hearing the ſudden order for the weaning of the infant. He fell aſleep; but in an hour's time was wakened by the noiſe of a moſt violent vomiting ſhe had fallen into. She had a pain in her ſtomach at the ſame time, from her account of which the deſcription above was taken. All this had been occaſioned by her applying the child's mouth to her nipple.

geſtion, the gout, diarrhœa, looſe-belly, dyſentery, or the bloody-flux, cholera (u), the colic (x), the iliac (y) paſſion,

(u) or that diſeaſe, the urgent ſymptom of which is alternate vomiting and purging, the effect of which, while their cauſe is a general weakneſs over all, but prevalent in the firſt paſſages, is to increaſe the weakneſs, from which they proceed to ſuch a degree, as to hurry on the patient's death, with every ſymptom of expiring debility, in the ſhort ſpace of ſixteen hours. This happens in the warm countries, as the ſouthern parts of Europe, and eſpecially in the torrid zone, whether in Aſia, Africa, or America.

(x) The colic has been commonly treated by purging and bleeding, and low diet; but in no inſtance has that treatment of it been ſucceſsful. Opiates were particularly forbidden upon the ſuppoſition of their conſtipating the belly; but the truth is, that the colic, as well as diarrhœa (which has been ſuppoſed a diſeaſe of an oppoſite nature, from the ſeeming contrariety of looſeneſs of the belly, and coſtiveneſs to each other), are the ſame kind of affection, only differing in degree. And the colic is to be removed by no other means than thoſe that remove the ſimple looſeneſs; that is by durable and diffuſible ſtimulants.

(y) which is that higher degree of colic where vomiting comes on, and the periſtaltic motion is ſo inverted as to occaſion the rejection of ſtercoraceous matter by the mouth. Sometimes in the progreſs of the ſame diſeaſe, eſpecially when treated only by evacuation and bleeding, a portion of gut is inſinuated into the cavity of the next portion. This is called in the art Volvulus, or Intus Suſceptio. The quick and effectual cure of colic before the ſymptoms of volvulus make their appearance, is a good proof that the latter is induced by the purgative medicines, employed to clear away the obſtructing cauſe, acting with ſuch relaxing effect, and urgent violence, as to turn back the inverted motion in one part, while it continues inverted in all the reſt, and particularly in the portion next to it. The ordinary evacuant plan therefore, is a cauſe of the violence of the diſeaſe in all its ſtages; and laſtly, of the laſt, which becomes a local and immoveable affection. Nothing could be more abſurd than the reaſoning that has directed the practice of phyſicians. In which, beſides the general rules of bleeding to cure bleeding, vomiting to cure vomiting, and purging to cure purging, and beſides the contradiction of employing purging in colic, which by the laſt rule only applies to diarrhœa; they have taken it into their head, that a good means of removing the obſtructing

ſion, the green purging of infants, the worms, that waſting of the body called Tabes, or Conſumption, and atrophia (z), both

ſtructing matter in colic, was to throw in a large quantity of heavy ſubſtance with the intention of forcibly diſplacing it; reaſoning in that way not ſo well as a ſoldier would do in clearing away any foul matter from his firelock; for it ſhould have been remembered, that whatever effect ſuch ſubſtances, as quickſilver, might have by their weight in puſhing downward any obſtructing matter, they muſt operate with a contrary effect, as often as in the convoluted ſtate of the inteſtinal canal, the courſe of any portion was upward. Neither did it ever ſtrike them, upon any one occaſion, what they never ſhould have left out of view upon every occaſion, that the idea of the action of dead matter upon dead matter, whether mehanical or chemical, that is, perceptibly or imperceptibly mechanical, is never to be transferred, in ſound reaſoning, to the mode of action of the ſame dead matter on living matter; the excitement in no caſe whatever admitting of any ſuch analogy.

(z) Theſe two diſeaſes, according to a theory that has at all times prevailed in the ſchools, and has pervaded all medical ſyſtems, are ſuppoſed to originate from an obſtruction in the meſentric glands, through which the chyle, or alimentary matter, after undergoing a double preparation, one in the ſtomach, and another in the firſt convolutions of the inteſtines, has to paſs before it arrives at its common receptacle, the thoracic duct, in order to be thrown into the venous maſs of blood; and to remove it, ſtill upon the ſame idea, as if all the cavities of the animal economy, whether great or ſmall, were to be cleanſed, like the ſoldier's firelock, no limits were ſet to the uſe of gentle aperients, and particularly the uſe of mineral waters. And they uſed gravely to tell us, that with the help of a courſe of time, ſuppoſe the arrival of the infant, or child, at the ſeventh year of his age, that would carry off the diſeaſe by its detergent operation, provided the obſtruction were not ſo great as to induce death before the lapſe of that period. That all this is ſilly theory devoid of all foundation in truth, is proved by the completion of hundreds of cures in the ſhorteſt ſpaces of time, by means of durable ſtimuli, which act upon their delicate frames with ſuch efficacy as to ſupercede, unleſs in the moſt violent caſes, all uſe of the diffuſible. This remark applies likewiſe to worms, for the cure of which no bounds were ſet to the uſe of purgatives, upon the idea of clearing away the ſtuff in which this vermin neſtled; a practice not ſo judicious as that of ſome fooliſh boys, who place their ſucceſs in bird-catching upon the chance of bringing

both of them diſeaſes chiefly of children, and by far the greateſt part of the diſeaſes of that age.

CXCVI. As the cauſe of the diſeaſe proceeds, and the exciting hurtful powers prove more urgent; the external parts are drawn into conſent, and now the organs of voluntary motion are affected. Sometimes the legs, ſometimes the arms, and other parts, differently upon different occaſions, are tortured with cramps; ſometimes the thorax variouſly all round; ſometimes the ſhoulders, ſometimes the ſides, ſometimes the back, ſometimes the neck, are affected with pain, from which pains no part of the humon body is exempted, and the region of the lungs, of the liver, and of the ſtomach, are eſpecially liable to them. The ſmart pains that affect thoſe parts, and are ſuppoſed to proceed

bringing down the neſts from the top of high trees, by throwing ſticks and ſtones at them; while other boys, both more ſenſible and alert, climb up and ſeize every one of them. The cauſe of worms is the ſame as that of all the other diſeaſes we have ſpoken of, differing in nothing but in what they all differ from each other, mere degree. Debility over all, but prevalent in the alimentary canal, occaſions a weakneſs both in all the other functions, and particularly in that of the periſtaltic motion. This ſtate implies a ſimilar weakneſs in the veſſels that pour their fluids into that cavity; their weakneſs implies an enlargement of their diameters, and that enlargement an increaſe of the quantity of fluids thrown in, without any increaſed impulſe behind. Hence ariſes a colluvies of matter, which the increaſed periſtaltic motion is not able to throw off. The colluvies is increaſed by the uſe of vegetable matter and fruit taken into the ſtomach, and depoſiting their feculent parts upon the inteſtines. The indication of cure is not to increaſe either the general, or particular part of the cauſe, by purging, and the uſe of other debilitating powers, but to ſtrengthen the whole living ſyſtem; and eſpecially the inteſtinal canal, by the whole round of ſtimulant remedies diffuſible or durable. To this treatment the tabes and atrophia will yield in a few days, or even hours; the worms in as many weeks. And they are all increaſed by the common plan of cure, as univerſal experience has proved to a demonſtration.

proceed from internal inflammation, are, in reality, owing to ſpaſmodic or convulſive affection (a). That this is their true origin is proved by the renewal of ſtimuli, removing the affections, often immediately, always in a ſhort time, and reproducing the healthy ſtate. It is proved by the

(a) Endleſs have been the bleedings and other evacuations employed to remove thoſe painful affections, and as diſmal has been the effect of that method of cure. The univerſal rule ſuggeſted by the principles, and confirmed by the practice of this new doctrine, is to invigorate the whole ſyſtem, and apply any diffuſible ſtimulus, particularly laudanum, to the pained parts. By that practice I know not one cure, of ſome hundreds, that either I or my pupils have performed, that has failed. The gout will ſometimes make its attack in this way. But whatever be the particular force of diſeaſe, with which they may ſeem to have any connection, the only diagnoſis here neceſſary is to be ſure that the true peripneumony, is not the morbid ſtate. When that is out of the queſtion, and whether the painful complaint be denominated baſtard peripneumony or not, the only indication of cure is what has been juſt now mentioned. A young lady, with whom I am nearly and tenderly connected, has been often affected with an acute pain in her right ſide, moſtly fixed and ſolitary, ſometimes accompanied with a certain numbneſs and ſenſeleſſneſs in her extremities, commonly with loſs of appetite, and ſome degree of head ach. The effectual method of cure is to apply rags dipped in laudanum, volatile alkali, or æther, and renew them as often as they become dry, and to ſupport her internally with durable and diffuſible ſtimuli, proportioned in kind and quantity to the exigence of the caſe. This method of cure of a morbid affection, that upon the contrary debilitating evacuant plan would be readily and quickly converted into an incurable aſthenic diſeaſe, has always proved infallible in removing the attacks, which never after return but when ſhe has enfeebled herſelf by keeping the houſe too much, and neglecting air, exerciſe, and the uſe of the other diffuſible ſtimuli. Friction uſed over all the affected parts, is alſo found uſeful in ſupporting the ſtimulant operation of all the other remedies. There is in the fens of Lincoln, where an eminent phyſician, and follower of this doctrine, practiſes, a diſeaſe called a baſtard peripneumony; in which, though it had always baffled all the efforts of the common evacuant practice, he never loſt a patient, by exerciſing the contrary one.

the unſucceſsfulneſs of the contrary method of cure, which proceeeds upon bleeding, the various modes of purgation and abſtinence. Nay, what even makes more for the ſame concluſion, is, that, while abſtinence almoſt alone is often ſufficient to produce the pains, rich diet alſo alone has been ſufficient to remove them (b).

CXCVII. The ſame pains, ſometimes combined with enormous motion (c) ſometimes without it (d), are abſolutely free from inflammation. To diſtinguiſh them, then, from the pains that flow from inflammation or a ſimilar origin, the concourſe of accompanying ſymptoms muſt be attended to. Sthenic diatheſis points out that whatever pains occur are ſthenic; and the information received from the aſthenic diatheſis is, that the pains appearing in it are participant of its nature and as certainly aſthenic. This remark is of deep application to diſeaſes of daily occurrence, and overturns the common practice. Even head-ach, which is ſo frequent an affection, is ten times to be removed by the ſtimulant plan, for once that the contrary anſwers (e).

2 CXCVIII.

(b) This I have often experienced in the caſe of the gout. Before dinner, when my ſtomach was empty, I have limped in going abroad to dine. But after having made that meal heartily, and taken a glaſs or two of wine, have returned with a perfect firm ſtep, and free from all feeling of pain and uneaſineſs.

(c) as in the convulſive kind ſo lately ſpoken of, where the enormity of motion is ſometimes external and in the organs of voluntary motion, ſometimes internal, as in cholera and ſo forth.

(d) as in the ſpaſmodic pains, head-ach, pains in the legs and ſoles, where there is an inability to perform the due motion.

(e) The true reaſon for all this, and innumerable errors in the practice, is that the leaders in the profeſſion never underſtood any diatheſis but a ſthenic one, or any indication of cure but an aſthenic, to which they gave the name of an antiphlogiſtic, as they did that of phlogiſtic to the diatheſis. By his reformation of the erroneous plan of cure, that his cotemporaries, the Alexipharmacs, had introduced, in the ſmall-pox and the few other ſthenic diſeaſes that ever occur, in all the reſt of the general

CXCVIII. Symptoms of diſturbance occur alſo in aſthenic diſeaſes as well as the ſthenic. Such a ſtate of diſturbance takes place in the alimentary canal in the caſes of hyſteria, colic, dyſpepſy, and the gout. Thus in the alimentary canal, beſides the pains, mentioned above, a certain ſenſe of burning, anguiſh, contortion and direful torture, exhibit a ſet of appearances, formidable in the higheſt degree, both to the patient and by-ſtanders, and which beget a ſuſpicion of their proceeding from inflammation as their cauſe. But that thoſe affections have nothing to do with inflammation as their cauſe, and that they depend upon a ſtate of the part quite the reverſe, has been proved by the ſtimulant method of curing them turning out ſucceſsful in every inſtance in which it has been tried (i).



neral diſeaſes, Dr Sydenham's authority confirmed the error. He left alſo the meaſles as he had found that diſeaſe, and all other general diſeaſes, which are much more in frequency than 97 out of the 100, or 97 to 3 of the ſthenia. Great men had need to be cautious, as the leaſt inadvertency in them, not to ſay eſſential miſtakes, never fails to lead their followers, who are commonly ſervile imitators, and implicit believers, into capital error. If ever they attempt any thing of themſelves it is commonly to raiſe a crazy ſuperſtructure upon a falſe foundation, it is commonly to refine upon error ad infinitum.

(i) Till this doctrine appeared, it was impoſſible to eraſe from the minds of phyſicians an impreſſion that had been deeply made there, that, nothing but the only inflammation, that they were acquainted with, could be the cauſe of ſuch pain and torture, as is deſcribed in the text. I have more than once experienced the whole concourſe, here mentioned, and have always found them to yield to the moſt ſtimulant method of cure, that I could contrive. I once laboured under this modification of aſthenic diſeaſe for no leſs than ten days, and was always able to overcome it in two hours, and procure an interval of complete eaſe and relief for the reſt of the day. The remedies employed were the whole round of diffuſible ſtimuli, as opiates in all their forms, camphor, muſk, volatile alkali, and æther, &c. By theſe the functions for the time were completely reſtored. But their ſtimulant effect was no ſooner perfectly gone off, that is, after the interpoſition of a long ſleep, through the night, than

The ſame fact is confirmed by the uſe of wine, opium, and other diffuſible ſtimuli. After that, and ſtill in conjunction with their uſe, animal ſoups, and next ſolid meat, and the uſual way of living, and guarding againſt debility, effectually re-eſtabliſh the healthy ſtate (k.)

This

than the ſymptoms returned with a violence little ſhort of what it had been the day before. This was proof poſitive, that their nature was aſthenic, or conſiſting in debility; ſince they yielded to ſtimulant remedies; and that the debility was exquiſitely great, ſince it required ſo high a degree of ſtimulant operation to remove it. While that is the undoubted fact, there is a nicety with reſpect to proportion to be attended to in this caſe. It is a rule, that the degree of curative means, whether in the cure of ſthenic or aſthenic diſeaſes, ſhould be accommodated to the degree of the diſeaſed ſtate or degree of the cauſe. If too little of the curative means is employed, a proportional part of the diſeaſe will remain; if too much, the diſeaſe will be more than removed, that is, another ſtate which may be morbid in another extreme, may take place. Too much was once employed in this affection, and the effect was, that the diſeaſe was not eradicated till the tenth day of its courſe from the beginning.

(k) The rule here is, if indirect debility be the cauſe, to begin with a high degree of ſtimulant cure, and gradually reduce it to the ordinary degree that is ſufficient for the healthy ſtate. And the caution is to be ſure of this gradual reduction, otherwiſe the indirect debility will be liable to return the moment the effect of the ſtimuli is gone off. By an attention of this kind a diſeaſe depending upon indirect debility may be cured in the ſixth part of the time, that would be taken up by the cure, when the remedies are every day carried beyond the due bounds. For example, if the indirect debility be in the table the effect of an application of 71 degrees of exciting power inſtead of 40, that is to ſay, the excitement is worn down to 9 inſtead of being up at 40; it is evident, that an application of 71 degrees by way of remedies, will leave the diſeaſe where it was. Suppoſe only 65 degrees of ſtimulant power adminiſtered; the excitement will fall to 66, and the waſted excitability riſe to 15. Next day let only a degree of exciting power as 60 be applied; then the degree of excitement will be that number, and that of excitability 20. Five degrees of exciting power ſtill leſs will reduce the morbid excitement to 55, and raiſe the excitability to 25. And ſo on may the matter go, till the excitability is raiſed to 40 and the excitement reduced to the ſame

number.

This plan of cure proves to a demonſtration, that thoſe affections are moſt foreign both from ſthenic inflammation and every degree of ſthenic diatheſis; and, beſides the general ſthenic inflammation, not appearing to affect internal parts, it affords another argument againſt inflammation in this caſe being the cauſe (l).

CXCIX. The aſthenic pulmonary diſturbance diſtreſſes the patient with ſo intolerable a fixed pain, that no bounds have been ſet to bleedings for the cure of it. But all ſuch bleedings have not only been uſeleſs, but detrimental, and often fatal; whereas, on the contrary, the ſtimulant plan of cure has always ſucceeded (m). By it the reſpiration is interrupted, and nearly all the ſymptoms that accompany an actual peripneumony, diſtreſs the patient, and to ſuch a degree, that it has been ſuſpected, there was an inflammation in the caſe, or rather it has confidently been believed that there was. Or, if any difference was diſcerned betwixt this affection and that phlegmaſia, or ſthenic general affection with inflammation; that was only a ſhadow of diſtinction, and led not to the rejection of the notion of inflamma-



number. But, if the reduction be much leſs by the day, the cure will be proportionally ſlower. Nay, ſuch an error may be committed as to increaſe the diſeaſe inſtead of reducing it, which will happen, as often as a degree of ſtimulant power is applied, which is more than equivalent to that which produced the diſeaſe. All this attention and caution is neceſſary in the cure of aſthenic diſeaſes of indirect debility; while that of thoſe of direct debility is eaſy and ſimple, to wit, to give the ſtimulants in ſmall proportion and often repeated, till the diſeaſe is removed, unleſs, which may happen, you can gueſs the proportion, which may ſuffice to remove the diſeaſe at once, or, at leaſt, twice.

(l) See CLXXXII. and CLXXXIII. par. above.

(m) A young lady afflicted with theſe ſymptoms was in the courſe of a month bleeded thirty times, always with a temporary relief, but with a return of the diſeaſe more violent than ever. She was then put upon a ſtimulant plan, and in leſs than a month reſtored to her perfect health. That was among the moſt early cures taken from this doctrine.

tion being the cauſe, but only gave occaſion to a queſtion about its ſeat. But truly, that there is no inflammation at all here, at leaſt as a cauſe, and that the diſeaſe depends upon pure debility, is ſufficiently proved by the arguments that have been brought before. The diſeaſe is increaſed by the antiphlogiſtic, and diminiſhed and removed by the ſtimulant plan of cure.

CC. The formidable ſymptoms of diſturbance, that accompany epilepſy, apoplexy, and fevers, ſuch as ſtupor, a diſpoſition to ſleep, in them all; in fevers often that falſe watching, that is called typhomania, and ſometimes coma (n); in the latter, (or fevers), ſtarting of the tendons, in the former, (or epilepſy and apoplexy), convulſion or a diminution of the voluntary motions; which by moſt phyſicians have been partly imputed to irritation(o), as

(n) or an inſuperable proneneſs to ſleep,

(o) No diſeaſes are more oppoſite to each other than high ſthenic diſeaſes, ſuch as the common inflammatory fever, or peripneumony, and proper fevers; the former, in the table, ſtanding at the head of the ſcale of increaſed excitement, and the latter at the bottom of the ſcale of diminiſhed excitement. And the ſame method for the cure of both has been purſued, to wit, the evacuant, debilitating. If, in peripneumony, large quantities of blood were taken at a time, the difference has been made up in the cure of fevers by repeating it the oftener; while all the other evacuations were carried on with the ſame profuſion in both. When they talked of the reſpective cauſes of thoſe diſeaſes, phlogiſtic diatheſis was the word for the high ſthenic diſeaſes, and irritation for the high aſthenic. But theſe were words only, while in fact the method of treatment of both was the ſame at leaſt in kind; and ſcarcely different in degree. To whatever part of any ſyſtem of phyſic we turn our attention, we conſtantly ſee one mode of practice running through the whole, and that too, notwithſtanding of the ſuppoſed great number of diſeaſes very limited. It turns all upon bleeding, other evacuations, ſtarving, and ſome other trifling directions under the title of regimen. It was all antiphlogiſtic to uſe their own language; and whatever other language they held, the nature of the diſeaſe, if we are to judge from their treatment, was phlogiſtic.

as typhomania and the ſtarting of the tendons; partly to plethora, either alone and pure, or together with its mobility: All theſe without diſtinction are evidently owing to the ſame cauſe, upon which all aſthenic diſeaſes depend, that is, debility. Which is proved by the debilitating hurtful powers, whether acting directly or indirectly, alone producing thoſe diſeaſes; and by the remedies, the whole action of which depends on ſtimulus, alone relieving or removing them. But it is in vain to impute apoplexy to plethora (p); as if at that time of life, when the body is nearly worn out and almoſt bloodleſs, that is, when the uſual degree of aliment is neither deſired, nor taken in, nor digeſted, more blood could be produced than in the flower and vigour of human life. On the contrary, at the time when apoplexy comes on, in conſequence of indirect debility, induced by old age and exceſſive excitement in the mode of living, the ſolids are languid, the quantity of fluids deficient, as alſo their fountain, the blood. Epilepſy depends upon the ſame debility, and the ſame ſcantineſs of fluids, only that its debility is oftener of the direct kind. Fevers may depend upon indirect debility, as in the confluent ſmall-pox (q), or where drunkenneſs has been the principal hurtful power producing them, but at the ſame time their moſt frequent cauſe is direct debility. And in all

(p) or an over proportion of blood, ſee above, CXXXI.

(q) The confluent ſmall-pox, as depending upon a very high degree of debility, is ranked among the high fevers in the after part of this work, becauſe the ſcale is not regulated by the appellations given by phyſicians, or by any of their erroneous diſtinctions, but by ſtrict regard to the degree of excitement. And for the ſame reaſon is the violent cholera marked nearly in the ſame place; becauſe the debility, taking place in it, is nearly equal in degree to the moſt ſinking febrile debility; in a word, becauſe the ſame degree of debilitating power produces, and the ſame degree of ſtimulant operation, removes the diſeaſes ſo aſſorted.

all the caſes, that have been juſt now mentioned, debility is the primary cauſe and final termination both of all the reſt of the ſymptoms and of thoſe of diſturbance.

CCI. To the ſymptoms of diſturbance ſometimes alſo belong the following that affect the head; great head-ach in fevers, imbecility of the intellectual function, confuſion of thought, and delirium, the laſt often ſufficiently fierce, though occuring in the higheſt degrees of debility, and leading to efforts beyond the ſtrength. This ſtate often happens towards the end of a nervous fever, even when violent. Inflammation is apprehended, blood is let, but directly from the head; bliſters, which are extreme unction in the art, are clapped on, ſilence and darkneſs are preſcribed, even the moſt gentle ſtimulants are forbid. In conſequence of the emptineſs of the ſtomach, as well as of the veſſels of the whole body, and of the higheſt degree of languor from the want of many ſtimuli, vertigo is ſuperadded to delirium, and the patient, deprived of ſtrength, ſenſe and intellect, breaths out his laſt.

CCII. But in this caſe there is either no inflammation, or, if there be, it is altogether of a different nature from the general ſthenic one. That it is not the latter, the unſucceſsfulneſs of the debilitating plan of cure, and the incredible ſucceſs of that which firſt ſtimulates, and after fills the veſſels, afford certain proof: and that it is not any other inflammation is evinced by the ſo ſudden reſtitution of health. Now, as an impaired uſe, or confuſion of the intellectual faculty is, in a certain degree, always the conſequence of debility, whether ariſing from any other ſource, or from emptineſs, or a general inanition of the veſſels, and that too even in thoſe, who are otherwiſe ſound; where is the wonder, if, in the higheſt degree of inanition, compatible with life, in the higheſt degree of diminution of excitement, ſcarcely leaving a ſhadow of life

life, alſo the higheſt degree of failure in the intellectual function, that is, delirium, among other inſtances of impaired function, ſhould take place. Nay this very fact is certain, and proved to a demonſtration. Thus famine, thus drinking water contrary to cuſtom, after a courſe of drinking to exceſs, of both eating and drinking with intemperance, a gloomy ſtate of the animal ſpirits, grief, terror, deſpair, not only induce a temporary delirium, but frequently bring on downright madneſs. The ſame concluſion applies to any conſiderable loſs of blood. For how many perſons, after being wounded either in line of battle or on the highway, have never after, and often during a long life time, come to the right uſe of their ſenſes. To ſay nothing of contuſions, wounds and other injuries, by which the texture of the brain is injured, as belonging to local diſeaſes, of which we are to treat afterwards; how does cold induce death? Is it not, amidſt a diminution of all the other functions, by a delirium preceding death? From theſe facts, of ſuch weight, both from their number and validity, and that bring forward all the powers in ſupport of the argument, it muſt be admitted, that both head-ach, and every failure of the intellectual function, in every degree, and that higheſt degree of ſuch failure, delirium, depend not at all upon general ſthenic inflammation, the only inflammation hitherto known; but ariſe from the higheſt defficiency, both of other ſtimuli, and of that which depends upon a proper fulneſs in the veſſels, that is, debility. Debility then is the moſt frequent cauſe of the ſymptoms, that have been mentioned, as is proved by the reſtoration of health ſo quickly upon the new plan of cure.

CCIII. But if ever the aſthenic inflammation, mentioned (r) before, excited the tumult of ſymptoms, which are

(r) See above, paragraph CLXXI. and CCII. It is to be defined in the next paragraph.

are our preſent ſubject; it produces that effect in the ſame manner preciſely, that debility produces it, by means of a penury of blood and deficiency of other ſtimuli. For,

CCIV. The general aſthenic inflammation is nothing elſe but aſthenic diatheſis, ſomewhat more violent in a part than in any other equal part (f); and upon this footing, that the degree of aſthenic diatheſis conſtituting the inflammation is by no means to be compared with the degree of diatheſis in all the reſt of the ſyſtem; becauſe the affection diffuſed over the whole body is far greater than that confined to a part (t).

CCV. Inflammation, in this caſe, is nothing elſe but a ſtate of the inflamed part, of the ſame kind with that of all the reſt of the body. And, as the inflammation is conſtituted by a leſſer excitement in a part, than in any other equal part; ſo, before the arrival of the diſeaſe (u), of which the inflammation is a part, a ſymptom, or ſequel, the excitement of that part is underſtood to be proportionally leſs, than that of any other part.

CCVI. This inflammation (x) ſhould be diſtinguiſhed from another, which is local: It is general, and depends upon

(f) See above, paragraph XLIX.

(t) See above, XLVIII. XLIX. L. LI.

(u) See above, par. CLXIX. and compare it with this. The meaning in both is, that as certain parts of the ſyſtem have more excitability than others (LI.), ſo thoſe parts, which in the diſeaſed ſtate are more affected than any other, that is, are either more excited, as in ſthenic inflammation, or leſs, as in aſthenic, than in any other, keep up the ſame proportion of diſparity before the arrival of the diſeaſe, before the appearance of any of the ſymptoms, and while, as yet, nothing but mere prediſpoſition has taken place. The truth of this propoſition is eſtabliſhed by that of another ſo comprehenſive as to extend to the whole ſubject of life; which is, that over the whole living creation, throughout the univerſe, health, prediſpoſition to diſeaſe, and diſeaſe itſelf, are the ſame ſtate, only differing in degree, (vid. par. XXIII. and LXV.). Health, therefore, is alſo comprehended under this ſame propoſition.

(x) mentioned in the two laſt paragraphs, CCIV. and CCV.

upon a general diatheſis and only happens when the diatheſis has attained to a certain degree; while the local ariſes from ſome hurtful power, that produces a ſolution or vitiation of the texture of the part, without regard either to diatheſis or degree: The general inflammation is brought on by the ſame hurtful exciting powers, which produce the general diatheſis, only applied in a higher degree; and the ſame remedies remove both the diatheſis and the inflammation: The local inflammation depends upon hurtful powers, that only harm a part, and is removed by remedies that change the ſtate of the part; but is not affected either by general hurtful powers, or general remedies. Examples of the univerſal are theſe inflammations, which accompany the gout, the putrid ſore throat, the gangrenous ſore throat, and that inflammation which produces ſore eyes: The local inflammation will be illuſtrated by examples, to be produced in their proper places (y): The general inflammation is attended by debility over the whole ſyſtem; which debility is only a ſequel of the local, and not always. To remove the former the general method of cure (z) is adapted; but the cure of the latter turns upon healing up the part. In this way, then, there are four ſets of inflammation, two univerſal, a ſthenic, and an aſthenic, and two local; one of which is ſthenic, and the other aſthenic. The former often ends in ſuppuration, often in ſolution; the latter in gangrene, and ſometimes ſphacelus, ſometimes at the laſt in death. If, in the end of a typhus

(y) as in the inflammation, that is produced by a wounding inſtrument when a perſon, previous to ſuch an accident, is in health, and continues to be ſo after the accident. Or it may ſtill be local, though a perſon is in bad health when it happens, but ſo, however, as that the general ſtate of the health is underſtood to have no concern in it. A wound in a very tender part may induce diſorder over the general ſyſtem; but ſtill all the ſymptoms can be traced to the wound, and not to the ordinary cauſe of general diſeaſe.

(z) See par. LXXXVIII.

typhus fever (a) inflammation affects the brain or its membranes, which (b) is neither yet proved, nor a very likely fact, it will serve for an instance of an asthenic general inflammation.

CCVII. As the general sthenic inflammation is occasioned by a quantity of blood, excessively distending the vessels, which are its seat, by that distention stimulating them, by stimulating increasing their excitement, by the last producing more forcible and more frequent contractions, by these increasing the tone of the fibres as living, and their density as simple solids, and thereby diminishing their

(a) or a low nervous fever, which is a disease of the highest debility, next to the plague, and often not inferior to that disease in malignity, and, therefore, to be arranged in the scale, as next to that disease, which stands at the bottom of diminished excitement. Physicians have constantly confounded the different degrees of this disease with sthenic ones, affecting the pulse. But they are diametrically opposite as shall be pointed out when we come to the proper place for such distinctions.

(b) though strongly asserted. A professor in his lectures gives a case of a typhus fever, where, upon account of delirium and some other symptoms, thought to announce an inflammation in or near the brain, the patient was so freely bleeded, that the state of the pulse (which is said to have been, in his words, "a pulsus vacivus, if ever there was such a "pulse",) forbid any further bleeding. The patient was given up, and the extraordinary physicians withdrew, leaving the ordinary one of the family, only, about him. This gentleman, from some impression on his mind, began to think, that another bleeding might be tried with advantage. He bleeded him, and the patient recovered. This is an account of a case that I pretend not to understand, and I believe it will be no less puzzling to my readers, and the more puzzling the more sense they have. It is, however, brought as an example, that in a seeming expiring debility, the highest degree of asthenic diathesis, there may be an universal sthenic debility, that requires bleeding. I have mentioned it, not for the sake of information, but of caution to the reader. Any person may see the frivolity and lightness of the theories of our profession, but it requires knowledge and discernment to guard against the seduction of facts.

their diameters (c); and, conſequently, making the blood flow with great effort through the contracted veſſels, and, during its flow, produce pain from the high force of the contractions, and the narrowneſs of the ſpace through which it has to paſs; and as the ſame, though in a leſſer degree, is the cauſe of ſthenic diatheſis over the whole vaſcular ſyſtem, whether red or colourleſs: So,

CCVIII. The cauſe of general aſthenic inflammation is alſo abundance of blood in the inflamed veſſels, producing the ſame effects in the inflamed portion as in the ſthenic inflammation; and, notwithſtanding of the penury of blood in every part of the vaſcular ſyſtem beſides, flowing abundantly into the inflamed veſſels, upon account of a greater atony and laxity in them, than in the others, diſtending them and producing the phænomena peculiar to any inflammation (d).

CCIX. As the indication of cure for the former is, to diminiſh the quantity of blood, which is the firſt cauſe of the ſtruggle, and, thereby, to reduce the exceſſive excitement to the degree that ſuits the healthy ſtate, and the exceſſive contractions, which conſtitute the ſtruggle, to the moderate ones, which are pleaſant and agreeable to health (f): So

CCX. The indication of cure for the latter is, firſt, by

(c) See LXI. above, and CXXXI.

(d) Theſe definitions, apply to all the four inflammations (par. CCVI.) with reſpect to the ſtate of the inflamed veſſels; their differences only depending upon the general ſtate of all the reſt of the veſſels, which in the local, may be quite the healthy ſtate of theſe, while, in ſthenic general inflammation, it is the ſthenic, and in this the aſthenic diatheſis, that are conjoined with the inflammatory ſtate. Further, as their cauſe is influenced by theſe general circumſtances, ſo alſo is their cure; the ſthenic and aſthenic general inflammations requiring the remedies of the diatheſis to which they reſpectively belong, and the local only the remedies ſuited to heal up the part.

(f) See above, CXXXIV.

by powerful ſtimuli, to drive on the quantity of blood which there is in every part of the ſyſtem, that the portion which loiters in the languid veſſels of the inflamed part, may be thereby propelled, and the veſſels relieved of their burthen; and then by the gradual adminiſtration of ſeaſoned animal food, in the form of ſoups, and, ſoon after, and when now the ſtrength is recruited, in a ſolid form, to fill the whole ſyſtem of veſſels.

CCXI. The two other inflammations, both local, will be treated of afterwards, each in its proper place.

CCXII. That inflammation of the throat, which ends in what they call a putrid (g), ſore throat, is ſingularly inſidious. During the firſt days it differs little in its appearance from the ſthenic ſore throat. The general ſymptoms are alſo ſimilar. The pulſe ſcarce exceeds the meaſure of the ſthenic pulſe in its frequency and other characteriſtics. For ſome time the whole diſeaſe proceeds with gentleneſs and tranquillity, excepting that a conſtant rejection by ſpitting of a tough mucous matter is troubleſome. At laſt, when head is not made againſt it by means of the moſt powerful ſtimuli, a period arives, when all the ſymptoms are ſuddenly precipitated into a bad ſtate; when the pulſe becomes very quick, very weak, and remarkably ſmall; when the ſtrength, over the whole ſyſtem, ſinks; and now it is not a moderate portion of diffuſible ſtimulus, not before adminiſtered, that will ſtop the much to be lamented death of the greateſt ornament of human nature (h). The beſt plan of curing this diſeaſe, is to prevent

(g) The diſeaſe, here mentioned, is neither deſcribed nor, ſeemingly, underſtood, in medical books and lectures. In this work it is taken, as every thing elſe is, from nature at the bed-ſide of the ſick, and deſerves ſo much the more attention, that, though it is a diſeaſe of the utmoſt malignity, it ſeems to have been altogether overlooked. Its appearances are mild at firſt, but, without both ſkill and attention, will end fatally.

(h) All this refers to a lady in Scotland, of ſingular worth and amiabi-

lit

vent the mortal period by employing the moſt powerful ſtimuli.

CCXIII. The diffuſible ſtimuli are ſo powerful in removing the inflammation of the gout, that, ſometimes, ſtrong ſtrink, undiluted, as wine, and ſpirits, or the latter diluted with water, as warm as can be borne, have in a few hours removed the moſt violent fit, and reſtored the uſe of the affected foot. And the ſame remedies, as have been mentioned before, are of equal efficacy in removing the general ſymptoms (i).

CCXIV. The inflammation of the throat, in the gangrenous ſore throat, is not, according to the common opinion, a primary affection; but, like every other general aſthenic inflammation, depends upon the general diatheſis, which, in this caſe is manifeſtly aſthenic, being a part or ſymptom of the diatheſis, when that has attained a certain high degree.

This inflammation has nothing in common with the ſthenic

lity, who died, but not in conſequence of the plan of cure, which this doctrine enjoins, having been followed; eſpecially at the period of the diſeaſe when it was moſt wanted.

(i) Treated in the way, here and formerly (vid. the pref.) mentioned, the moſt violent degree of the diſeaſe always gave way in a few days, and milder caſes in as many hours. I never found a ſingle caſe baffle me but one, where the patient, who, with his valet, had quacked himſelf into the gout as well as other complaints, and particularly an habitual coſtiveneſs, by forcing every paſſage by the belly, for the ſpace of ſeventeen years. I was diſmiſſed without having my directions complied with; and without being allowed to accommodate the remedies to his practice of purging and throwing up injections, ſo as to endeavour, at leaſt, to prevent or mitigate their hurtful effect. For, it muſt be obſerved here, that, as every directly debilitating power is an exciting hurtful means of bringing on any aſthenic diſeaſe, ſo the effect of every evacuation, and particularly that by the belly, is well known to be a certain means of bringing on a fit of the gout. Among many other means of inducing that diſeaſe, a ſingle doſe of Glauber's ſalt, though that be but a mild cathartic, will bring a fit of the gout on me at any time.

ſthenic general inflammation, which diſtinguiſhes the ſthenic inflammatory ſore throat, (k) or with the two local inflammations.

CCXV. The crowded puſtules, in the ſmall-pox, when it is now converted into the confluent diſeaſe of that name, that is, into an aſthenic general diſeaſe, become partakers of the new diatheſis, and, inſtead of ſthenic, which was their firſt ſtate, become aſtſthenic; and, as by their local ſtimulus before, they quickly changed the ſthenic into the aſthenic diatheſis, by means of indirect debility; ſo they, now, by the debilitating influence of their aſthenic nature, confirm aſthenia, or a ſtate of debility, over the whole ſyſtem; they increaſe it, and carry it quickly on to death (l).

CCXVI. To throw light and illuſtration upon them, by comparing their reſpective methods of cure; it is to be obſerved that the cure; in the one eaſe is

(k) Yet in their ſyſtems of noſology, which are laboured volumes of diſtinctions without differences, begun, within this half century, to be ſuperadded to the former modes of ſyſtematizing, which, without this new one, had ſufficiently diſgraced the art, and needed no more than the moſt abſurd of the whole, or that the miſled fancy of men could invent, to complete, in all its copartments, the vaſt fabric of error, and particularly in the laſt of theſe, that publiſhed in Edinburgh, the putrid ſore throat, as deſcribed (above CCXII.) was left out, and the gangrenous, which is that juſt now alluded to in the text, conjoined with the common ſthenic ſore throat, though diametrically in its nature oppoſite to it.

(l) There cannot be a more exquiſite ſtimulus in living nature, than that univerſal cake of inflamed puſtules, which covers the whole ſurface in a crowded ſmall-pox. It is no wonder then, that, when it is ſuperadded to the ordinary ſtimulant hurtful powers, to which this diſeaſe firſt owes its violence, and afterwards, that very eruption, the united effect of both ſhould ſoon paſs the whole range of exceſſive ſtimulus, and quickly run into the ſtate of indirect debility (ſee par. CC). Such is the nature and progreſs of the ſmall pox, in paſſing from the ſthenic into the aſthenic ſtate, that is, from one diſeaſe into another of a moſt oppoſite nature.

is quite different from that of the other (m). The remedies of the diſtinct ſmall-pox, and of its accompanying eruption, are cold, and whatever, by evacuation or otherwiſe, debilitates. The remedies of the confluent diſeaſe, as well as of its accompanying eruption, are heat, remaining within the indirectly debilitating degree, and all the powers, which ſtimulate as quickly, and as powerfully as poſſible, and conſequently, the moſt diffuſible.

CCXVII. They differ beſides in this, that all the hurtful powers in the diſtinct caſe are ſthenic; all in the confluent aſthenic. And this difference equally applies to both diſeaſes, and both eruptions.

CCXVIII. And as the ſthenic or diſtinct puſtules have a direct tendency to produce aſthenic inflammation, and ſthenic eruption; ſo the tendency of the aſthenic or confluent, is as directly to gangrene, ſphacelus, and death.

CCXIX. The boils, carbuncles, and buboes, which often accompany the plague, and ſometimes the typhus fever (n) ariſe from a contagious matter, taken into the body, and then detained with the perſpiratory fluid, under the cuticle, and in the glands. The caſe of the detention, and, therefore, of this eruption, is a total ceſſation of motion in the extreme arteries, eſpecially the glands and perſpiratory terminations, upon account of the univerſal debility, and the very great languor of the heart and arteries. That this is the caſe, is proved by their being no eruption during the period of prediſpoſition, when ſome vigour ſtill remains; and,

(m) The cure of the diſtinct ſmall-pox is the debilitating; that of the confluent, the ſtimulant plan. The cauſe of the former is ſthenic diatheſis, that of the latter the aſthenic, occaſioned by indirect debility; which is a diſtinction unattended to in general, and with very bad effect upon the practice. For, when the confluent ſmall-pox is eſtabliſhed, the puſtules flat, and ſigns of mortification coming on, the covering the patient with a ſingle ſheet is as common as in the diſtinct ſmall-pox.

(n) See above, the note (c), under par. CCVII.

and, therefore, the perſpiration goes on in a certain degree; none in the caſes of ſudden death from the violence of the diſeaſe; neither eruption nor diſeaſe in all the caſes, whether theſe are early prevented by the uſe of the more powerful ſtimulants; by the diſeaſe being always gentle, and the eruption always ſparing, in proportion to the proper management of the ſtimulant plan of cure. For, whether the ſuppreſſion of perſpiration be the conſequence of a very great degree of ſthenic diatheſis, or of an equal degree of ſthenic as in the preſent caſe; all the foreign matter, that ſhould be thrown out of the ſyſtem along with the perſpirable is, together with it, detained, and ſo detained below the cuticle, by ſtagnating, and acquiring a more acrid nature, it produces local inflammation, either of a ſthenic or aſthenic nature, in proportion to the different nature of each, or rather of the habit of the body.

CCXX. In the ſame manner is that eruption which diverſifies the ſkin in the gangrenous ſore throat to be explained; as well as another, which ſupervenes upon that ſtate of the ſmall-pox, which by reaſon of the debility of the ſyſtem, would otherwiſe turn out well; but if the new eruption be not oppoſed by the moſt powerful ſtimuli, is ſure to end in death. Both theſe eruptions (o) are ſpotted both of them red; but the former (p) is marked by ſmaller, the latter by larger ſpots; in the latter the colour is a fine ſcarlet, far exceeding all art, and almoſt the power of nature herſelf in other reſpects (q). Both of them are owing

4 to

(o) A young child of mine, who had been long weakly, and often, in conſequence of that, ſnatched from the jaws of death by being properly ſupported, according to the principles of the new doctrine, had been prepared to receive the ſmall-pox, and inoculated. After the eruption was completed, and it was now certain it would be exceedingly moderate, one morning he was brought before me covered over with the appearance of the eruption deſcribed in the text.

(p) or that in the gangrenous ſore-throat.

(q) The beautiful colours ſometimes painted in the clouds are often not to be copied by art.

to a ſuppreſſion of the perſpiration by the debility that has been mentioned : the former is removed, in practice, by the ſtimulant plan of cure, which removes all the other ſymptoms; in the latter or uncommon eruption, the debility produced of purpoſe in the preparatory plan of management, to render the ſmall-pox mild, muſt be oppoſed, as ſoon as the eruption appears, and the ſtrength muſt be reſtored by the uſe of the moſt diffuſible ſtimuli: the puſtules which are both few, and of no conſequence, and do not even attain to the meaſure of actual general diſeaſe, and are, therefore, free from all danger, are not to be regarded. If this practice be executed, the recovery is both certain and quick; but, if it be neglected, or if a contrary plan of cure be ſet on foot, death is inevitable (r).



(r) It is certain, that the ſafe conduct of the ſmall-pox depends upon debilitating the habit which is to receive the infection; and it is as little doubtful that we may carry that operation a great way, by lowering the diet, purging the belly, and applying intenſe cold to the ſurface, and, by all means, guarding againſt all alternation with heat. By this means the phlogiſtic diatheſis, chiefly ariſing from the ordinary powers and in part, as it would ſeem, from the contagious matter, is prevented or removed; the great flow of the fluids to the ſurface checked; and the diameters of the perſpiratory, as well as of all the other veſſels, kept open and patulous. But it had been long a queſtion with me, whether this debilitating operation might not be carried too far. If it be certain, as it is, that extreme debility ſuppreſſes perſpiration, ſurely the proceſs puſhed near to that degree muſt endanger that event. This phenomenon happening to my child, ſolved the doubt that I had not yet decided, and it ſeemed to be in perfect conformity to the principles of this doctrine to underſtand, that, as this child had been formerly weak, and, perhaps, ſtill retained ſome degree of that ſtate, the further weakening him by the preparatory management, for the better regulating this diſeaſe, had been carried too far. A ſurgeon happened to be by when the child was under examination; I aſked him if he had ever ſeen ſuch a caſe, for I had neither ſeen, nor heard, nor read, of any thing like it. His anſwer was, that he had ſeen three, and all of them fatal. I knew how that would happen, that is, that they would continue the debilitating practice they had

CCXXI. Heat is not peculiar to ſthenic pyrexiæ (ſ), but belongs alſo to other diſeaſes of the ſame ſtamp. Nor is it ſo confined to thoſe, as not alſo to ariſe in all the degrees of prediſpoſition to thoſe diſeaſes, and in proportion to each degree (t). But the matter does not end here. The ſame heat diſtinguiſhes all aſthenic diſeaſes, whether febrile, which is a diſtinction without any good meaning, or not febrile, and alſo the prediſpoſitions to them all and that in proportion to the degree of debility. There is not a more certain mark of a departing diſeaſe, whether ſthenic or aſthenic, than a return of that temperature, which is commonly called cool, to diſtinguiſh it from morbid heat.

CCXXII. The heat is then only natural, when neither diatheſis is preſent. From that point it encreaſes, through all the degrees of encreaſed excitement, till indirect debility, from exceſs of ſtimulus, is eſtabliſhed; and it encreaſes in proportion to the degree of excitement, rendering the perſpiratory veſſels always leſs and leſs patulous. It alſo encreaſes through all the degrees of diminiſhed excitement

had been following. On the contrary, I ordered the child ſpirit and water, and a little of an opiate, then reſtored the meals that had been taken from him, and brought him about to his perfect health (for the ſmall-pox gave no trouble) in twelve or ſixteen hours.

(ſ) Pyrexia is the word for ſthenic diſeaſes affecting the pulſe, called febrile, or fevers, very improperly, while the term fever is reſerved for the high aſthenic diſeaſes that have been confounded with the pyrexiæ.

(t) That heat takes place in prediſpoſition, is a matter of daily obſervation. Thus, when a perſon has no other ſymptom of diſeaſe, it is often remarked, ſometimes by himſelf, ſometimes by another, who may have happened to feel his hands, that he is certainly not quite well as his hands are hot. When this heat happens, either in the hands or feet, without any cauſe to account for it conſiſtently with health, it is a ſure prelude of diſeaſe, that is a ſure mark of a conſiderable prediſpoſition to diſeaſe: and the kind of diſeaſe, of which it is the harbinger, is oftener aſthenic than ſthenic.

citement to certain boundaries, which are fixed by a cauſe by-and-by to be explained, and encreaſes in proportion to the degree of decreaſing excitement, though the latter all along renders the perſpiratory veſſels more patulous; and, thereby, among other effects, diminiſhes the motion, both of all the veſſels, and particularly of the perſpiratory.

CCXXIII. When the heat has now been the greateſt it can be, and the debility encreaſed in proportion, at laſt in the exremities, and afterwards gradually in the reſt of the body, cold, which is always a bad ſign, ſucceeds to it. In the progreſs of the debility motion begins to be very languid, firſt in the extreme veſſels of the extremities of the limbs, and then to be deſtroyed altogether. Hence, as heat, whether in due proportion, or in exceſs, depends upon the motion of the blood and other fluids, being performed in due proportion, in exceſs, or to a certain extent, in a deficient degree; if, therefore, the heat is either nothing, or next to nothing, as in the preſent caſe, the effect, together with the cauſe, by an univerſal law in nature, ceaſes. The ſame thing happens in both extremes of excitability, that is, of exceſſive abundance in direct, and of nearly a ceſſation of it, in indirect debility; and ſo much more readily will this happen, becauſe, whatever be its ſource, debility is always the ſame.

CCXXIV. Becauſe the excitement in ſthenic diſeaſes is for the moſt part much and equally encreaſed over the whole body; the heat, on that account, is alſo equally diffuſed over the whole. From which fact no caſes are excepted, but thoſe, in which, in certain parts, as the ſtomach, under a ſtrong diſpoſition to vomiting, and, therefore in danger of falling into indirect debility, indirect debility either actually takes place, from the diſeaſe proceeding with an exceſſive force of ſtimulus; or direct debility comes on, when the debilitating plan of cure has been puſhed beyond the rule. But, ſo long as the ſthenic

diatheſis is vigorous, and ſupports a high force of excitement the heat will almoſt always be equal.

CCXXV. The ſame thing happpens in moderate debility. Accordingly, through the whole courſe of prediſpoſition, and in thoſe diſeaſes, where the matter has not gone ſo far as almoſt a total ceſſation of motion, the heat is pretty equal. The effect of ceſſation of motion has been explained (u). But, before that happens, if any inequality of heat occurs in diſeaſes of moderate debility, as is frequently the caſe in the hands and feet; the reaſon of that is, that a greater degree of debility as in cold, labour, and ſweat from theſe, or any other ſource, and that ſweat cold and clammy, has been applied to thoſe parts, than to others. Not only in the gout, but alſo in other affections both of direct and indirect debility, a burning heat, chiefly diſtreſſing to the ſoles of the feet, torments the patient, eſpecially in walking. That that ariſes from debility, checking perſpiration, is proved by fatigue, cold, and other debilitating powers proving hurtful to it; and heat, reſt, and other ſtimulant powers, giving it eaſe.

CCXXVI. It remains now, that it be explained, how too great excitement, in high ſthenic diſeaſes, impairs ſome functions, but never, by a debilitating operation; and how too ſmall an excitement in violent aſthenic diſeaſes, gives an appearance of encreaſing ſome functions, but always a falſe one.

CCXXVII. If, in peripneumony, ſynocha (x), and, violent rheumatiſm, the voluntary motions are impaired, and to ſuch a degree, that a perſon can neither uſe his hands nor his feet, more than a paralytic perſon; that that is not owing to debility, that is, diminiſhed excitement whether directly or indirectly (y), is evident from this double proof; that,

(u) See above, CCXXIII. (x) or the inflammatory fever.

(y) When the excitement is at 40 all the functions are performed in the

that, if the apparent debility were real, ſtimulants would be of ſervice, and debilitating remedies of diſſervice (z). But the reverſe is the truth. For the ſame debilitating powers, which cure the other ſymptoms of confeſſed exceſſive excitement, alſo remove this indiſpoſition to the performance of motion; and the contrary encreaſe the affection.

CCXXVIII. Again, in ſpaſms and convulſions, either of the involuntary motions, in the internal parts, as in dyſpepſia

the beſt and compleateſt manner. Above that there is more force through all the ſteps of prediſpoſition, but with leſs durability and ſteadineſs; which is exemplified by the compariſon of hard labourers, who at the ſame time are well ſupported, and gentlemen, who live well, without uſing a proportional degree of labour or exerciſe to prevent a luxuriant ſtate of vigour. When two ſuch perſons are ſubjected to a comparative trial of their vigour in any exertion, the former will be found to go through the exertion with more ſteadineſs, and to hold out longer and better than the other; even though his firſt efforts may have been inferior in force to thoſe of his antagoniſt. And the reaſon is evident; a moderate and proper degree of vigour, will bear an addition of ſtimulant operation longer than a higher degree of it approaching to morbid ſtate; becauſe the diſtance of the excitement from indirect debility, which puts an end to excitement, is greater in the former than in the latter caſe. The difference in the well-ſupported labourer is 30 before he can reach an encreaſe that leads up to 70; whereas that of the gentleman is perhaps not more than 20. The exertion in the ſtruggle adds ſtimulus; which will be better borne by him who has leaſt and yet enough, than by him who has more, but of a ſuperfluous degree, and more liable to run into the extreme of a ceſſation of excitement. The effect of exertion in the labourer will be to carry him ſoon up, by its ſtimulant operation, to the degree of excitement where the gentleman began, ſuppoſe that to be 50, and perhaps by and by to 60. But the ſame ſtimulus of exertion in the gentleman will have the effect of firſt mounting up to 60, and by and by to 70, where the excitement begins to ceaſe.

(z) Who would adminiſter wine, opium and the other high ſtimuli, whether durable or diffuſible, to cure the inability to perform motion in either peripneumony or that rheumatiſm which is highly ſthenic? Or rather, who would think of any other means of removing that ſymptom, than the debilitating powers, ſo effectual in removing all the reſt, and not leſs ſo in removing them?

dyſpepſia (a), in colic, in dyſentery (b), in cholera (c), in hyſteria, in any violent attack either of vomiting or looſeneſs of belly, (great numbers of which affections happen every day, without being diſtinguiſhed by names); or in the burning affection of the alimentary canal (d), which is conſidered by phyſicians as an inflammatory affection; or in affections of the voluntary motions externally, as in the lock-jaw, in tetanus (e), and in many ſpaſms of other parts; or

(a) in Engliſh indigeſtion: (b) in Engliſh the bloody-flux.

(c) or that diſeaſe the urgent ſymptom of which is vomiting and purging.

(d) See above, CXCVIII. and the annexed notes.

(e) Tetanus is a violent ſpaſmodic motion of the muſcles of the head, neck, and upper part of the thorax, whereby the head is kept immoveable in the ſame poſition, in which it had been found upon the coming on of the ſpaſm. The teeth alſo, from the affection occupying the muſcles of the under jaw, are kept immoveably locked, and hence the name of lock-jaw. Beſides the affection of the muſcles, that has been mentioned, there is ſcarce one muſcle in the whole body, free from one degree or other of the affection. Further, there is a moſt painful feeling over all, but eſpecially in the parts moſt affected. This diſeaſe ſometimes happens in cold countries, ſuch as this, in conſequence of a wound in any ſenſible part, or when ſmall bones, as the oſſa ſpongioſa are bruiſed, cruſhed and daſhed into the ſofter parts. The part of it called lock-jaw is frequently a ſymptom in fevers. But the diſeaſe is more frequent in warmer countries than this, as in the ſouth of Europe, where the exceſs of heat is liable to run into indirect debility. It is moſt frequent of all in the Torrid Zone, where indirect debility is the moſt conſtant attendant on heat. As a violent and permanent contraction of the muſcles was the moſt ſtriking ſymptom of it, and ſyſtematic phyſicians ſuppoſed every ſuch contraction the effect of an encreaſe of excitement, or, to uſe their own words, an increaſed flux of the nervous fluid or nervous power into the parts affected; conſequently their indication of cure was to relax the rigid contracted parts. Hence no bounds were ſet to their emolient relaxing meaſures. Such were bleeding, other evacuations, and warm-bathing. But experience ſoon taught, that all theſe increaſed, inſtead of removing the diſeaſe. Of late opium, becauſe it was thought a ſedative, was tried. The trial ſucceeded. But immenſe quantities of that

or in convulſion, epilepſy (f), and many other convulſive affections; if theſe functions ſeem very much encreaſed; that that is not owing to encreaſe of ſtrength, that is, encreaſe of excitement, ſhall alſo be proved to any unprejudiced judge by the following two-fold fact; that, if this were a caſe of really encreaſed ſtrength, debilitating powers, or the remedies of ſthenic diatheſis, would remove it, and ſtimulants (g) not proceeding to their ultimate effect of inducing indirect debility, but remaining within that range, in which they remove aſthenia (h) would increaſe it. But to ſuch a fact alſo is the truth in diametrical oppoſition (i). For ſtimulants alone, which remove the other ſigns of acknowledged debility, alſo remove thoſe ſpaſms and convulſions; and debilitating powers encreaſe them, or change the diſeaſe into a worſe (k).

CCXXIX.

that medicine were found neceſſary to effect the complete cure. Laudanum uſed to be thrown in without meaſure, or any other rule, but to give it on till the diſeaſe ceaſed.

(f) or the falling-ſickneſs in Engliſh,

(g) keeping within their ſtimulant range, and

(h) or affections of debility,

(i) Who does not now know, that bleeding, evacuations of other kinds are hurtful, and that ſtimulants proportioned to the degree of the cauſe, are the only ſucceſsful remedies?

(k) A certain gentleman in his deſk, ſpeaking of the method of curing epilepſy or the falling ſickneſs, and recommending among other evacuant and other debilitating means, ſmall but frequently repeated bleedings, unguardedly contradicts himſelf in his very next ſentence.—— "However," ſays he, "we regular practitioners are liable to be too cau- "tious and even timid ſometimes. For I have known a bold practiti- "oner in the country, who cured an epilepſy by very profuſe bleeding. "In a few months after the patient died of an univerſal dropſy, but the "epilepſy never returned." I would aſk this gentleman, what ſort of a cure that was, that converted a diſeaſe, which may come and go for many years, nay even for a long life time, into one that, in a very ſhort time, proved fatal? What reaſon would a podagric have to thank any one, who ſhould convert the gout in him upon any violent attack, into

a

CCXXIX. Becauſe we know not what contraction is, or almoſt any function of living ſyſtems (l); we ſhall not, therefore, wrangle about whether it be an increaſed or diminiſhed function (m); but we will by no means give up the point of thoſe ſpaſmodic and convulſive motions being an impaired function (n); for, if, within certain boundaries,

a fatal dropſy? That ſort of treatment is not curing a diſeaſe but encreaſing it, and even that to death. The convulſive ſymptoms of an aſthenia may paſs away, but the aſthenia remains. You may ceaſe to call it epilepſy; but dropſy ſtill ſhews that the cauſe of the diſeaſe remains, nay is prodigiouſly increaſed. This fatal miſtake of an encreaſe of the diſeaſe upon the whole, for the cure of an inferior degree of it, proceeds from an improper uſe of directly debilitating powers in place of the proper ſtimulant ones. But there are caſes, where the laſt, by being carried too far, produce the ſame fatal miſtake. Thus in peripneumony, to get rid of the hard pulſe, and the acute pungent pain (ſee above, CLXXIV. and the notes), the bleedings are carried ſo far as to produce a fatal hydrothorax, or dropſy of the cheſt.

(l) This is, perhaps, the firſt philoſophical performance in which care has been taken to keep clear of abſtract cauſes. The proſecution of them has contaminated almoſt every department of knowledge that had been treated ſcientifically. See the introduction to my Obſervations on the ſeveral erroneous Syſtems of Phyſic, &c. where it will appear, that even the great Sir Iſaac Newton did not altogether avoid this error, eſpecially in the queſtions he put, however modeſtly, with reſpect to an all-pervading æther; the wanton and aerial theoretical fabrics that have been raiſed upon which, have, in ſpite of Lord Bacon's better directions, diſgraced the philoſophy of the middle of the eighteenth century. Compare what you will find in the book with the III. Chap. paragraph XVIII. in this.

(m) See above, Chap. V. throughout.

(n) I know not what the abſtract ſtate of muſcular fibres is, either when they contract and relax with rapid, violent, and morbid force, or when they remain immoveably fixed in one forcible permanent contraction: But I know, that nothing but debilitating powers produce them, and nothing but invigorating ones remove them, which is enough for me, who mean to prove myſelf a ſure and cautious obſerver of the phænomena of nature; and in my practice as a phyſician, to avoid, after the

ries, (o), excitement, when increaſed, produces more ſtrength, and leſs when it is either diminiſhed without limitation, or ultimately encreaſed; and if every function ſo ariſing is properly defined to be either a function encreaſed in proportion to the encreaſe of excitement as contained within its boundaries, or as a function diminiſhed in proportion to the deficiency of the ſame excitement, without any boundary, or to the ultimate encreaſe of exciting power beyond the ſtimulant range; conſequently, in the laſt of theſe caſes it is a moſt proper definition to ſay, that the function is diminiſhed; and in the firſt, that it is increaſed (p).

CCXXX.

the example of many others, groping in the dark under the guidance of abſtract reaſoning, but to view every ſubject of obſervation, by nature's cleareſt light.

(o) See above, par. XXIV.

(p) In the ſpaſmodic and convulſive ſtate of the function of motion, when compared with the vigour of the ſame function in its healthy ſtate, who would ſay that the former is greater than the latter? The healthy and vigorous ſtate of motion conſiſts not in the degree of contraction, but, with a certain degree of that, in the well proportioned alternation between contraction and relaxation; of which we have proof indiſputable in this mode of motion being beſt performed in that middle ſtate of vigour, that intervenes betwixt the extreme of the healthy, or moderately encreaſed vigour, and the other extreme of direct and indirect debility. The encreaſe of vigour and excitement keep pace to a certain extent, even through ſome degrees of morbid exceſs of the latter: but a period, and that ſhort of indirect debility, arrives, as in peripneumony, where the excitement is increaſed beyond the healthy ſtate, and muſt be reduced in order to reſtore the due healthy vigour. There are other caſes, as that of mania, or ſthenic inſanity, where the conjoined encreaſe of vigour and excitement will ſtill go further. But in every caſe the encreaſe of vigour, ſtill judging of it from its effects in the healthy ſtate, ceaſes before that of excitement; and, perhaps, we may make a ſtep towards finding the boundary, by obſerving, that the greater the ſum total of exceſs of exciting power is, the ſooner does the point arrive, beyond which the vigour does not proceed. In peripneumony it ceaſes at a certain

CCXXX. The notion, therefore, hitherto received with reſpect to theſe motions is falſe. It proceeds upon a ſuppoſition (q), as if the motions proceeded from an exceſſive influx of the nervous fluid, according to a mode of ſtyle which they firſt held (r), or of the nervous power

tain period of the diſeaſe, where the ſalutary effect of bleeding and other debilitating means ſhows that the encreaſe of excitement is ſtill going on. But here the ſum total of excitement, conſidering the ſtate of all the other functions, is greater than in mania, where the function chiefly encreaſed in vigour is only that of voluntary motion, while all the functions of involuntary motion are very little affected. From this inveſtigation we can clearly diſcern, that every increaſe of excitement leads to a morbid encreaſe of vigour, and that there is, ſomewhere or other, a point in the ſcale of encreaſing excitement, and below the point of indirect debility, where the vigour is no further encreaſed; and this inference ariſes with reſpect to the practice, that we ſhould be very obſervant of both facts, as pointing out a very material diſtinction in the indications of cure; that in indirect debility being to ſtimulate, while that at the ceſſation of vigour is to continue to debilitate till the ſum total of exceſſive vigour be reduced to the proper and healthy. The inability to the performance of motion in peripneumony is an inſtance of the latter; that of the converſion of the ſame diſeaſe from exceſs of debilitating cure is an inſtance of the former.

(q) Indeed they have talked ſo confidently of it, that they may more juſtly be arraigned of going upon a petitio principii, or that error in logic where a point, chiefly required to be proved, is taken for granted, and made a ground work of other reaſoning.

(r) From a microſcopical obſervation of Leuenhoeck, where he once thought he ſaw a hollow cavity in the nerves (but could never ſee it again, nor any body after him, though that inſtrument has been infinitely improved ſince his time), the celebrated Dr Boerhave took his noted intertexture of veſſels, making the whole maſs of living bodies conſiſt of ſuch. The functions were, at that time, ſuppoſed to depend upon an elaſtic fluid ſecreted in the brain, and diſtributed in the cavities of the nerves, to every part of the ſyſtem. Much reaſoning has been employed in refutation of that beautiful, though fanciful, ſyſtem. But the only reaſon, that ſhould have been employed againſt it, was to deny the truth of the hypotheſis upon which it was built; and that negative argument might have been ſupported by this poſitive one, that it is now known,

er (s), which is now the common language, that is, if it has any meaning, from an exceſſive excitement in the fibres that have been mentioned (t); and, as according to the phraſeology of the logicians, "error draws on error;" ſo this notion of the abſtract cauſe led to another (u) with reſpect to the operation of opium. And as they ſenſeleſly enough ſuppoſed exceſſive motions to be occaſioned by an exceſs in the principle of life, at leaſt in the labouring parts, ſo they either thought, or taught, that opium poſſeſſed the virtue of checking or allaying, as a ſedative, thoſe motions, and that contrary to the whole analogy of nature, and the certain proof afforded

known, that the nerves are ſolid ſubſtances, and not hollow tubes. The next theory that was taken up was, that though the nerves were ſolid ſubſtances, yet they were porous, and, therefore, fitted to receive into their pores an elaſtic fluid, like the electrical, the magnetical, and, like, or rather a modification of, the ſuppoſed æther of Newton; that this inelaſtic fluid alſo floated upon the ſurface of the nerves, and formed an atmoſphere around them, and by it all the functions of living ſyſtems even thoſe of the moſt perfect, the human, were explained. For a full account of it ſee the Preface to the Obſervations on the Principles of the old Syſtems of Phyſic, from page 19 to page 58. Among other applications of the æther, under the denomination now of nervous power, one was to make its influx into the muſcular fibres affected with ſpaſm, or convulſion, the cauſe of theſe morbid motions; as its influx, as an inelaſtic fluid, into the hollow cavities of the nerves had been before ſuppoſed to afford the ſame explanation.

(s) That was their word, after an ingenious philoſopher in Edinburgh, whoſe diſſertation upon this ſubject is given at full length in the place of the Obſervation referred to, had ridiculed them out of their æther.

(t) It is here to be obſerved, that the change of the theory here has led into a vagueneſs of terms. It might have been proper, had the notion of either an inelaſtic, or elaſtic, fluid been retained, to have called the ſuppoſed cauſe of the function a fluid, and to have talked of its influx as ſuch; but now that we know nothing about it, or whether it has any exiſtence at all, to call it a power, and yet to talk of its influx or efflux, its flowing in or out, is ſurely vague and incoherent.

(u) that is, they ſuppoſed the moſt powerful ſtimulus, opium a ſedative.

afforded by all the exciting powers, every one of which has been proved to be ſtimulant, not one ſedative (x) but if it were in any reſpect doubtful, that nothing in nature, at leaſt in thoſe powers, that are commonly applied to animal bodies is ſedative, how can there be any uncertainty of that point as to opium, much leſs, that the contrary concluſion ſhould be held for the truth? Has not it the ſame effect upon the Turks, that wine has upon us? Or, are we to ſuppoſe, that the troops of that people, on their march to the onſet of battle, chew opium, with the intention of checking their natural alacrity and propenſity to action, and of blunting and depreſſing their high ſpirits and courage? If fevers, if the gout, if indigeſtion, if the colic, if aſthma, and the whole train of ſpaſmodic and convulſive diſeaſes, in fine all aſthenic diſeaſes, have lately, to the conviction of every perſon who gave the ſubject a due conſideration, and, contrary to the expectation and opinion of all men hitherto, been proved to yield to the various forms of opium without difficulty; and if all theſe diſeaſes, in which it is ſerviceable, have been demonſtrated to be affections depending on debility, are we to agree, that opium proves of ſervice, by an operation that is further debilitating, or rather that extinguiſhes the miſerable remains of nature's motions? If the various forms of wine, and other ſtrong drinks, have a very great effect in removing the ſame diſeaſes, which has likewiſe been diſcovered by late experiments, and are, therefore, underſtood to be beneficial by the ſame mode of operation as opium, are we to agree, that that ſimilitude of operation argues a diverſity, nay a diametrical oppoſition in the nature of the powers that unite, with ſuch harmony, in producing the ſame effect? Laſtly, if it cures diſeaſes, that depend upon a confeſſed deficiency of

(x) See above, par. XIX. to XXII. with the additions and notes.

of motion (w), equally as thoſe, the motions in which, though ſeemingly increaſed, are in reality diminiſhed; what can any perſon ſay in objection to ſo ſtrong an argument, added to ſo many and ſo powerful ones already advanced? In faith opium is not a ſedative; on the contrary, as it is the moſt powerful of all the agents that ſupport life, and that reſtore health, and a truly bleſſed remedy, to the divine virtue of which the lives of ſo many mortals has been owing, and, in future, will be owing; ſo it muſt be acknowledged, that ſpaſms and convulſions, over which it has ſo great power, do not conſiſt in increaſed, but diminiſhed excitement, and that opium cures them by the ſame operation by which it cures any of the diſeaſes depending upon debility.

CCXXXI. Sometimes in diſeaſes there is a preternatural flow of blood. Thus in ſthenic diſeaſes blood drops from the noſe: it is ſparingly expectorated from the lungs, and tinges the urine. The firſt and laſt of theſe three are conſidered as critical ſigns; but they have no other meaning than an abatement of ſthenic diatheſis, and a diſpoſition to indirect debility. This is an effect, that, for the moſt part ſoon goes off, leaving behind it a ſtate of convaleſcence(z), and ſoon after a reſtoration of health, ſeldom paſſing into an eſtabliſhment of indirect debility.

CCXXXII.

(w) In one fit of the gout, when its paroxyſms were allowed to return, in conſequence of a diſreliſh that I had taken for a certain ſtimulus of the drink kind, and, therefore, all at once abſtaining from ſtimulus, I fell into a ſtate of perfect inaction, and, though without feeling of pain or uneaſineſs, ſo devoid of muſcular force, or capability of producing any motion or exertion, that even the ſlight degree of muſcular contraction neceſſary to ſupport my poſture in bed failed. In that ſtate, when my eyes were glazed, the whole dangerous paroxyſm was removed by changing my drink into a more agreeable one; any ſtrong drink would have anſwered, and opium beſt of all.

(z) or of recovery.

CCXXXII. Great and continued bleeding diſcharges, whether from the womb, from the anus, or from around the latter, or by the noſe, depend upon pure debility (b). An over-proportion of blood, diſtending the veſſels beyond bounds, and eſtabliſhing indirect debility, may ſometimes be the primary cauſe. But, in this caſe, if no other debilitating power, and particularly directly debilitating, has acceded to the cauſe; if the diſcharge be ſtopt by a ſtimulant plan of cure; if the body be ſtrengthened, and the laxity of the veſſels taken off, the whole affection will ſoon diſappear, and the health be reſtored. On the contrary, when indirect debility has not preceded, and other directly debilitating powers have been applied; ſuch as thoſe are which have been ſpoken of; and more eſpecially, if the diſeaſes are treated by bleedings and other evacuations, by abſtinence, or by vegetable food and watery drink; in ſuch a caſe the diſeaſes become chronic (c), troubleſome, at laſt direful and fatal. That they depend upon

(b) Theſe are the ſeveral hæmorrhages of ſyſtematic and noſological authors. They have hitherto been ſuppoſed to depend upon ſthenic, what they call phlogiſtic diatheſis, and the particular diſcharge to be ſupported by an activity, an effort, what they call a molimen hæmorrhagicum, in the veſſels pouring out the blood and the parts of the veſſels immediately behind. Their continuance was accounted for upon the ſuppoſition of there being an over-proportion of blood in the ſyſtem, or what is commonly called a plethora; but they are all aſthenic diſeaſes, depending upon relaxation and atony both of all the reſt of the vaſcular ſyſtem, and particularly of the bleeding veſſels. (See above CXXXIV. χ.) and, inſtead of a plethora, there is a penury of blood; all which is proved by the phenomena during the prediſpoſition, when little food is taken in, and leſs, upon account of the weakneſs of the digeſtive organs, is digeſted; theſe circumſtances are increaſed after the arrival of the diſeaſe. The pulſe withal is weak, ſmall and frequent; and the patient puny and emaciated. The diſeaſe is encreaſed by bleeding and other evacuations, and both relieved and removed by wine, ſpirits and diffuble ſtimuli; a method of cure which, till within theſe fifteen years, would have ſtartled all the phyſicians upon earth.

(c) of long duration,

upon debility, is proved by the failure of the cure juſt now mentioned, and by the great ſucceſs of the ſtimulant plan. The true cauſe of bleeding diſcharge is not plethora, which cannot happen in the caſe of perſons ill nouriſhed, in water drinking, and under the application of other hurtful powers, that equally deſtroy the tone and denſity of the veſſels (d). For as food is nearly the only material, from which blood is formed; how, when it is withheld in the abſence of the cauſe, can the effect remain? and, if, upon account of the debilitating effect of other hurtful powers, any food that is taken is not digeſted, how can there be an over-proportion, and not a manifeſt ſcantineſs of blood? But it may be alleged, that loſs of blood, and every ſort of debilitating power, diminiſh perſpiration, and that from that circumſtance the quantity of blood is increaſed. How can that happen? The matter, from which the blood is made, it may be added, is taken into the ſtomach, and a ſmaller quantity of fluid paſſes off by perſpiration. But, to that it is to be anſwered, that in the firſt place it is not taken in; and next the little that is, is not digeſted (e); then after the ſerous part has been ſeparated from the red, will it, if

(d) See above, CXXIV. and χ.

(e) No idea in medical writings ſeems ever to have been formed of the body as a whole. On the contrary, nothing has been more common, than to talk of the functions as operating in a great meaſure, each from a cauſe exiſting within itſelf, or but ſlightly and arbitrarily connected with ſome other. This falſe notion was carried to its moſt ridiculous pitch in the doctrine of ſympathy, and not rendered much more decent, after the word conſent of parts came to be ſubſtituted in its place. Thus, the common expreſſions were the ſympathy and conſent of the ſtomach with the head, of the ſtomach with the face, of the ſtomach with the external ſurface, of the latter with the internal, and particularly with the inteſtines, of the excretions with each other, of the feet with the kidneys, and ſo forth. It was never dreamed, that there was one over-ruling principle throughout upon which all the functions depended. The ſtomach, for inſtance, cannot be ſtrong while the perſpiratory organs are weak, and therefore take in and digeſt too much while they cannot throw out their fluid.

if detained and thrown back into the blood, again become blood? If theſe queſtions, to which there is no poſſibility of returning any anſwer, ſhould ſeem in any degree ambiguous; are we to believe that one part of the body is in ſuch a ſtate of vigour, as to produce an over-proportion of blood, and another in ſo languid a ſtate, as not to be able to carry off by the due outlets its corrupted matter? And muſt we, giving up our fundamental principle after ſo complete an eſtabliſhment of it, allow, that the excitability over the whole body is not the ſame uniform, undivided property over all the ſyſtem; that the powers acting upon it are not the ſame, finally that matter can be created out of nothing (f)? It is in vain to talk of the fattening of chickens and

(f) It has been proved in the IVth chapter, Part I. that the excitability is one uniform, undivided property over all, and that, in whatever part of its ſeat it is acted upon, that action extends inſtantaneouſly over all; that though ſome parts, differently upon different occaſions, may be more acted upon than any other, equal in ſize and nervous importance, that that is only in ſo inſignificant a proportion as to have no effect in conſtituting an inequality of action in the ſyſtem. Again the force of the powers that act is a given force, being either weak, in due proportion, or exceſſive, or weak again from ultimate exceſs. Their effect then upon the ſyſtem, which receives their action in every degree in which it is communicated, and that with the utmoſt exactneſs, muſt always be the ſame, that is, either direct debility, health, ſthenic diatheſis, or indirect debility. To apply this to the preſent caſe, the ſtomach cannot be healthy, or under a prediſpoſition to ſthenic ſtate, and thereby take in and digeſt, with the help of the other digeſtive organs, too much of the matter, from which blood is made; while the perſpiratory veſſels are too weak to perform their function of throwing off their excrementitious matter. On the contrary, the ſtate of the ſtomach muſt run through the whole living ſyſtem. If it can perform its functions properly, or in whatever degree it performs it, all the other organs of digeſtion, the upper part of the inteſtines, biliary veſſels, the lacteals, the veins betwixt their common trunk and the heart, the heart through all its cavities, the whole arterial ſyſtem, and the colourleſs terminations of that ſyſtem, whether exhalant or glandular, and the excretory orifices of theſe,

and cattle by keeping them from exercise and in a state of rest. The condition of health and disease is very different. In the former there is a certain latitude of the strength of the stomach; in the latter, and especially when debility is the cause, there is a prostration of strength. In fine, it is an universal and constant effect of all debility, to produce a deficiency of the fluids in the internal parts of the system with a relaxation of the vessels over all, especially about their excretory terminations, and a discharge of the fluids by some out-lets. The death, that happens, during the time of an entertainment, is not to be imputed to an over proportion of blood, which cannot happen in so short a space of time. The drink has no effect in filling the vessels. Nor do any persons, but those who are under direct or indirect debility, meet with such an end, never those who have an over-proportion of blood; which as the appetite is gone, and the digestive powers destroyed, cannot be produced. In what diseases was it that plethora was supposed to take place? Not in those, in which the digestive organs, and those that produce blood, in fine, in which the whole system, are in a state of vigour, where the appetite is very keen, and the digestion most perfectly performed, and the digested matter most completely converted in-



these, the inhalents, and all the venous blood returned by the arteries; lastly, all the excretories upon the external and internal surface, all these will perform their functions in the same degree as the stomach whether properly or imperfectly. To promote the most perfect health all the exciting powers must be applied, each in its due proportion. And the want of any one or more may make some odds, which is insignificant to this point. If a person has not had his usual exercise a chearful glass will prepare him for sleep. For want of the same exercise the appetite will be impaired, but so is the function of perspiration. Too much exercise under heat will impair the appetite, but it also impairs the perspiration after a person gets into a state of rest. In short, any slight inequality from want of any one or more stimuli can be made up by others. See above, par. XLI.

to blood; but in thoſe, in which upon account of the debility propagated over the whole body, all the functions are in a ſtate of languor, and in which the only matter, ſuited to make blood, is either not applied, or not aſſimilated. In this way, the gout, apoplexy, epilepſy, palſy, aſthma and hyſteria, the indigeſtions of perſons, who have been formerly addicted to luxury, in fine, thoſe very diſeaſes, which make our preſent ſubject, the hemorrhages, as they are called and falſely defined by that term, laſtly; the far greateſt part of aſthenic diſeaſes, have been thought, at all times and by all phyſicians to depend either upon plethora with vigour, or plethora with mobility. But in fact and truth, that both all the reſt of thoſe diſeaſes, and thoſe accompanied with bleeding diſcharge, depend upon a penury of blood and other debilitating powers is proved, by the conſtant failure of the antiſthenic plan of cure to the great diſgrace of the profeſſion, and by the incredible ſucceſs of the new ſtimulant plan. And with reſpect to the bleeding diſcharges, conſider the perſons affected with them in the hurtful powers, that precede them, and in the ſymptoms that attend them. During the whole period of prediſpoſition, quite delicate and weakly, they have very little appetite for food, and take very little, and what they take, is not digeſted, and often rejected by vomitting. In their weak ſtate they are not ſupported by the ſtimulant operation of corporeal, or mental exerciſe, nor by that of the animal ſpirits, which are quite puny and dejected, nor by that of pure air, which they are not able to go out to take, nor by that of agreeable ſenſation, nor by that of ſtrong drink, which from the miſleading advice of their phyſicians, they look upon as poiſon, nor by that of the diſtention of the veſſels, which are not ſufficiently filled with blood, nor by that of the ſecretory ſmall veſſels, upon account of their ſluggiſh motion, and the ſtagnation of their degenerated fluids every where, and the direct debility conſtantly ariſing from that.

What

What ſort of pulſe have they? Such, as it is in all diſeaſes of manifeſt debility, for inſtance, fevers, (in which laſt, which is ſurpriſing their favourite plethora, was ſeldom ſuſpected by them), ſmall, weak and very quick and almoſt empty. Upon the whole, what like are their intellectual functions, thoſe of paſſion and emotion, and their corporeal functions, either in ſenſe, or motion whether of the voluntary or involuntary kind? All weak, all frail, all ſuch, as ſhow that they have not a third part of life to ſupport them. What, on the contrary, is the ſtate of thoſe, who abound in blood, and yet never experience diſcharges of it? They are ſtrong and full of vigour in all their functions, with redneſs of countenance, ſparkling eyes, ſtrong, hard and moderately frequent pulſe. Their appetite for food is keen, the quantity they take is great and well digeſted. As thoſe perſons, may experience droppings of blood of no conſequence, and yet not often, ſo they fall into no diſcharges of blood. And it is in perfect conſiſtency with all that has been ſaid, to add, that the various forms of ſtrong drink, and theſe particularly, which are the ſtrongeſt, ſuch as are called ſpirits, are ſurpriſingly ſucceſsful remedies of bleeding diſcharges, in ſpite of every thing that has hitherto been thought to the contrary, in ſpite of rooted prjudices: But the preparations of opium (h) and of the other diffuſible ſtimuli are



(h) Opium, though much uſed in the cure of certain ſymptoms of diſeaſes was never underſtood by thoſe phyſicians, who, in books and lectures aſſumed to themſelves the province of directing the profeſſion of phyſic. Every property they aſſigned to it was the reverſe of the truth. Inſtead of allowing it to be the ſtrongeſt ſtimulant in nature, they made it a ſedative; and, though they found great difficulty in finding a ſingle ſedative more, to help to make out their catalogue of a claſs of ſuch bodies in nature, they were confident that it was one (ſee above. CCXXX. and the notes). Another property they aſcribed to it was that of bringing on ſleep; whereas, it is the moſt powerful body of all others in producing and keeping up the watching ſtate (ſee above, XXX. XXXI. note

ſtill more ſucceſsful. This is a fact, that proves to a demonſtration, that in the bleeding diſcharges there is no exceſſive activity, no hemorrhagic effort as it is called, and on the contrary, that there is only a falling off of the natural moving energy. The hemorrhages, then, that have been the ſubject of ſo much falſe explanation, and falſe denomination, muſt be rejected from the number of ſthenic diſeaſes, and transferred to the aſthenic diſeaſes, under the title of Hæmorrhaeæ.

CCXXXIII. If any perſon be ſeized with a cough at firſt rather dry and bound, then more moiſt and free, and after

note (b). They alſo aſſigned it the virtue of allaying pain, but there is a kind of pain, that it encreaſes, and beſides that, aggravates every other ſymptom of the diſeaſe. They never could deny, that opium, was exceedingly improper in inflammatory diſeaſes, that is, the ſeveral ſthenic diſeaſes with affection of a part whether inflammatory or cattarhal. And wherever they found it of ſervice in pain, they might have perceived, that ſuch pain was different from what they called inflammatory, or our general ſthenic pain. The truth is; it is not a palliater of pain, but a remover of its cauſe, as often as that depends upon debility, while it as certainly aggravates every other. The pains, that opium is calculated to remove, are all theſe, that depend upon general aſthenic affection, as thoſe of the gout, of chronic rheumatiſm, that of the gangrenous, as well as the putrid, ſore throat, all ſpaſmodic and convulſive pains, all pains from pure debility, as in the legs, ankles and ſoles, or in any part of the ſkin, nineteen head-achs out of twenty, which are in that proportion aſthenic; the pain of any deep-ſeated ſore or gun-ſhot wound after every degree of ſthenic diatheſis is removed from the habit. It is an equal remedy againſt the aſthenic inflammation whether local or general, as preventing their tendency to mortification and ſphacelus. Nay, when theſe latter ſtates have come on, it is a moſt powerful means of removing them, and of correcting the degeneracy; for the effecting of which the bark had ſo often failed. All this is the diſcovery of the author of the Elementa, though the credit of the laſt and ſmalleſt part of it, from their ignorance of the high merit of the whole, they have ſhewn diſpoſition to give another, a gentleman and eminent author in London. But a treatiſe on the gout, with a full, account of all the virtues opium will ſoon be preſented to the public, in which all this will be cleared up. Bleſſed as opium in all theſe caſes is, it is equally bad in all ſthenic ones.

after that accompanied with a large expectoration, if the hoarſeneſs at firſt is deep, and afterwards ſlighter and freer, in proportion as the cough becomes more and more moiſt; if the cheſt all round, over the whole region of the lungs, is diſtreſſed with a degree of diffuſive pain; if there is either no vomiting, or what of it there is, ſeems forced up by the convulſive motion of the cough ending in expectoration, and in ſuch a manner, as either not to return, or to have no ſpontaneous tendency to a return; if the ſtrength is otherwiſe good, and the pulſe ſtrong, full, and more or leſs hard, and not much exceeding the frequency of a healthy pulſe: Such a caſe will be found to be ſthenic, and to depend upon heat and every other ſtimulus (i), to be cured by cold and every other debilitating remedy (k). The cauſe of theſe ſymptoms is a high degree of ſthenic diatheſis (l) over the whole body, higher on the external ſurface of the body, and eſpecially in the throat, which is a part of that ſurface (m). The ſame ſymptoms in whatever morbid caſe they occur, are to be explained in the ſame manner. Conſequently, the catarrhal ſymptoms, which are an inſeparable part from the meaſles, admit preciſely of the ſame concluſion; and, as well as the whole diſeaſe, are to be underſtood to ariſe from exceſſive excitement, and to be cured by the debilitating plan. The ſame is the judgment to be formed of the influenza. In all which caſes it is eaſy to make trial of the truth. Give a glaſs

(i) See above the following paragraphs CXIII. CXIV. CXXII. CXXIV.

(k) and alſo CXVII. CXXVIII. CXXXIV. and all the debilitating powers throughout the whole chapter; while all the ſtimulant ones in it will be found to be ſuch as contribute according to their degree of ſtimulus towards the production of the morbid effect, which makes our preſent ſubject.

(l) or ſtimulant operation or exceſſive excitement, or waſted excitability.

(m) See above, par. CXIII.

glaſs of wine or brandy, give a little opium; the hoarſeneſs will encreaſe, the cough will be more hard and bound, the expectoration will ſuffer a temporary ſuppreſſion. Give a large draught of cold water, and all the ſymptoms will be relieved. Often does it happen that a perſon troubled with a cough when he ſits down to drink wine, is freed from it in the courſe of the circulation of the glaſs (n). The reaſon of which is, that aſthenic diatheſis was the cauſe, which was converted by the drink into a ceſſation of all diatheſis, or into a temporary ſthenic diatheſis. Often at the end of a debauch in drinking, the cough, and that very violent, returns for this reaſon, that the ſthenic diatheſis has made conſiderable advances. It will be cured by drinking a tumbler or two of cold water, and drinking no more wine; which precautions operate by ſtopping the exceſs of excitement.

CCXXXIV. From the deſcription juſt now given (o) it appears, that ſymptoms, commonly ſuppoſed to be the ſame, are however of a diametrically oppoſite nature (p); which

(n) Whenever his cough is cured he ſhould ſtop; as the carrying the ſtimulus too far will endanger the return of the cough from a very oppoſite cauſe. The cough at firſt, ſuppoſe, to be from an excitement as 26; its cure to be brought about by an excitement at or above 40; its return to an excitement at or above 60, will bring on a ſthenic cough.

(o) of the nature and cure of the ſymptoms we have been ſpeaking of, compared with that which is next to be given.

(p) This miſtake of ſymptoms in conſequence of judging of their interior nature from the ſimilarity or diſſimilarity of their appearance is the falſe idea, upon which the whole fabric of a department, lately introduced into the art of medicine, has been reared. It is to be obſerved, that ſymptoms the moſt ſimilar to each other in their appearance are, in reality, the moſt different, and thoſe, that have the leaſt reſemblance in their appearance, have the neareſt affinity in their interior nature, and indeed are one and the ſame, with no other difference, but a difference of degree, and even that often very ſlight, ſometimes next to none at all.

The

which will be evinced by a fuller explanation. If, therefore any one has a very great cough, a very great expectoration, either at firſt with hoarſeneſs, and afterwards, through

The great variety of ſymptoms that diſtinguiſh the whole form of aſthenic diſeaſes affords as many proofs of the truth of this propoſition, as the inſtances of diſſimilarity or difference in opinion are numerous. What is ſeemingly more oppoſite than diarrhœa and colic, than typhomania and coma, than epilepſy and general dropſy, than the cold and hot fit of agues, than ſpaſmodic and convulſive affections compared with thoſe in which there is no fault in the motions either as to exceſs or regularity, than the ſeveral degrees of morbid diminution of menſtruation down to the actual ſuppreſſion, and the ſeveral degrees of the morbid encreaſe of that natural diſcharge till their flow, at laſt, attains its ultimate exceſs both in degree and duration? And, with reſpect to febrile and non-febrile diſeaſes, what is more ſimilar than a ſlight ſynocha or inflammatory fever and a typhus in the ſame degree, which, yet, are diametrically oppoſite both in their cauſe and cure? What is more diſſimilar than the various phænomena of fevers of the intermittent kind through all their degrees of intermitting and remitting and thoſe of the more continued kind? And yet they all ariſe from cauſes highly debilitating, and are effectually removed by remedies equal in their degree of ſtimulus. In one word, to ſhow the inſignificancy of the diſtinction of diſeaſes into febrile and non-febrile, and, when the degree of debility conſtituting the cauſe in both, is conſidered and compared; is there any reaſon for ſeparating the high dropſy, the high dyſentery, and ſinking cholera from their place betwixt intermittent and remittent fevers and the moſt continued kind? Laſtly what two things can be liker one another, than a crowded diſtinct and confluent ſmall-pox, or than the common inflammatory ſore throat and that which was lately deſcribed (ſee above, par. CCXII.) Such have been the ideas, that have guided the directors of the art of medicine in their inquiries into the natures, cauſes and cures of diſeaſes. If botaniſts and natural hiſtorians, by all their artificial methods of arrangement, have made little progreſs in exploring the true nature of their ſubject, and on the contrary, with ſcarce a ſingle exception, have confounded it; if it was ridiculous to unite into one genus a man, a monkey, and a bat, how much more abſurd was the attempt to arrange the mere qualities of matter in the ſame way. Yet upon this hopeful employment has John Bull expended vaſt ſums of money, while he left the moſt ſolid and important departments of ſcience neglected

and

through the whole courſe of the diſeaſe, without the hoarſeneſs; if he is of a very advanced age, or arrived at the laſt ſtage of life; if he is of a weak habit; if his pulſe is neither ſtrong, nor full, and withal very quick; if this concourſe of ſymptoms has been preceded by either direct or indirect debility, as uſually happens in the caſe of famine, of water drinking, of a long courſe of ebriety, and of having led a life of luxury: one may be certain, that all theſe ſymptoms are aſthenic (q), and to be removed by ſtimulant remedies.

CCXXXV. The explanation of the dry cough is eaſy, and ſuch as was formerly given (r). The origin of the cough and expectoration is quite the reverſe (s). For, whether the ſyſtem has been weakened directly or indirectly, as the excitement over the whole body is diminiſhed in the higheſt degree, as the debility in every part is exquiſite; the conſequence is, that in the vaſcular ſyſtem the tone, and in proportion the denſity, is every where diminiſhed; and the diminution chiefly takes place in the extreme terminations of the arteries, that are moſt remote from the center of activity, and above all other parts of the vaſcular ſyſtem, in the perſpiratory veſſels (t). When all this has taken place; the quantity of fluid that is thrown up by expectoration is incredible. Indeed (u) it is great enough, not to be inferior in its degree to the greateſt profuſion that ever takes place in conſumption, and even to exceed it.

CCXXXVI.

and covered by the dirt among his feet. We have too little uſeful ſcience yet, it is time to improve our ſcanty ſtore (ſee the Introduction to Obſervations, &c.)

(q) or depend upon debility. (r) See above, par. CLX.

(s) CXXVIII. in the M. S. addition CLXI. and particularly CXXXIV.

(t) LIX. LX. LXI.

(u) though it has never been attended to,

CCXXXVI. The cure of it, however, in all the caſes that depend upon direct debility, is by no means difficult (x). unleſs the diſeaſe has proceeded beyond the boundary of admitting a cure, and life is now approaching to its end. The cure, however, is a good deal more difficult in the caſe of indirect debility, and for this good reaſon, that there is no other plan of cure, but ſtimulating, to remove a diſeaſe occaſioned by an exceſs of ſtimulant operation (y). Nay, the ſame debility, as ſhall afterwards be obſerved, produces the ſame relaxation both of the bronchia and of the reſt of the body, but it does not always produce conſumption. With this profuſion of expectoration appearing ſometimes in the form of fever (z), ſometimes in that of the gout, the phyſician has often a long ſtruggle, while he employs his diffuſible ſtimulants, the event of which is ſuch,

(x) I have experienced ſuch a caſe more than once, and have ſeen and treated it in great numbers. It is ſometimes a part of the concourſe of ſymptoms, that form that aſthenic caſe of diſeaſe, which is commonly called fever. A gentleman, under or about the thirtieth year of his age, had been ten days in a typhus fever, occaſioned by extreme cold, ſucceeding to the debilitating effects left upon his habit by too great moderation in his diet, and, certainly, not a good choice of the different articles of it. To aid the debilitating effects ariſing from theſe, he had experienced all the extremes of the heat and fatigue, that fall to a ſoldier's lot, in very warm countries. He was, over and above, of a ſmall ſize, ſlender and emaciated. He had alſo, from his infancy, been affected with a ſhort cough, ſometimes dry, and ſometimes with a little expectoration. During the courſe of his cure, he had been more than once bleeded, though his diſeaſe had uſhered itſelf in by a great profuſion of bleeding, which ſuddenly took him as he was on a journey in a cold day of about 44 miles in a carriage. He was vomited, purged, bliſtered prodigiouſly, and glyſtered. The whole force of the old plan of cure was exhauſted upon him, and he ſo exhauſted by it, as to be given up for an incurable of two diſeaſes, a bad fever, and rotten lungs. His face was hippocratic, he had the dead rattle, and his cough and expectoration were aſſiduous. By the ſtimulant new plan of cure he was put out of danger in ten days, and ſet upon his feet in as many more.

(y) See above, CIII. (z) See the laſt note (x).

ſuch as to produce a complete reſtoration of health, and thereby to leave not the leaſt ſuſpicion, of there being any local affection in the lungs, which is ſo much the object both of the faith and fear of phyſicians (a).

I. When

(a) A deſcription of this diſeaſe, in which the lungs are ſuppoſed to be affected with ulcers or tubercles, has been given in the note under this paragraph at (x). But, as the ſubject is both as new and intereſting as any in this work, it may be proper to give a further illuſtration of it by the expoſition of another ſet of facts. Both in perſons liable to the gout, and other aſthenic diſeaſes, ſometimes of direct and at other times of indirect debility, and eſpecially in thoſe who have been much expoſed to cold, without the debilitating effect of the cold being overcome (vide par. CXXII.), by an alternation with, or ſucceſſion of, heat, and in very many old people, eſpecially among the poorer ſort, who have been, and naturally are, much expoſed to various debilitating powers, there is often, eſpecially in winter, a very great cough and expectoration. This ſometimes goes to ſuch a height as to give ſuſpicion of the affection of the lungs juſt now ſpoken of. But the completeneſs of its cure, which when it ariſes from indirect debility, is effected by the uſe of animal food, avoiding vegetable, and fiſh, and by good wine and diluted ſpirits in moderate proportion at a time, but frequently repeated, avoiding claret and other French wines, and all ſour and all beer-drink, unleſs perhaps a little warm porter in cold weather, and a very moderate uſe of diffuſible ſtimuli, keeping the feet and the body in general moderately warm; ſhows ſufficiently, that there had been no local affection in the lungs. When the debility of the diſeaſe is of the indirect kind, in which the cure is more difficult, there is, ſtill, as little reaſon to be apprehenſive of the pulmonary or any other local affection. For the cure of it alſo proves the contrary. In it the means of cure are to change the forms of ſtimulus, and to proceed from the uſe of the ſtronger to that of the weaker, till at length the patient can do without much of the very ſtrong ones. (See above, par. XCIX. and thoſe that follow). When the diſeaſe cannot be overcome in that way, the excitability muſt be underſtood to be worn out, and life come to its end; but ſtill from general debility, not local diſeaſe. For, if ever any local affection does appear, it is always the laſt effect, not the primary cauſe. In this way I loſt two gentlemen, after having been able to ſupport them for many weeks, when the prognoſis upon the common practice

I. When, in all the veſſels, the fluids are not agitated by a ſufficient action, they are proportionally more imperfectly mixed, and therefore in a vitiated ſtate. But in the extreme terminations of the veſſels, as being at a greater diſtance from the center of motion, they often, from a total ceſſation of motion, ſtagnate, and degenerate into a foreign nature. This is an effect not produced by heat alone (b) but by cold (c), not only by this, but by all the powers that debilitate in an equal degree (d).

## CHAP VII.

### *Of Sleep and Watching, whether ſalutary or morbid.*

CCXXXVII. AS death finiſhes the operations of all life, ſo ſleep finiſhes thoſe of every day; and as the former is the conſequence of a perfect extinction of the excitement, from, either a complete exhauſtion or ultimate abundance of excitability; ſo the latter (a) ſucceeds to a diminiſhed excitement, while the excitability is either diminiſhed, but in ſuch ſort that it can be accumulated again, or abundant, in ſuch ſort that the abundance can be waſted, and the excitement, in both caſes, renewed.

CCXXXVIII. Such is the nature of the excitability of animals, that it can neither be deficient nor over-abundant,

tice did not allow them as many hours. The cauſe of their indirect debility had been hard drinking. But even in thoſe who die of a confirmed conſumption, there is not often reaſon for the ſuſpicion of tubercles in the lungs. Their bodies have been opened after death and the lungs found quite ſound: And in the diſſections, where the tubercles have been found, ſtill they were only an effect.

(b) See above, paragraph CXV. (c) See alſo paragraph XVII.

(d) See alſo CXIX. which compare with par. XXVIII. Nay, all the power mentioned in par. XI. and XII. and fully explained in Part Second, Chapter I. throughout.

(a) or ſleep.

dant, without detriment; a deficiency producing indirect and a ſuperabundance, direct debility. And, as any exciting power, carried beyond its boundary (b), can produce the former, and the with-holding of any, give occaſion to the latter (c); ſo the ſame propoſition holds good of the exceſſive or too ſparing uſe of ſeveral of them, or of them all (d). Sleep, then, is the effect of the actions of the day, at firſt giving always more and more excitement, but leſs and leſs in proportion to the continuance of their operation (e), but in ſuch ſort as always to add ſome excitement, till the matter at laſt comes to a point, where the degree of excitement, neceſſary to conſtitute the waking ſtate, no longer exiſts. Of this we have the moſt certain proof in every day's experience, and in the confirmation of it, which the complete induction of the effects of all the exciting powers afford (f).

Thus,

(b) See par. XXVIII. (c) See par. XXXVIII.

(d) This is completely illuſtrated through the whole firſt chapter of the ſecond part, from par. CXI. to par. CXLVII. inclusive. Nay, the propoſition is conſtantly alluded to through the whole that has yet been ſaid, and will be in what remains to be ſaid.

(e) See par. XXXVI.

(f) To illuſtrate this, let us take the exciting powers one by one, and begin with wine. When a perſon is inſufficiently excited with reſpect to that ſtimulus, and riſes not, ſuppoſe above 30° in his excitement, a glaſs carries him up 2°, another 2° more, and ſo forth, till after five glaſſes, and their effect in carrying him up to 40°, he finds himſelf well and vigorous in all his functions. But, ſtill, we are not ſo ſlimſily made, as not to bear a little of what is either too much or too little. Suppoſe him then to take five glaſſes more, and, conſequently, to be raiſed to 50°, or 10° above the ſtandard. As his ſpirits, his intellectual, and all his other functions, were low, while his excitement remained below 40°, ſo they are all proportionally exalted by the time that his excitement is elevated to 50°. Let him ſtill go on, and his intellectual function will riſe ſtill higher; he will now diſplay the full extent of his genius; his paſſions and emotions, of whatever kind, will riſe in the ſame proportion;

Thus, heat not ultimately exceſſive, or reduced, by cold, from that exceſs to its ſtimulant degree (g), and food, and drink, and labour, either of body or mind, and the exerciſe of paſſion and emotion, when their ſtimulus neither ſtops ſhort of the proper point, nor goes beyond it, all give a diſpoſition to ſleep. This is the moſt ſalutary ſtate of ſleep.

K. Pre-

proportion; he will, in one word, be an example of the effects of Alexander's feaſt. Suppoſe, to bring him to all this he has ſwallowed, beſides thoſe he had before, other five glaſſes. Let him go on, till he has taken five glaſſes more, and we ſhall ſee the effect: In the courſe of time, employed in taking theſe, he gradually falls off in his ſpirits, in his intellectual, and in his corporeal, functions; his tongue, his feet, his eyes, his memory, his judgment, all, fail him; he, at laſt, becomes drowſy, and then falls faſt a-ſleep. The ſame is the progreſs of excitement as it ariſes from labour or exerciſe through the day, whether of mind or body. The ſame is the effect of the ſtimulus of eating, eſpecially nouriſhing ſtimulant things, and in great plenty. Before dinner, the occupations of the former part of the day, are not yet ſufficient to prepare one for ſleep; which, however after a heavy dinner, will, unleſs the interference of ſome other ſtimulus prevent it, very readily happen to moſt people, eſpecially to thoſe, whoſe frailty, from age or any other cauſe, renders them more liable to be fatigued by the paſt operations of the day than others. The younger and more vigorous will be able to hold out to the end of the day; when they too, after having undergone the degree of ſtimulus neceſſary to give that waſte of excitability that diſpoſes to ſleep, will be overcome by it. The very flow of the blood in the veſſels, and the exerciſe of the involuntary motions, that keep it up, tend at leaſt to the ſame effect. The ſame thing applies to the motion conſtantly going on in the ſtomach and inteſtines, as well as the motions that occur in all the ſecretory and excretory ſmall veſſels. Light, ſtimulating the eyes, and ſound, the ears, and the ſeveral ſubſtances that act upon the organs of the other three ſenſes, all, tend, by waſting the excitability, to wear down the excitement to that point in the ſcale where ſleep commences. And the proceſs, in every caſe, is, firſt a low, then a higher and higher, then the higheſt, vigour of all the functions; which, again, gradually falls till its termination in ſleep. We have, therefore, after viewing their effects ſingly, to ſuppoſe them, in one degree or in another, united, and ſleep the finiſhing effect of their united operation.

(g) See above, par. CXXII.

K. Premature, unſeaſonable, or morbid ſleep, is produced by either indirect or direct debility.

A. With reſpect to the effect of the former, an exceſſive energy of any one or more of the ſtimuli (i) produces it; accordingly, any one or more of thoſe that have been mentioned, by acting in exceſs, and waſting the excitability, ſuch as hurried drinking, produce that effect.

M. Of the directly debilitating powers, which produce the ſame effect, the want, or ſparing application, of the powers, which, by a due degree of ſtimulus, produce ſleep, will ſurpriſe into a bad kind of it; accordingly, when a perſon is in that ſtate, that he wants excitement in order to be in health, the defect of light, of ſound, and of the various contacts of the bodies that excite the other ſenſes, the defect of both ſets of motions, the voluntary and involuntary, as well as of the exerciſe of the mind, of the exerciſe of paſſion, of heat, acting in its ſtimulant degree, and too long continued ſleep itſelf, all theſe produce hurtful ſleep (k).

CCXXXIX. On the contrary, ſound watching is the effect of the ſuſpence of the ſame diurnal actions during the period of ſleep, taking off more and more excitement, moſt at firſt, and leſs and leſs after, but always adding to the ſum of diminution of excitement, and accumulation of excitability; that is, always continuing to take off ſtimulus, till the matter comes to the degree of diminiſhed excitement,

(i) Of indirect debility in producing premature ſleep, ſee par. CXXXVIII.

(k) Coma, or an inſuperable diſpoſition to ſleep, is moſt commonly owing to the want of moſt of the ſtimuli mentioned in the text, as that of food, of wine, at leaſt in the ordinary practice of cure, of good animal ſpirits, of the power of thinking in a pleaſant exciting train, of a due quantity of blood in the veſſels, of pure open air, of corporeal exerciſe, and of the abſence of certain ſtimuli, that otherwiſe irritate in the weakened ſtate, and produce watchfulneſs.

excitement, and encreaſing excitability neceſſary to the watching ſtate. In this way does ſleep prepare the ſyſtem for the watching ſtate; which is afterwards kept up, for, the due length of time, by the ſeveral exciting powers, acting through the day, till at laſt, by a certain failure of their action, ſleep is produced again (l).

N. Too long or morbid watching is alſo brought on in a two-fold way, by indirect and direct debility. Thus, intenſe thinking (m), violence of paſſion in extreme (n), ultimate exceſs in corporeal labour (o), unuſual and high relaxing heat, debauch in eating and drinking, a great exceſs in the uſe of the diffuſible ſtimuli (p), a great abundance and velocity of blood; all, or any of theſe, riſing to indirect debility by an ultimate exceſs in their operation, are notorious for their effect of repelling ſleep. Again, cold, not in that extreme degree which immediately precedes death; abſtinence from food, or that ſort of it that is not ſufficiently nouriſhing, or of ſufficient indirect ſtimulus to produce the requiſite diſtention; weak drink, as tea, coffee, or watery drink, eſpecially when a perſon has been accuſtomed to more generous; intermiſſion of uſual labour or exerciſe, whether of body or mind; a ſenſe of ſhame from diſgrace, and fear, and grief; all theſe, by their operation not ſufficiently approaching to indirect debility, produce an undue or morbid ſtate of watchfulneſs.

CCXL. As debility, therefore, whether indirect or direct, or in part a mixture of both (q), is the cauſe of ſleep, the firſt of ſound ſleep, the two latter of an improper or morbid ſtate of that function; ſo an exceſs of the ſame debility, whether indirect or direct, is alſo a cauſe of improper

(l) See laſt par. CCXXXVIII. (m) See above, CXXXVIII.
(n) See CXL. (o) See CXXXVII. r.
(p) See CXXIV. CXXV. CXXVI. o. p.
(q) See par. XLVII. and the note belonging to it.

proper or morbid vigilance. The only ſalutary ſleep is that which is produced by a proper degree of excitement, occaſioned by a proper action of the exciting powers upon the excitability; all the extremes of either exceſſive ſleep, or exceſſive vigilance, are either ſo many tendencies to diſeaſe, or actual diſeaſe (r).

A perſon, fatigued with his uſual exerciſe, is immediately compoſed to ſleep; which, equally, flies from him who has had either leſs, or more, than that middle degree (ſ).

4 CCXLI.

(r) Too much, or too long continued, ſleep, is hurtful, becauſe it implies a ſuſpenſion of that excitement, to which proper health and due vigour is owing, it is, conſequently, a ſtate of direct debility. Too little ſleep, or of too ſhort duration, is of equal detriment, as implying a degree of excitability, not ſufficiently accumulated to receive a ſufficient impreſſion from a renewal of the exciting powers. From the former ariſe moſt of the complaints of the rich and indolent; from the latter, many of the diſeaſes of the poor and laborious. As the action of the exciting powers ſhould be adapted to the ſtrength, a little indulgence in ſleep is the ſafeſt extreme to the weak, as in the caſe of children, and perſons labouring under debility.

(ſ) When a boy, I valued myſelf much for enduring the fatigue of walking: About the fifteenth year of my age I walked, in a ſummer day, from Berwick on Tweed to Morpeth, which, with two miles wandering out of the high road, I found to be a journey of fifty miles. But I got not a wink of ſleep the whole night, from the exceſs of the exertion; and the next day, ſo pained and enfeebled were all my joints, that it was with the utmoſt difficulty I made out the ſingle ſtage from Morpeth to Newcaſtle, which was only a walk of fourteen miles. Some years after that, when I was now arrived at my full ſtrength, and my joints perfectly knit, I walked and wandered in all ſorts of ground, in roads and out of them, over ſmooth and plain, and heathy and mountainous tracts, from four o'clock P. M. to two o'clock, P. M. next day, with only an hour's reſt, and one hearty meal at betwixt ten and eleven o'clock in the forenoon, when I was now within ſix miles of my deſtination. The hills over which I wandered in the courſe of the night are thoſe called Lammer-muir, ſituated betwixt Eaſt Lothian and the Mers: the

CCXLI. As the effect of both indirect and direct debility is ſometimes ſleep, ſometimes watching, both of them unſound, both hurtful; ſo the cauſe of bad ſleep is either ſort of debility; without a ſtimulus acting upon the ſyſtem in a weakened ſtate, and, thereby, throwing the ſyſtem into a ſtate of diſturbance. The ſame debility of either kind, with ſuch a ſtimulus, produces the morbid watching; in which caſe it is a ſmall ſtimulus that acts as an irritating power (t).

M N. Inſtan-

the places I travelled between in this rout were Edinburgh and Duns, the place of the nativity of the celebrated ſchoolman and metaphyſician, John Duns Scotus, and that of my grammar education. In this great exertion I was ſuſtained by a great ſtimulus, high animal ſpirits, and love. At the end of my journey, and finding myſelf among my friends, and the object my affection, I had vigour enough to dance with the latter. This time I ſlept well, and was perfectly recruited next day.

(t) Volumes have been filled with the doctrine of irritation as a cauſe of morbid ſtate, and the indications of cure and remedies to remove it have been equally tedious and laboured. In ſthenic diſeaſes, phlogiſtic diatheſis inſtead of plethora and vigour (for the belief in which two laſt there might have been ſome foundation in that form of diſeaſes, ſee above from CXXXI. to CXXXIV) has been the univerſal pathology; and bleeding, other evacuations, and cold, the univerſal idea, or, as it is called, indication of cure; and while they thought of no other method or means of cure for the aſthenic form of diſeaſes, the pathology, applied to them, was plethora with vigour or with mobility in other caſes, and, in the febrile, irritation. By irritation they explained the ſtartings of the tendons, the reſtleſſneſs, the frequency of the pulſe, the typhomania or conſtant working, of ſo frequent occurrence and ſo noted a ſymptom in thoſe diſeaſes. But as we have proved, that the reverſe of plethora and vigour is the true ſtate of the ſyſtem in every diſeaſe of debility; ſo we aſſert with the ſame ſolidity of argument, and the ſame weight of proof, that irritation, as being conſidered, either as the cauſe of morbid watchfulneſs or of any other ſymptom, is nothing that requires either evacuant, or any other debilitating remedies, to remove it. It is merely a weakened ſtate of the ſyſtem, thrown into flutterings from the ſlighteſt exertion of the ordinary functions, as when a perſon falls into tremors from noiſe, or into a ſweat from walking a ſtep or two.

N. Instances of morbid sleep occur in the predispositions to diseases, and the actual diseases, that depend upon sthenic diathesis, and in the ordinary state of intoxication from drinking. But all the exciting powers, when converted into hurtful ones of excessive stimulus, each in proportion to its degree of excess, have the same tendency (u). But, when the exciting power proceeds beyond the sleep-inviting point; or when any stimulus, still finding unwasted excitability to act upon, continues to act; in that case, the watching will be continued with bad effect (x).

CCXLII. Instances of morbid sleep occur in all the diseases of indirect debility, and in pains that have advanced to the same degree of exhausted excitability in the scale (y); as in the several cases of the phlegmasiæ, that arise from the violent progress of the morbid state, or the improper administration of stimulants for the cure; which is particularly

(u) A heavy dinner, excessive fatigue from either corporeal or mental labour, a high fit of passion, and heat, are, each of them, noted for giving a disposition to sleep; which is an effect, arising from their high degree of stimulus, hurrying the excitement to that degree of waste in which the sleep-inviting point consists; and it will the more readily take place, that no exciting power, by still finding excitability to act upon, continues, therefore, to act, and prevent the sleep.

(x) as in the harrowing watchfulness, which is liable to accompany the phlegmasiæ, or the several sthenic diseases with inflammation of a part.

(y) That happens in the phlegmasiæ, where the effects, not only, of the inflammatory pain, but of the whole diathesis, and of every other symptom, as well as that of pain, is to run up into indirect debility. The last part of debility, that ushers in a fit of the gout, is commonly of the direct kind; but the effect of the continuance of the pain is often sleep, the origin of which is indirect debility, its consequence an encrease of the disease, and its remedy an interruption of the morbid sleep for the purpose of administering such diffusible, and other stimuli, as have the effect of removing the debility which occasions both the sleep, and other symptoms of the disease.

ticularly exemplified in the dropsy of the breast, that often arises from peripneumony under such management. With respect to sleep from direct debility, women, who have had many deliveries, who have often suckled, as well as all lazy persons, and those of both sexes, who are addicted to luxury, and whose custom it is to sleep too much, are all liable to fall into this sort of morbid sleep.

CCXLIII. When either direct or indirect debility, sometimes produces sleep that gives no refreshment (z), sometimes an ungentle, turbulent waking state, neither of them accommodated to health; as the debility productive of either effect, exceeds that in which sound sleep consists; the use of that degree of stimulus which may repel the former, and convert the latter into sleep, will remove the complaints, and serve for an illustration of the nature of both (a). In asthenic diseases the watching state



(z) which often happen in fevers and many other cases of debility, besides those mentioned in the text (CCXLII.) and ought never to be encouraged, but repelled by every means of exciting the patient.

(a) Let the point of indirect debility, in which sleep consists, be as 15 degrees in a particular scale, and the greater debility, than that which either constitutes morbid sleep or morbid watching, be 20 degrees or upwards in the case of its being indirect, or 10 or downward in the case of its being direct debility. It is evident, that, to bring on salutary watching on the one hand, or salutary sleep on the other, or to convert both into salutary sleep, if that be required by the circumstances, the deficient degree of stimulus must be administered; that is five degrees to bring up the excitement from 10 to 15 degrees, and as many for the purpose of renewing the worn-out excitement by means of a new exciting power which may still find a portion of excitability to act upon, or to remove certain stimuli, which, however slight and mild, are fatiguing and disturbing to the system in its weakened state. Accordingly in fever, when the patient, amidst every sort of directly debilitating powers, had besides wanted sleep for ten days, a small portion of an opiate given him every quarter of an hour, in three hours time laid him asleep, which in spite of an urgent cough and profuse expectoration, lasted for sixteen, hours,

for the moſt part is the conſequence of direct debility, with ſome power acting with ſlight ſtimulant effect; the reaſon of which is, that the diſeaſe depends upon more debility than that which conſtitutes ſleep. Hence it comes about,

hours, and was followed by the moſt ſurpriſing relief. The continuance of this practice with only an encreaſe of the doſes in proportion as the abundant excitability was gradually worn off, and alternating them with wine and beef ſoup, in ten days removed all danger, A child of three months had had no ſound ſleep for ten days, but had cried night and day from a complaint in his belly, which the ordinary practitioners would have called an obſtruction in the meſenteric glands. A large doſe of the tinctura thebaica, for the patient's age, was adminiſtered, which laid him in a profouud ſleep, that continued near 36 hours, and at once removed the diſeaſe. Numberleſs are the caſes of a kind ſimilar to this where the morbid watchfulneſs was partly from direct, partly from indirect debility, that have been conſtantly removed by the ſame practice. A child of 7 years of age, in a fever of great direct debility, in conſequence of a moſt rapid growth happening during the diſeaſe, which was not completely removed till near the end of 7 weeks, after having been under the diſeaſe near a fortnight, was affected with the moſt conſtant diſpoſition to ſleep, ſo ſound that no noiſe or ſhaking of his body could waken him. The adminiſtration of the opiate repeated in ſmall doſes till the effect took place, kept him awake. Some time after, in the courſe of the ſame lingering diſeaſe, when he had not yet acquired any permanent ſtrength, but was only better ſupported by the diffuſible and other ſtimuli, than he had been till I was called in, his predominant ſymptom came to be great watchfulneſs, which was partly the effect of a certain, though not a great degree of excitement that the tincture and other cordial powers had given him. It, however, induced too great a degree of indirectly debilitating exertion for his ſtill very weak ſtate, and it, therefore, became neceſſary to give him an addition of excitement to bring him to the ſtate of ſalutary and recruiting ſleep, and thereby to ſuſpend the action of a number of exciting powers, however ſlight their operation was, which were too much for the enfeebled ſtate of his ſyſtem. In the caſes of children whoſe diſeaſes are almoſt all aſthenic, and in other diſeaſes of high debility, the inſtances of ſuch effects of the diffuſible ſtimuli, (for more than one was employed upon this as well as many other occaſions) are equally numerous and ſurpriſing. In a very large practice I am ſure I never, in the very worſt caſes, loſt three patients.

about, that every thing that ſtimulates, every thing that raiſes the excitement as it were to that point, which compoſes the ſyſtem to ſleep, produces that effect by a ſtimulant, not a ſedative, virtue. In a ſmall degree of debility, where the excitement has fallen only a little below the point of ſleep, a very ſmall degree of ſtimulus, ſuch as a little animal food, if the weakneſs had been owing to vegetable food, ſuch as wine, or any drink of equal power, after a water regimen; ſuch as conſolation in affliction of mind; heat, when cold has been the debilitating power; gentle exerciſe or geſtation; or the ſtimulus of a pleaſant train of thought, when one has been deprived of the ſtimulus of corporeal or mental exerciſe, is ſufficient. In a higher degre of debility (for the curative force ſhould always be adapted to the degree of the diſeaſe (b); either a proportional higher degree of the ſtimuli which have been mentioned, or ſome more powerful one, ſuch as thoſe, which are called diffuſible, ſhould be employed.

CCXLIV. In both which caſes, the virtue, of opium is great; its virtue, however, is not peculiar to it, or any other than what it poſſeſſes in common with all the other ſtimulant powers, differing only from the reſt in the higher degree of its (c) virtue. Thus in great debility, as in

(b) See above, par. XLIV. and XCII.

(c) The notion of ſome powerful remedies, as opium, mercury, the Jeſuits' bark, &c. acting by an operation peculiar to each, and different from every other power in nature, was long prevalent in the ſchools of medicine. Thoſe they called ſpecifics; an idea, which, like many other of their vague conceptions, was altogether contrary to ſound philoſophy; ſince the more careful our inquiries into nature's operations are, the more and more reaſon have we to be convinced, that ſimplicity and uniformity pervade the whole phenomena of the univerſe. Accordingly, in the exciting powers that act upon the excitability of our bodies, we find only one action, that of ſtimulating, varying only in its degree, to take place in all animal as well as vegetable bodies, nay in every thing that we

in fevers, as in a violent fit of the gout, diſturbing with tumultuary diſorder the internal parts, and in other ſimilar diſeaſes of debility, in which the violence of the diſeaſe keeps off ſleep; opium often, after the watchful ſtate has remained many days, brings on profound and ſound ſleep; in which caſe, becauſe the excitability is very abundant, and, therefore, can bear but a very ſmall force of ſtimulus, we ſhould, on that account, begin with the ſmalleſt degree of ſtimulus, and proceed gradually to more and more (d); till at laſt we arrive at the point of ſleep, which will ſoon happen, as it is placed much within the range of direct debility: And with reſpect to coma, or that ſleep which is not recruiting: ſuch is the effect both of other diffuſible ſtimuli and of opium, that it converts morbid ſleep into vigilance; vigilance, after a certain ſpace of time, into refreſhing ſleep, and, in that way, conducts the patient ſafely, gently, and pleaſantly, to health. But as the influence of the ſtimulant operation, that ſupports excitement, is of ſo great importance, and as ſleep of longer duration than to prove refreſhing may ariſe even from good remedies, the rule to be obſerved when that happens is, whenever any attack

we know to poſſeſs life in the univerſe. We alſo find, to the ſame extent, only one property in living ſyſtems upon which it acts, that is, the excitability; and one effect produced by the mutual relation betwixt them in that reſpect, to wit, the excitement. Inſtead of the diſtracted notion of vortices, or atmoſpheres in rapid motion, governing the motion of the planets, Sir Iſaac Newton found the whole planetary ſyſtems of the univerſe governed in their motions by one ſingle principle. Inſtead of the infinite difference of habits and temperaments, I have found every individual preciſely the ſame as every other. Whatever produces the gout in one; will produce it in another, prepared to receive its influence. And whatever cures it in any one, cures it alſo in every other; and ſo forth with reſpect to every other diſeaſe. The deeper we explore the works of nature, the more will we be convinced of this wonderful ſimplicity, ſo that, to a philoſopher, all nature would appear the effect of one ſingle inſtrument in the hand of the all-wiſe all powerful creator.

(d) See above, par. CVII.

tack of ſleep, upon account of too long a ſuſpenſion of ſtimulant action, has been of leſs ſervice than was expected, to ſhorten its next attack, and renew the operation of the ſtimulus.

CCXLV. In aſthenic diſeaſes, and thoſe ariſing from indirect debility, in which ſleep is alſo kept off; in order both to reſtore it, and remove the other ſymptoms, and bring about the healthy ſtate, both other ſtimuli ſhould be employed according to the degree of debility requiring their uſe, and, when the degree of debility is very conſiderable, the diffuſible ſtimuli, and among the reſt opium, ſhould not be omitted.

CCXLVI. Theſe are the times and circumſtances of the body in which opium produces ſleep. In all the other ſtates either of health or diſeaſe, it excites the functions both of body and mind, as well as of paſſion and emotion; among others it baniſhes ſleep and produces great activity and vigilance. Thus if any one is under the preſſure of ſleep without an evident cauſe, he will by opium be rendered ſurpriſingly ſprightly, lively, and vigilant; it baniſhes melancholy, begets confidence, converts fear into boldneſs, makes the ſilent eloquent, and daſtards brave. Nobody, in deſperate circumſtances, and ſinking under a diſreliſh for life, ever laid violent hands on himſelf after taking a doſe of opium, or ever will. In one word, through all the intermediate degrees of excitement from direct to indirect debility, opium is by far the moſt powerful of all the agents, and as ſuch muſt be moſt hurtful in ſthenic diatheſis; becauſe, when added to the other ſtimulant powers, it not only baniſhes ſleep, but is liable to precipitate thoſe diſeaſes from the ſthenic ſtate to indirect debility, and from this laſt to death.

CCXLVII. That the debility, upon which coma depends, is leſs than that which ſupports morbid vigilance,

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is proved, from the former being leſs dangerous, and more eaſily removed; yet, when its duration is in any degree conſiderable, or when it reſembles profound ſleep, care ſhould be taken to prevent the hurtful effect it may produce from direct debility (e); in which caſe recourſe ſhould be had to the different forms of wine and opium, with the intention of raiſing the excitement to that degree, which repels the ſleepy ſtate, produces more ſtrength, and facilitates the return of health (f).

CCXLVIII. In the gout, in indigeſtion, of which examples have already been adduced, in diarrhœa and the colic, and many other aſthenic diſeaſes, particularly diſturbing the alimentary canal, and chiefly affecting thoſe women who are exhauſted with frequent child bearing, and long and repeated nurſing; it often happens, that there is a ſtrong propenſity to ſleep, contrary to what happens to the ſame perſons in health, and the period of ſleeping attack is prolonged, without the indulgence in it bringing any alleviation of the diſeaſe. The ſame thing happens to thoſe who have fallen into indirect debility from drunkenneſs or any other cauſe. That this deſire for ſleep depends upon direct or indirect debility is evident from every thing that gives further debility encreaſing the diſeaſe, and every thing that ſtrengthens, removing it. Among thoſe all ſtrong drink, and the preparations of opium, are peculiarly

(e) See above, par. CCXLI. and the note under it, as well as this whole chapter.

(f) Phyſicians have had a more favourable idea of coma, or the ſleeping ſtate in fevers, than it merited. Inſtead of deſerving to be looked upon as a poſitively good ſign, enſuring a ſafe return of the diſeaſe, as they did; it was at beſt but a negative mark, implying that the ſlight ſtimuli acting upon the ſyſtem in a ſtate of high debility, and, therefore, by their operation, ſlight as it was, encreaſing the direct debility by the addition of the indirect to it, were kept off and hindered from producing that hurtful effect. Their authority in giving that judgement of it is overthrown by their extreme ignorance of its nature,

arly effectual, and that in proportion to their greater and more diffusible stimulant power, than that which others possess.

CCXLIX. Nor is it unconnected with this explanation of the nature of sleep and watching, and of both of them being sometimes repelled, sometimes induced, by a certain degree of stimulus (g): that excessive motions, as the spasmodic and convulsive, which have been mentioned (h), such as the quick pulse in fevers (i) and other motions, are removed by an equal force of stimuli, to that which is required to remove morbid affection without any motions. Hence it is plain, that irregular motions are not only encreased functions (k), independent upon debility, but that they are impaired functions, and consist nearly in the same degree of debility.

CCL. From what has been said, the analogy between watching and life, and sleep and death, and their dependence upon the same laws of nature, that govern all the other functions, clearly appears; and the most solid probation has been adduced, that the most vigorous vigilance consists in the highest degree of salutary excitement; that the middle and deep period of sleep depends on the highest debility that is consistent with the healthy state; that true sleep depends on a middle degree of indirect debility, and that both morbid sleep and morbid watching are the offspring of great debility, whether of the indirect or direct kind.

CHAP.

(g) See above, par. CCXLI. where this proposition is reduced to its exact principle.

(h) See above, par. CCXX.

(i) See par. CLXXIX.

(k) See above, CCXXIX.

## CHAP. VIII.

### *The Cure of both the Diatheſes.*

CCLI. AS the cauſe of both the diatheſes is that which has been formerly (a) related; the indication of cure, therefore, to be taken from that is, in the ſthenic diatheſis to diminiſh exceſſive excitement over the whole ſyſtem; in the aſthenic to encreaſe deficient excitement likewiſe over all the ſyſtem, till it be brought to that degree, which proves the cauſe of health.

CCLII. The remedies that produce that effect in the cure of ſthenic diatheſis, are the powers, which, when their ſtimulant operation is exceſſive, produce that very diatheſis, in this caſe, acting with that ſlight and reduced force of ſtimulus, by which they produce leſs excitement than health requires, or by which they prove debilitating.

CCLIII. The powers which produce the ſame effect in the aſthenic diatheſis, are thoſe that, when their ſtimulus is ſmall, produce that diatheſis, in this caſe, exciting, with that high dagree of ſtimulus, by means of which they give more excitement, than ſuits the healthy ſtate, or by means of which they ſtimulate.

CCLIV. In the ſthenic diatheſis that temperature (c) which

(a) See above, par. CXLVIII.

(c) The ſame order is followed here, that has all along been obſerved, to wit, that of the enumeration of the powers in par. XI. and XII. and that of the explanation of them, when viewed as the hurtful powers producing either diatheſis in Chap. I. Part II. and it will be kept to throughout the whole work. Nothing can be more ſimple and natural, and better ſuit the ſimplicity of the ſubject, while nothing is more artificial and arbitrary than the arrangements either of Syſtematics or Noſologiſts. Juſt order could never be expected from an erroneous and confuſed

which is called heat, muſt by all means be avoided; and for this very good reaſon, that the only degree of it which proves debilitating, that is the exceſſive to an extreme, cannot be carried to that height, in which it debilitates, without the riſk of hurtful or pernicious conſequence from the exceſs of ſtimulus (d).

CCLV. But, when the diatheſis, and its cauſe the encreaſed ſtimulus, is gentle in the actual diſeaſed ſtate, there is no occaſion for forbidding that degree of heat, which accompanies the operation of ſweating and pediluvium (e); becauſe the waſte of fluids in the former, and the agreeable ſenſation in the latter, promiſe ſomewhat more advantage than the moderate degree of heat employed in this caſe threatens diſadvantage.

CCLVI. In a particular manner, after the application of cold in an intenſe degree, muſt the application of heat be avoided, becauſe its operation, from the encreaſe of the excitability of cold, becomes more effective (f). And the conſequence is the more to be dreaded, that, at the ſame time, other ſtimuli are uſually urgent.

CCLVII.

ſed view of the ſubject to be treated of; while a clear conception of the ſubject as a whole, infallibly leads to a diſtinct diſtribution of the ſeveral parts that compoſe it; ſo that what Horace ſays of language, equally applies to order, and the ſame thing applies here as to his Verba & lucidus ordo. Rite paratam rem verba haud in vita ſequentur.

(d) See above, par. CXV. Though very intenſe heat relaxes the ſimple and induces atony on the living ſolids, who in a peripneumony, would think of uſing it with that view? That diſeaſe from its own violence, often mounts up ſo high in the ſcale of increaſed ſtimulus, as nearly to approach the point of indirect debility, and it ſometimes actually gains that point. The addition, therefore, of more ſtimulus, from the application of heat, would enſure that effect, and thereby occaſion the converſion of the diſeaſe into a much worſe one, ſuch as hydrothorax, or the dropſy of the breaſt.

(e) Pediluvium is the warm bath of the legs and feet.

(f) See above, par, XXXVII. θ and note (d).

CCLVII. Cold is the beneficial degree of temperature in the cure of this diatheſis, but it muſt be cold not followed by any conſiderable degree of heat. That miſtake, therefore, in medical practice, of thinking cold hurtful in ſthenic diatheſis by a ſtimulant operation, ſhould be corrected; and its benefit in the ſmall-pox is not to be underſtood to ariſe ſo much from its mere debilitating degree, as from avoiding the ſtimulus of heat after its operation. When the ſame precaution is employed, the ſame cold either alone, or in conjunction with other debilitating powers, has lately been found the moſt effectual remedy of catarrh (g).

CCLVIII. From which circumſtance, and becauſe a cap of freſh dug up earth put upon the head, has been of ſervice in phrenitis; and that degree of cold, which produces froſt and ſnow, when applied to the naked body, has removed a ſynocha accompanied with delirium (h); and becauſe

(g) or the common cold in Engliſh, a name ſtampt upon it by the very blunder we have been ſpeaking of.

(h) It is called the common inflammatory fever, very improperly, as being no fever, but a general pyrexia, or affection of the whole ſyſtem, without inflammation or local affection, and producing heat over all and tumultuous effect upon the pulſe. Its proper generic name is pyrexia. See above par. LXVIII. where that appellation is aſſigned to it; an appellation to avoid miſtaking its nature, that ſhould be accurately attended to. Great miſchief has been occaſioned by this vague term. Thus when a perſon is ſaid to be affected with a diſeaſe; when it is aſked what diſeaſe it is, and the anſwer given, that it is a fever, immediately bleeding is thought of, though that, and every, evacuation is as hurtful in proper fever as it may be ſerviceable in the pyrexia. To give an example of this pyrexia, the particular appellation for which is ſynocha, or ſthenic pyrexial diſeaſe; many years ago, a perſon in the old town of Edinburgh, labouring under it, eſcaped the vigilance of his nurſe; flew naked out of the houſe in a very keen froſt with ſnow upon the ground, acroſs the ſtreets, paſſed over into the new town, and from that to the fields beyond it. He ſoon became ſenſible of his ſtate, ſtole into a houſe next

becauſe cold is ſo efficacious a remedy in the ſmall-pox; it clearly follows, that the uſe of cold ſhould be extended to the whole range of prediſpoſition, the whole circle of diſeaſes, depending upon ſthenic diatheſis.

CCLIX. That no hurtful effect ariſes from the ſuppoſed aſtringent power of cold in the ſthenic diatheſis (i), is proved by its very high influence, when applied to the ſurface of the body in the ſmall-pox, in keeping up a freedom of perſpiration in proportion to the degree of its application. And its influence in producing atony with proportional laxity of the fibres of the veſſels, is in conformity to the ſame obſervation (k).

CCLX. For the removal of aſthenic diatheſis the ſtimulus

next to him, got ſome clothes thrown about him, and was carried home in a chair, perfectly cured of his diſeaſe. From which, and a prodigious number of facts to the ſame purpoſe, all concurring in the proof of the debilitating operation of cold, there can hardly ariſe a doubt in the mind, that in a certain high degree, if it could be conveniently uſed, or if there were occaſion to have recourſe to it for want of efficacious remedies, it would at once remove the higheſt degree of ſthenic ſtate that ever occurs in diſeaſe, and reduce the excitement from the neareſt approach to 70 down to 40. Nay it might run into the oppoſite extreme and go all the way to death. But we ſhall, by and by, have occaſion to obſerve, that we are ſo well provided with effectual remedies as not to be under any temptation of ſtraining this to its height. And we ſhall alſo find that a number of remedies in a moderate degree are preferable to any one, or to a ſmaller number in a higher degree. The diſcovery of the principle upon which the cure of ſthenic diſeaſes turns, has enabled us to render the cure both more complete and exact, than it could have been without principle.

(i) I remember, when I was a young ſtudent, of hearing the old phyſicians in Edinburgh very gravely forbid a draught of cold water in an inflammatory pyrexia and even in a common catarrh, for fear it ſhould produce an inflammation in the ſtomach.

(k) The fibres being relaxed deſcribe a greater cavity, and hence the check given to the perſpiration by the contrary effect of the ſthenic diatheſis in encreaſing their denſity in diminiſhing their diameters, is taken off.

lus of heat is ſignally uſeful, and chiefly for the following reaſon; that it muſt be as uſeful in this diatheſis, where the excitement is too low, as it is hurtful in the ſthenic, by giving a further encreaſe of the excitement, too much increaſed already. Hence in fevers, in the gout, in dyſpepſia, in the colic, in rheumatalgia (l), and in all aſthenic diſeaſes, the ſyſtem is very much cheriſhed by heat, and debilitated by cold: Which, by its debilitating effect, is ranked among the powers that produce the diſeaſe (m), and is deſtructive in fevers.

CCLXI. As cold is hurtful in aſthenic diatheſis in the proportion in which it is ſerviceable in the ſthenic (n); it is accordingly, for this further reaſon, to be avoided in diſeaſes of the higheſt debility, that, like intenſe heat, it relaxes the extreme veſſels, and produces a putrefaction in the fluids (o).

CCLXII. The more certainly to moderate the ſthenic diatheſis while as yet it remains within the range of prediſpoſition, a ſparing uſe ſhould be made of fleſh and the preparations from it, and vegetable diſhes uſed with greater freedom. But, when the ſame diatheſis is encreaſed to the degree, that conſtitutes diſeaſe, abſtinence from animal food, eſpecially in a ſolid form, and a free, but ſtill not exceſſive, uſe of vegetable matter, eſpecially in a fluid form, are the beſt means of removing it, as far as the management of diet goes.

CCLXIII.

(l) or what is improperly, as it has been ſaid before, called the chronic rheumatiſm.

(m) No gouty perſon can bear the operation of much cold, and every one can endure more heat, than moſt other perſons. And the reaſon is evident: So debilitating a power muſt, in proportion to its degree, be peculiarly hurtful in all diſeaſes, in which the debility conſtituting their cauſe, runs high, as it naturally does in the gout, where it is encreaſed by the advance of age, and other cauſes, and much more ſo in fevers.

(n) See par. CCLVIII. (o) See above, CXVII.

CCLXIII. In that degree of this diatheſis, which does not exceed prediſpoſition, it is proper to avoid ſeaſoning, which is deſtructive in diſeaſes.

CCLXIV. Watery drink is very ſuitable to it, and all pure and ſtrong drink hurtful, and that in proportion to the quantity of alkahol that it contains. The latter ſort of drink, unleſs taken very weak, is deſtructive in diſeaſes. In the number of which pure water, eſpecially with an addition of ſomething to acidulate it, is preferable to ſmall-beer, which a great authority admitted. But the diffuſible ſtimuli in this diatheſis are above all others hurtful.

CCLXV. Since the indirect ſtimulus of food aſſiſts the direct, that is, propagates itſelf over the whole body; for that reaſon bounds ſhould be ſet to the bulk even of the ſuitable matter (q).

CCLXVI. In every degree of aſthenic diatheſis, vegetable food ſhould be avoided, and recourſe had as ſoon as poſſible to that, which conſiſts of meat and animal matter. And, as that can ſeldom be executed immediately upon account of the weakneſs of the ſtomach; the diffuſible ſtimuli ſhould, therefore, be uſed; ſuch as the different forms of wine when the debility is moderate, and opiates when it is greater. And at the ſame time, from the very beginning rich ſoups ſhould be given in great quantity upon the whole, and a gradual tranſition made to the uſe of more ſolid matter.

CCLXVII. As it is animal matter in this caſe, that is of ſervice, ſo the degree of ſtimulus, that ſeaſoning adds to it, improves its effect (r).

CCLXVIII. During the prediſpoſition to aſthenic diſeaſes, watery, cold, acid, fermenting drink is hurtful, and that proportion of pure ſtrong liquor, that the degree of debility requires, is beneficial. But, after the diſeaſes have

(q) See above, par. CXXVII. (r) See above, par. CXXV.

have actually taken place, and have now attained a high degree of vehemence, the ſame ſtrong drink becomes ſo indiſpenſibly neceſſary, that excepting the ſoups, and the ſtill more diffuſible ſtimuli, it is the only ſupport required for a long time. There is no occaſion for any dread of the indirect ſtimulus of food, when the matter, which chiefly affords it, that is, vegetable matter, is guarded againſt (t).

CCLXIX. For the purpoſe of diminiſhing the ſtimulus, which an over proportion of chyle and blood (u), directly applied to a great extent of the body, produces; the over proportion, when it is very great, ſhould be removed by abſtinence, bleeding, and purging: when it is more moderate, but yet adequate to the effect of producing diſeaſes, the directions lately given (x), reſpecting a moderate diatheſis, ought to be obſerved; that is, we ſhould adhere to the practice of vomiting and purging from time to time, and to a ſparingneſs in diet. But blood ſhould not be let. And, if upon any occaſion, the patient ſhould give way to a little fulneſs in his uſe of food, he ſhould uſe vegetable matter, abſtinence, gentle and frequent exerciſe, and ſweating, and, thereby, keep up a full perſpiration.

CCLXX. The ſame are the means of cure for an exceſs in the velocity of the blood (z), in ſo far as it depends upon an over proportion: when the velocity depends upon violent motion of the body, the means of leſſening it, when the

(t) Compare this with what was lately ſaid in paragraph CCLXV.

(u) The chyle is the alimentary matter, that has undergone a preparation in the ſtomach, and an after one in the upper part of the inteſtinal canal, and, which, ſo prepared, or in part digeſted, is taken up by the mouths of a number of ſmall veſſels that open into the inteſtines; theſe carry it to a great trunk, in which all theſe veſſels, called lacteal, unite, and through that trunk, to be afterwards mixed, firſt with the venous, and then with all the other blood in ſucceſſion. Such is the nouriſhing matter of animals.

(x) See above, par. CCLV.

(z) See above, par. CXXXI. to CXXXIV.

the diatheſis is ſo moderate, as only to produce prediſpoſition, or a gentle degree of actual diſeaſe, are an abatement of exerciſe, more indulgence in reſt, and a reduction of other ſtimuli. In the very great diatheſis, that which occaſions ſevere diſeaſes, in order to retard the motion of the blood, a point muſt be made to avoid the ſtimulus of all the exciting powers, and blood muſt be taken profuſely. Here it is ſuperfluous to lay down a rule for the obſervance of keeping the body in a ſtate of reſt, as reſt, even in ſpite of the patients, is unavoidable (a).

CCLXXI. Withdrawing the powers that occaſion an over-proportion of the ſecreted fluids in the excretory ducts, is the beſt method of removing the ſtimulus, which that over-proportion, by its diſtending energy, produces (b . The cure, therefore, conſiſts in more frequent coition, drawing off the milk, taking in food of a leſs nouriſhing nature, and in reſtoring the perſpiration by removing the ſthenic diatheſis upon the external ſurface.

CCLXXII. To remove the debility, or atony and laxity, of the veſſels, which is occaſioned by a penury of chyle and blood over a very great extent of the ſyſtem (c),



(a) It would be ridiculous to require of a patient in the rage of peripneumony not to run a race, when his real ſtate is, that he cannot move or turn himſelf in the bed without pain.

(b) In par. CXXXVI. you will find, that the ſecreted fluids, here alluded to, are the milk, the ſemen, and the perſpirable fluid. As the diſtention occaſioned by the over-abundance produces the morbid ſtimulus, ſo the ſubduction of the fluids muſt, of courſe, take it off, and give the deſired relief.

(c) How great the ſpace or extent of the ſyſtem that, in the ſthenic diatheſis, receives the ſtimulus of an over abundance of blood; and, in the aſthenic diatheſis is ſubjected to the debilitating power of an under-proportion of the ſame fluid, may eaſily be conceived from the well known fact, that there is not a ſoft part in the whole ſyſtem, into which the inſertion of the point of the ſmalleſt needle will not draw blood; conſequently, the ſtimulus ariſing from an over-abundance of blood, as

firſt, the ſtrength muſt be gradually brought back by diffuſible ſtimuli (d) and ſoups; next, we ſhould gradually uſe the latter more ſparingly, and ſolid matter more plentifully: laſtly, to give the whole ſyſtem ſtill more ſtrength, it ſhould be fortified by exerciſe, and the reſt of the durable ſtimuli; but no further uſe ſhould be made of the diffuſible, than to employ them ſo long as conſiderable debility remains (e).

CCLXXIII.

well as the debility ariſing from too ſmall a quantity, muſt be the moſt conſiderable of all others. Every circumſtance here concurs to render the one the greateſt ſthenic, and the other an equal aſthenic, hurtful power. If the force of every ſtimulus, of every exciting power, be in proportion, firſt, to the degree of it applied; ſecondly, to the ſenſibility of the part on which it acts; and, thirdly, to the extent of that part, it will be no wonder, that theſe two powers ſhould prove the moſt formidable of all others. Hence it is, that, in the curative part, bleeding is the moſt powerful remedy of ſthenic, and filling the veſſels an equal one, of aſthenic diatheſis.

(d) which act by giving vigour to the whole ſyſtem, and more eſpecially to the ſtomach, with which they come into actual contact. Hence digeſtion, and the converſion of the matter taken in into good chyle, and blood; and hence, at laſt, the fulneſs of the veſſels firſt indicated. The proceſs of emptying the veſſels in the cure of ſthenic diatheſis has the advantage of being the firſt in order; and hence is it that the cure of ſthenic diſeaſes is more quickly effected than that of the aſthenic; it being, over all nature, much more eaſy to take away than replace. See and compare par. CXXVI. and CXXX. and ſubjoined notes, and a little above, par. CCLXVI.

(e) The ſole uſe, and a great one, of the diffuſible ſtimuli is, in great weakneſs, where they are only required, to ſupport the ſyſtem, while it cannot be ſupported by the ordinary durable ſtimuli; and, after the excitement is ſo far reſtored, that the ordinary ſupports are now ſufficient, to lay aſide the extraordinary; the continuance of which would now be hurtful, and to manage the convaleſcent, and reſtored, ſtate of health by the powers employed in health. When the diffuſible are continued longer, they are equally hurtful, and a cauſe of diſeaſe, as they are ſerviceable when diſeaſe requires their ſupport; analogous to wine, they bring about the ſyſtem in a weakened ſtate to be ſuſtained by its natural and ordinary

CCLXXIII. In a weak ſtate both of the veſſels and of the reſt of the body, every motion of the body, any way conſiderable, and all other ſtimuli, which quicken the motion of the blood, and bring on an indirect temporary debility, ſhould be with-held. But in a caſe of ſlighter debility, ſuch motion as does not prove fatiguing, but acts as an agreeable ſtimulus, and gives recruit, ſhould not be avoided. When a perſon is recovering from a diſeaſe, he ſhould be gradually brought back to his uſual plan of life; nor ſhould it be forgot, that, till that is done, the health is never completely reſtored.

CCLXXIV. The debility which an under-proportion of ſecreted fluids, or a degenerate, though plentiful ſtate of them, produces in the excretory ducts, is removed by the ſtimulant plan of cure which has juſt now been ſpoken of (f), not by an antiſeptic one (g).

CCLXXV. The ſuitable remedy of that ſort of ſtimulus, which ariſes from either violence or aſſiduity of thinking, is an abatement in the degree of thinking, or that high ſtretch of the intellectual function, whether its de-



ordinary ſupports; but, analogous to it in another reſpect, when the ſtrength of the ſyſtem requires not their additional ſtimulus, they carry it up into indirect debility, and prove the cauſe of diſeaſes and death. In one word, whatever has been ſaid againſt the propriety of the uſe of exceſſive, and ultimately exceſſive ſtimulant powers, the former producing ſthenic diatheſis, and the latter indirect debility, all that applies, with propriety, for the diſcontinuance of the uſe of diffuſible ſtimuli, when the durable are now ſufficient for the purpoſes of the ſyſtem. And another argument that ſtill remains againſt the ſuperfluous uſe of both the diffuſibles and ſtrong drink, when debility requires not their uſe; which is, that, independent of death, or even diſeaſes, being their immediate conſequence, prediſpoſition to diſeaſes muſt; conſequently, as the ſyſtem muſt at laſt be worn by ſtimuli, all the unneceſſary, that is, all that do not contribute to that middle vigour, in which ſound health conſiſts, ſhould be avoided.

(f) See above, CCLXXII. (g) See above, CXVII. and CXVIII.

gree or frequent repetition be regarded, that, by waſting the excitability, proves, at laſt, indirectly debilitating: Which is a rule, however it may ſuit the ſtate of prediſpoſition, that is by no means ſafe, after the diſeaſe has once made its appearance, and eſpecially if it is a violent one; becauſe there is no acceſs to any benefit from it, but through the intermediate degrees of that ſtimulant range, which by encreaſing the excitement, already too great, would do miſchief (h).

CCLXXVI. In order to cure a ſlight ſthenic diatheſis, ſuch as occurs in prediſpoſition, and to prevent diſeaſe, habitual paſſion ſhould be avoided; but the removal of actual diſeaſe requires, that every firſt guſt of paſſion ſhould be prevented. The ultimate exceſs of paſſion, upon account of the intermediate danger of ſtimulating too much, is by no means to be thought of.

CCLXXVII. In ſo far as debility depends upon exceſs in mental exertion, or upon a languid ſtate of that faculty, the exceſs ſhould be diminiſhed, and the languor removed, and an agreeable train of thinking ſet on foot; without which latter, however much all the other ſtimulant powers may have been employed, it may be depended upon, that perfect health, in every reſpect, will not be brought about (i).

CCLXXVIII.

(h) See above, CCLIV.

(i) The ſtate of the intellectual function has a great influence upon that of excitement; and, often, when all other ſtimuli have been applied in due proportion, the deficiency of that ſingle ſtimulus will point out a want in the proper meaſure of excitement. There is not a finer ſtimulus than the pleaſurable feeling ariſing from a happy train or flow of thinking; hence the high delight, that ariſes from a flight of wit, or from a pleaſant vein of humour; hence all the fine feelings of the belles letters; hence, in youth, the ardent keenneſs to be acquainted with the learning, wiſdom, and elegant productions of the ancients, as well as of thoſe, who have made a diſtinguiſhed figure in later times; hence the

CCLXXVIII. In every degree of debility that high force of the paſſions, that produces indirect debility, muſt be avoided; and it muſt not be forgot, that a very ſmall degree of them is ſufficient for that effect: we are not to give looſe reins to agreeable paſſions (k).

CCLXXIX.

the enthuſiaſm ſo natural to the human feelings, to outſtrip others in every mental excellency: The arts, the ſciences, every department of human knowledge, are all the effects of that intellectual propenſity. How happy would it be for mankind were this noble ſtimulus duly cheriſhed! What benefits, which ſociety is deprived of, would not accrue from a proper cultivation of it! How fine was that feeling in Julius Cæſar Scaliger, when he declared he would rather be the author of Horace's few ſtanzas of Lydia and Telephus, than accept of the crown of Arragon! What muſt have been the delight of Pythagoras, when he found out the XLVIIth propoſition of the firſt book of the mathematical elements, commonly called Euclid's? He jumped about in an ecſtacy, crying out Εὑρηκα, and was ſo much more ſubſtantial than ſome of his few brother diſcoverers, as to poſſeſs the means of offering a ſacrifice of an hundred fat bullocks to the gods. See Obſervations on the principles of the old Syſtems of Phyſic, from page ix. to xv. of the introduction. How delightful muſt the feelings of Horace have been, in whoſe works every Ode is an effort of the moſt beautiful, and frequently, of the moſt ſublime, conceptions of human genius! What muſt have been the fire and force of Milton's ſoul, in the deſcription that he gives of the appearance of the Son of God in his cœleſtial panoply, "his countenance too ſevere to be beheld!" How towering that ſoul, how exalted that intellect, which the great Marquis of Montroſe diſplayed in a ſtratagem, which converted into a glorious victory a blunder in one of his officers, that might have proved fatal to both his cauſe and his glory. When it was whiſpered to him, ſtanding in the center of his army, that one of his wings was overpowered, he ſhouts out to the commander in the other: "My Lord Aboyn, ſhall you and I ſtand here doing nothing, and M'Donald carry off all the honour of the day!"

(k) See above par. XLIII. and CXLI. Recollect the method preſcribed in the XLIII. paragraph of this work for preventing the fatal cataſtrophe of the Roman woman, when her ſon, whom ſhe had counted upon, for certain, in the nunber of the dead, was contrary to every expectation, preſented to her in perfect health. The danger and fatality

of

CCLXXIX. When there is a deficiency in the force of any of the paſſions, as in ſadneſs, grief, fear, terror and deſpair, which are only leſſer degrees of gladneſs, confidence, and hope, and imply only a diminution of exciting paſſions; ſuch deficiency or diminution muſt be expelled, and the exciting degree of paſſion recalled; hop eand aſſurance muſt be infuſed, and the patient gradually carried up to feelings of joy.

II. For there is only a ſum total of the paſſions, which act in the ſame manner as all the other ſtimuli, that is, by ſtimulating, either in exceſs, or in due, or in deficient, proportion; nay, like the reſt, as often as any one is deficient, it, by accumulating the excitability, has the effect of making the other ſtimuli act more powerfully (l). Take, for inſtance, the terror of an army before the ſound of trumpet for the onſet of battle, and the courage with which they are afterwards inſpired, from the conſciouſneſs of their bravery, the General's ſpeech to animate them, or perhaps, his commemoration of their former brave deeds.

P. An ultimately exceſſive voluptuouſneſs in the exerciſe of the ſenſes, as well as the effect of diſagreeable objects, preſented to them, in aſthenic diatheſis, ſhould equally

of her ſtate was, that her excitability was too accumulated, with reſpect to the ſtimulus of exciting paſſion, to bear ſuch a ſtrong impreſſion as that which the preſence of her ſon, in life and health, had made. She was in the ſtate of a famiſhed perſon, whoſe accumulated excitability is overpowered by a ſingle morſel of food, or of a perſon, who had been long affected with thirſt, where the ſmalleſt indulgence in drink may prove fatal; or of a perſon, near ſtarved to death by cold, in whom a raſh approach to heat, might induce the ſame fatal effect; all which are preciſely upon the ſame footing, and equal inſtances of an excitability too accumulated to bear any degree of ſtimulus.

(l) See above, par. XXXVII. and the note annexed to it.

equally be avoided; and in the ſthenic diatheſis, their turbulent force ſhould be guarded againſt (m).

s. Nothing is better accommodated to the aſthenic ſtate than purity of air; which, either alone, or conjoined with exerciſe, muſt, conſequently be of the greateſt benefit to convaleſcents.

t. Since the matter of contagion, in ſo far as it has any tendency to produce general diſeaſe, produces either ſthenic (n) or aſthenic diatheſis (o), and acts by an operation ſimilar to that of the general hurtful powers; the inference to be drawn from that is, that in the cure, general remedies ſhould be employed; and debilitating ones oppoſed to ſthenic, ſtimulant ones to aſthenic, diatheſis (p).

CCLXXX. Theſe powers, the ſame in kind with thoſe that produce the diatheſes, differing only in degree, and in that reſpect diametrically oppoſite, remove the diatheſis ſeldomer, and leſs ſucceſsfuly, one by one; oftener, and more effectually, when ſeveral co-operate, but, beſt of all, if all of them be taken together, eſpecially when there is occaſion for great aſſiſtance.

## CHAP IX.

### *A Compariſon of the different Parts of the Sthenic Plan of Cures with each other.*

CCLXXXI. AS, in the ſthenic diatheſis, bleeding is the moſt powerful remedy of all others, being that, which completely carries off a ſtimulus, as much more powerful than any other, as it is directly applied to a greater extent over the ſyſtem; conſequently, as often as the diatheſis is

(m) See par. CXLIII. and CXLIV.

(n) as in the ſmall-pox and meaſles.

(o) as the contagious typhus, the gangrenous ſore-throat, dyſentery, and the plague,

(p) Par. CXLVII, and CLXXV.

is very high, it ſhould be freely uſed; but never riſked during prediſpoſition, and ſparingly, or not at all, ventured upon in diſeaſes of a gentle nature; in which other remedies ſhould be preferred (a).

CCLXXXII. The next place of importance to bleeding, when heat and other ſtimuli are guarded againſt, is claimed by cold. Heat is always hurtful, and ſtill more ſo after a previous application of cold; but it is moſt hurtful, when it is alſo combined with other exceſſive ſtimulant powers. Cold is always of ſervice, and in proportion to its degree; provided foreign ſtimuli, blended with it, and overcoming its debilitating effect, be cautiouſly ſhunned.

CCLXXXIII. The third place in rank after theſe remedies is claimed by vomiting and purging and ſweating. Theſe evacuations have a powerful effect in removing ſthenic diatheſis, and therefore do they, with great advantage, ſuperſede the oftener imaginary than real, neceſſity of profuſe bleeding. They are often alone ſufficient to reſtore the healthy ſtate.

CCLXXXIV. Together with all theſe, the articles of diet, the ſtimulant operation of which prevents the benefits to be received from them, ſhould be ſparingly uſed, and that in exact preportion to the degree of the diatheſis. This precaution alone is adequate to the removal of prediſpoſition, and often to that of diſeaſes, eſpecially thoſe that depend upon a ſmall and gentle diatheſis.

CCLXXXV.

(a) See above, par. CCLXIX. With the exception of peripneumony, phrenitis, and violent and miſmanaged caſes of the ſmall-pox and meaſles, and rheumatiſm; in the laſt in their mild ſtate, as well as the other ſthenic caſes, the lancet ſhould never be unſheathed. That is to ſay, in ſeven caſes out of ten even of the ſthenic diſeaſes, which are the only ones that either require or bear any degree of it, the practice muſt be laid aſide, and never thought of in any aſthenic affections whatever. Conſequently, the caſes, where it is in any degree allowable, are exceedingly few.

CCLXXXV. Alſo with all the remedies yet mentioned we muſt conjoin reſt, when the diſeaſed ſtate has taken place, and moderation in motion during the period of prediſpoſition (b).

CCLXXXVI. The practice of the common run of phyſicians is very bad, in going too much upon any one of the remedies that have been mentioned, and overlooking all the reſt, or enjoining them careleſsly. We are not to depend upon bleeding alone, not even in peripneumony itſelf; but employ all the reſt either in concourſe or ſucceſſion.

CCLXXXVII. The diſturbed functions, or thoſe that are impaired (c) not from a debilitating cauſe, admit of the general plan of cure, and no other.

CCLXXXVIII. The ſymptoms of debility, which are the conſequence of the violence of the ſthenic diatheſis, in the progreſs of the diſeaſe, and that threaten death by indirect debility, ought to be prevented by an early interpoſition of the remedies.

CCLXXXIX. The ſame early cure ſerves to prevent ſuppuration, effuſion, and gangrene, which ariſe from ultimately exceſſive excitement, paſſing into indirect debility.

". If ſthenic diatheſis ſhould happen to be conjoined with a local diſeaſe, the former, to prevent it from aggravating the latter, ſhould be removed by its own reſpective remedies.

CHAP.

(b) So conſiderable a ſtimulus is exerciſe, that, if in ſuch a degree of ſthenic diatheſis, as that, which forms only prediſpoſition to the diſeaſes depending on it, exerciſe may of itſelf be ſufficient to effect the converſion of the prediſpoſition into the actual diſeaſed ſtate. Often has the higheſt of theſe diſeaſes, and even peripneumony itſelf, been brought on by violent exertion in exerciſe.

(c) See above, par. CXLVII. CLI. CLXXII.

## CHAP. X

*The ſame Compariſon of the different Parts of the Aſthenic Plan of Cure with one another.*

CCXC. IN aſthenic diatheſis, and the diſeaſes depending upon it, reproducing the loſt quantity of blood, is the moſt powerful remedy, when we, at laſt, find acceſs to it, as being the only means of reſtoring a ſtimulus of ſo much more power and efficacy, that its direct application is made to ſo great an extent of the ſyſtem (a). For which reaſon, as, in every degree of debility, the quantity of food, from which only blood is made, that is taken and digeſted, is always in an inverſe proportion to the degree of debility, (b); ſo much, and of ſuch a form, as can be taken and digeſted, ſhould immediately, and without loſs of time, be adminiſtered; on which account, if the debility be moderate, giving ſolid animal food ſparingly each time, but often repeated, is proper and ſuitable. When the debility is greater, and ſolid animal food can neither be taken, nor if taken, digeſted, broth made from it, as rich as poſſible, and as free of fatty matter, ſhould be carefully adminiſtered (c). With this view to excite the ſtomach, and render it more fit for receiving and digeſting the food juſt now mentioned; the diffuſible ſtimuli, ſuch as different kinds of wine, and more particularly ſtill opiates and other remedies of ſimilar powerfulneſs, ought to be conſtantly employed; ſparingly at firſt, and afterwards more fully, if the debility be direct; after which, the uſe of the diffuſible ſhould be gradually laid aſide

(a) Compare this with par. CCLXXXI. above, and with all the paragraphs from CXXXI. to CXXXVI.

(b) or in a direct proportion to the degree of excitement.

(c) Compare this with par. CCLXXII.

aſide, and, in the ſame gradual way, recourſe be had to a larger and larger uſe of the more durable and natural ſtimuli (d.) In the caſe of indirect debility, we ſhould alſo gradually proceed from the higheſt to the loweſt force of ſtimulus, as has been mentioned formerly (e), and, in an inverſe manner, go on from the ſmalleſt force of durable ſtimulus to the greateſt. Laſtly, in that moderate debility, which conſtitutes the predispoſition to aſthenic diſeaſes, it muſt always be kept in mind, that an abundance of blood is the greateſt ſupport of health (f), and that we are not to give way to a weakened appetite (g).

CCXCI. To the vital fluid, and the ſeveral means of encreaſing its quantity, which have juſt now been mentioned, the next remedy in the cure of aſthenic diatheſis is heat; as being the power by which animals (i), in their firſt formation, in their growth, and moſt eſpecially in their decay, are brought forth into exiſtence, are nouriſhed, and acquire vigour, and afterwards, through the ſeveral degrees of their declining ſtate, are to ſome extent upheld, till their excitement is all extinguiſhed (k). By heat, underſtand that point of external temperature, which intervenes as a mean betwixt cold, as it is called, and high heat (l); under which our ſenſe of temperature is agreeable

(d) See laſt note (e), and compare it with this. (e) Par. CIII.

(f) How widely different is that maxim from any that have hitherto ever been received in the profeſſion of phyſic; in which flying to the uſe of the lancet, was the firſt thought that aroſe in the mind, with reſpect to the idea of cure of every diſeaſe; and bleeding and evacuations through the courſe of each diſeaſe, the only remedies.

(g) This is equally the reverſe of the general practice of inanition in almoſt every diſeaſe, without a ſingle exception.

(i) And we may add vegetables.

(k) Compare this with par. CXII. and CCLIV. and CCLX.

(l) The Latins have a ſingle word for this which we want; the word is ardor.

able and pleaſant; under which the body is neither weakened by that relaxation which produces ſweat, nor by that torpor (m) which cold begets, where the debility is, in this caſe, direct, and in the former indirect; under which the functions of the whole body are excited, called forth, and, as it were, cheriſhed in the ſun beams; without which all other ſtimuli are of no effect (n).

CCXCII. Such a temperature as that is ſuited to every ſtate of the body, but ſtill more to its different ſtates of debility; becauſe in the latter caſe, as the excitement is deficient from other ſources, there is ſo much more occaſion for this ſtimulus, which is much eaſier come at than many others, to ſupply ſuch deficiency. Hence both in other diſeaſes of great and direct debility, and particularly in fevers, heat is found to be of the greateſt benefit, and above all others in all ſuch complaints of that kind as cold has had any ſhare in producing (o). In the ſame diſeaſes cold muſt be moſt carefully avoided, as it is always of a directly debilitating operation, and never of ſervice but in ſthenic diſeaſes, and thoſe that are in a progreſs to indirect debility (p). We muſt be equally on guard, in every degree of aſthenic diatheſis, againſt exceſſive heat; which is equally

(m) Or benumbed ſtate.

(n) It is plain, that though all the other powers ſhould be in full action upon our bodies, and that with the effect of keeping up in them a due degree of excitement over all; yet plunging any perſon naked into a denſe medium, ſuppoſe that of water, in a degree of cold at or under the freezing point, will moſt certainly, in an inſtant, put an end to life.

(o) See again, par. CCLX.

(p) The operation of cold has been ſo widely miſtaken by all phyſicians, that it comes to be of the greateſt conſequence to underſtand the ſeveral propoſitions ſtated in this work with regard to it. For that purpoſe conſult par. XXXVII. and the note upon it marked θ, as well as par. CCLX. and all that has been ſaid upon the ſubjects of either heat or cold in Chap. I. of the ſecond Part from CXII. to CXXIII. as alſo par. CXX.

equally debilitating as cold, and equally productive of atony, laxity and gangrene of the veſſels, as well as ſtagnation and corruption of the fluids, in conſequence of the inactive ſtate of the veſſels (q).

CCXCIII. As refilling the veſſels is the greateſt remedy, becauſe its direct ſtimulus is applied over ſuch an extent of the ſyſtem; for that reaſon heat, which is immediately applied to the whole ſurface of the body, and directly affects the body to that extent, ſhould be next in virtue to it.

CCXCIV. Since vomiting, purging (r) and ſweating (s) are ſo powerful in debilitating, as to claim the third place of rank in the ſthenic cure; they muſt, for that reaſon, by the ſame debilitating operation, be equally hurtful in aſthenic diatheſis, and the ſtimuli that ſtop their operation, and, conſequently, both the other ſtimuli, and particularly the diffuſible ones, equally ſerviceable.

CCXCV. To run over the liſt of ſtimuli, that anſwer this purpoſe, we muſt begin with the cure of that ſlighter loſs of fluids that occur in thoſe diſeaſes, and proceed to the more violent kinds of them.

In a ſlight looſeneſs of belly, ſuch as happens in prediſpoſition to aſthenic diſeaſes, or in the ſlighter degrees of the latter; it will be commonly ſufficient to abſtain from vegetable food, and from weak, watery drink, or that kind of it that ferments in the firſt paſſages, ſuch as the ſeveral drinks make from barley, called beers; to uſe animal food, as well ſeaſoned and as rich as poſſible, and free of all fatty matter; to drink pure wine, or ſpirit, in different degrees of ſtrength; and to take ſuch exerciſe as is gentle in degree, and often repeated (t).

CCXCVI.

(q) With this propoſition compare par. CXV. CXVII. and CXVIII.

(r) See par. CCLXXXIII. (s) See par. CCLV.

(t) See and compare, for the more clear underſtanding of this paragraph, the CCLXVI. CCLXVIII. CCLXXIII.

CCXCVI. When the belly is ſtill, looſer and with that affected with gripes and pains, as happens in the violent diarrhœa, and in the dyſentery, in which the looſe ſtools are accompanied with vomiting; or when, without theſe troubleſome ſymptoms affecting the belly, diſtreſſing vomiting is an urgent ſymptom; or, when the vomiting is conjoined with a moiſture upon the ſurface, or macerating ſweat; or when ſweat is the only urgent ſymptom, and as ſuch waſtes the ſtrength, exhauſts the body, and diſſipates the fluids: in all theſe caſes, we muſt have immediate recourſe to the moſt diffuſible ſtimuli, and check ſuch an impoveriſhment of the fluids of the ſyſtem.

CCXCVII. In which caſe, the uſe of ſtimuli will be ſo much the more neceſſary, that other ſymptoms uſually accompany thoſe encreaſed excretions. Their great efficacy, and ſtimulant power, is proved by their ſingular virtue in removing thoſe and other ſymptoms, in fevers and other moſt violent ſthenic diſeaſes, nay, in the article of death itſelf, from ultimate debility.

CCXCVIII. Accordingly, in ſpaſms and convulſions in the internal, in the external, parts (u) in bleeding diſcharges (x) in the direful delirium of fevers, and other very violent diſeaſes (y), in aſthenic inflammation (z); when thoſe ſtimuli which have a more permanent influence fail, or act to no good purpoſe; the virtue of the diffuſible ſtimulants, the principal of which is opium, is eminent.

CCXCIX. As, therefore, the energy of that ſtimulant virtue ſerves to check looſeneſs of the belly, and vomiting, or even ſweating, when theſe ſymptoms are gentle, and depend upon a leſs violent degree of the cauſe; ſo that degree

(u) See par. CXCV. and CXCVI.

(x) See par. CXXXIV. χ. †. and CCXXXII. and the ſubjoined notes.

(y) See par. CXCVIII. CC. CCI. (z) See par. CCIV. to CCXII.

gree of its power, which is fitted to check these affections in the greatest height of their violence, and to re-establish the state of health, is by far the greatest of all the powers, which are ever applied to the human body; which may be known from this proof, that when the action of all the other powers by which life is supported is of no effect, they turn aside the instant stroke of death.

CCC. The most weak degree of the diffusible stimuli (a) are the white wines, except madeira, canary, good sherry and the red wines, except port and spirits procured by distillation, so diluted, as to equal the strength of the wines, or exceed it a little. Still higher than these are the latter taken pure, and higher still, those that have undergone many rectifications. The strength of which is in proportion to the quantity of water expelled, and of the alkahol retained.

CCCI. A higher place in the scale is claimed by musk, volatile alkali, camphor; our trials of which are not yet so complete, as to ascertain its force exactly; next comes æther, and, last of all, opium. Of all which, however, unless, when, as they sometimes do, they have lost their effect by a continuance of their application, and are, therefore substituted in place of each other for the sake of a renewal of the operation of each; and when, in that way we make the complete round of them, for the sake of repelling extreme debility; in every respect, the preparations of opium are sufficient for most purposes of high stimulating. 4

CCCII. Together with all these (d), regard must be had to the articles of diet (e).

And,

(a) See above, par. CXXVI. o. π. p. c.

(d) They are animal soups, and solid meat (CCXC.) heat, (CCXCI.) stimulants (CCXCV.) diffusible stimulants (CCXCIX.)

(e) See par. CCLXXXIV.

And, as in great debility, and the diſeaſes depending upon it, of the only ſuitable matter, that is meat, nothing ſolid can be taken; for that reaſon, the matter to be uſed muſt be fluid, but ſtrong. Animal ſoups ſhould be given ſparingly at a time, but repeatedly, in proportion to the degree of debility, and jellies both along with the diffuſible ſtimuli. After that, when, chiefly by means of the diffuſive ſtimuli, the ſtrength is in part reſtored; at firſt ſolid meat, likewiſe in ſparing quantities, but often repeated; then given more plentifully, and at greater intervals, ſhould be taken. In which progreſs the patient ſhould gradually recede from the uſe of the diffuſible ſtimuli.

CCCIII. When now the diffuſible ſtimuli are altogether laid aſide, and the convaleſcent is given up to his uſual diet and manner of living, and that management, which perſons in health commonly obſerve, (only that more care is taken than in perfect health, to avoid any thing that might prove hurtful); then it is, that every attempt of the phyſician ſhould be directed to the conſideration of the ſtrength of his patient, as returning, but not yet quite eſtabliſhed (f). In his movements he ſhould firſt uſe geſtation, and then gentle but frequent exerciſe, and the latter ſhould always end in ſome, but not an high, degree of fatigue. His ſleep ſhould neither be too long, nor too ſhort, leſt the former produce direct, the latter indirect debility (g): the moſt nouriſhing food ſhould be taken, but not in too great a quantity, leſt the excitability of the ſtomach be worn off, without the attainment of a due degree of vigour; but it ſhould be often taken, in order to reduce the excitability gradually, which only ſerves to produce proper vigour, and reduce it to its half waſted ſtate (h); that degree of heat, which ſtimulates, ſhould be employed (i), and both exceſs of it, as well as cold, as they are equally debilitating, ſhould be

(f) See above, par. CV. and CIX. (g) See par. CCXLII. and ſequent.
(h) See above the XXIV. XXV and XXIV. (i) See par. CXII.

be avoided; the patient ſhould breathe pure air, and avoid impure; he ſhould keep his mind in gentle action, obſerve moderation in his paſſions, and court agreeable objects of ſenſe; he ſhould have no companions, around him, but agreeable ones, and be in frequent gay entertainments; he ſhould travel through a pleaſant country, and be moderate in love. Neither is the management of the ſenſes, and any return of contagious matter to be neglected.

## CHAP. XI.

*How the Remedies ſhould be varied.*

CCCIV. AS the hurtful powers, that produce predispoſition to diſeaſes, or diſeaſes themſelves, act ſome on one part, ſome on another, with ſomewhat more force than on any other equal part; and as ſuch a part is commonly that which they directly affect (a); ſo the powers, which are employed as remedies, in order that their general effect may reach the whole body with the more certainty, ſhould be in the ſame manner, differently applied to different parts.

CCCV. The cure of any ſthenic diſeaſe whatever, is improperly entruſted to bleeding alone, though that is one of the moſt powerful of the debilitating remedies. And the reaſon is, that, though the excitability is ſufficiently reduced by that remedy in the greater blood-veſſels, perhaps too much, yet in the extremities of theſe, as well as in the reſt of the body, it is not ſufficiently reduced (b).



(a) Par. XLIX.

(b) The action of every exciting power, whether ſalutary or hurtful, or curative, always extends over the whole body, the whole ſeat of excitability, but ſtill with the inequality mentioned in the fourth Chapter of part firſt. This is the baſis of the diſtinction with reſpect to the preſent

Nor is the alternation of bleeding with purging a perfect ſort of cure; becauſe, though the exceſſive excitement be ſufficiently, and more than ſufficiently, removed in the greater blood-veſſels, and in the innumerable ſmall arteries whether exhalent or mucous, which diſcharge their fluids into the inteſtines; yet, neither on the perſpiratoy terminations of the arteries, nor on the reſt of the body, is an equal debilitating energy exerted: for inſtance, the ſmall veſſels which open into the ſtomach, are not ſufficiently relieved of their diſtending (c) load. And although vomiting (d), which has been improperly left out of the cure of ſthenic diſeaſes, and ſtill more improperly employed in every one of the aſthenic, ſhould be conjoined with the two remedies juſt now mentioned, even that would not be enough to produce an equality of diminiſhed excitement; as there would ſtill remain in the perſpiratory veſſels, the ſame ſtate of the excitement, which has been mentioned, as in the reſt of the body, that is not vaſcular. In violent ſthenic diſeaſes, therefore, after diminiſhing the diatheſis, and in the ſlighter from the beginning of the diſeaſe, the addition of the operation of ſweat to the evacuations that have been ſpoken of, will produce a more equal diminution of excitement, a more perfect ſolution of the diſeaſe. For by means of this evacuation, not only from the larger blood-veſſels, in the interior parts of the body, but from an infinity of outlets both of the external, and internal

ſent ſubject: which is, that as every power acts moſt effectually on the part where its action is immediately exerted, it is better to truſt to a number, every one of which poſſeſſes that advantage, than rely on any one, however powerful otherwiſe; as by that means, whatever be the indication, whether it be to encreaſe or diminiſh excitement, the effect will be more equally produced over all in conſequence of there being a number of parts that have had a ſtrong action exerted upon them.

(c) And therefore ſtimulating load, the ſtimulus in any veſſel being the quantity of its fluid.

(d) See par. CCLXIX.

internal ſurface of the body, an immenſe quantity of fluids, every where diſtending, and, thereby, producing a very great ſum of excitement, is withdrawn. But the matter ſtops not even here. For, ſince in ſlight ſthenic affections much nouriſhing food, and in them all, too much, can be taken; the conſequence of that muſt be, that, however much the quantity of the blood and other fluids has been diminiſhed, if the food, which is the only power that can produce blood, continues to be taken, all the veſſels, in proportion to the quantity that has been taken, will again go on to be filled, and to be fired with the fuel of exceſſive excitement. To prevent which inconvenience, and to diminiſh excitement, ſtill with greater equality over the ſyſtem; abſtinence, or an allowance of vegetable matter in a fluid form, and watery drink, will have a very great effect. But neither does the matter end here. For, if, after taking all the precautions and ſecurities that have been recommended, the degree of heat, that proves hurtful from its ſtimulus, be allowed to approach the external ſurface of the body; it will produce another inequality of excitement, however much that may have been properly and equally diminiſhed by the other means of cure. Wherefore, as the ſthenic diatheſis depends ſo much upon the ſtimulus of heat, directly affecting the ſkin (e), and is, on that account, prevalent in the ſkin in preference to other parts; to make ſure of rendering the diminution of excitement as equal as poſſible, the debilitating effect of cold ſhould be oppoſed to the high degree of excitement, which the heat has produced. When, at laſt, all the directions, which have been ſo fully pointed out, have been executed, ſtill to reproduce the equality of excitement, ſuited to good health; it remains, that we be on our guard againſt the ſtimuli that ariſe from the intellectual functions and paſſions. For,



(e) See par. CXIII.

as they have a great effect in producing ſthenic diatheſis (f) ſo the guarding againſt them, or prevention of them, muſt be equally effectual in removing that diatheſis, and in reproducing that equality of excitement, upon which health depends (g).

CCCVI. If the cure of ſthenic diſeaſes hitherto has conſiſted in bleeding, purging of the belly, and in the uſe of refrigeration in a few caſes; and, if the other objects of attention, which have now been ſo fully treated of, have either been totally neglected, or mentioned in a ſlight way, by the by, and as if they had been of no conſequence, and, in the cures which were preſcribed in that way, not reduced to any principle; it will eaſily now appear, from what has been ſaid above, and in other parts of this work, how much the knowledge of thoſe diſeaſes has been improved, both in the practical and reaſoning part: and it will now, at laſt, be found a certain and eſtabliſhed fact, that both the nature and true theory of ſthenic diſeaſes, as well as the practice of the cure of them, conſidered either as an art and imitative, or as rational and ſcientific, has been diſcovered and demonſtrated.

CCCVII. As the debilitating or antiſthenic (h) remedies are the ſame with the aſthenic hurtful powers (i); ſo the ſthenic remedies (k) are alſo the ſame as the ſthenic hurtful powers.

φ. And as the remedies of aſthenic diatheſis, to whatever part they are applied, alſo ſtimulate that part more than any

(f) See par. CXXXVIII. CXL.

(g) As the moſt healthy ſtate of man is occaſioned not by the operation of any one, or of a few exciting powers, but by the united operation of them all; ſo neither is its re-eſtabliſhment to be effected, but by the ſame united operation of all the remedies, the laſt of which come to be the ordinary means of the ſupport of the healthy ſtate.

(h) See par. XC. (i) See par. CCCIV. to CCCVII. the preſent one.

(k) See par. XCI.

any other; ſome of them one, others another part, and encreaſe the excitement;

CCCVIII. So, in aſthenic diſeaſes, if we want to rouſe the excitement with more equality, and reſtore the loſt ſtrength, we muſt not depend upon the moſt diffuſible ſtimuli alone (m). For, while they indeed encreaſe the excitement over the whole body, at the ſame time, they produce that effect in the ſtomach with greater force than any where elſe. Hence, even from the beginning of the cure, when almoſt no food can be taken, and other durable and more natural ſtimuli (n) are moſt imperfectly applied; yet, together with the diffuſibles, ſoups (o) ſhould be given, and as much haſte as poſſible ſhould be made to bring the patient to take ſolid meat, while care, at the ſame time, ſhould be taken to apply a proper degree of heat. For, by this method, we moſt properly ſecure both the internal and external ſurface. Nay, in the ſame way, we move that inanition of the veſſels which takes place in aſthenic diſeaſes in an exact proportion to their degree. For, as in that abundance of blood, which is the moſt powerful means of bringing on ſthenic diſeaſes, there is an opportunity of making a quick cure by immediate taking of blood; ſo it is only by inſenſible, gradual, imperceptible, and obſcure ſucceſſive ſteps, that we open the acceſs to the removal of that penury of blood, which proves the moſt hurtful power in aſthenic diſeaſes, and effect the filling of the veſſels again.

CCCIX. After this management of both ſurfaces of the body, and this partial filling of the veſſels; ſtill the excitement is not, equally enough encreaſed. To effect this further in part; at the ſame time ſome moſt diffuſible

(m) See par. CCCI.

(n) as that of pure air, exerciſe, the ſtimulus of the motion of the food and other fluids in their reſpective veſſels.

(o) See par. CCCII.

ble ſtimulus, ſuppoſe any preparation of opium, ſhould be adminiſtered, and the little animal food, or meat, that there is any appetite for, and that can be taken and digeſted, ſhould be added. The idea of giving food is evident from the late explanation given about ſoups (q). But, the uſe of the more durable, and leſs diffuſible, ſtimulus depends on this, " that when the excitability is worn out by any one ſtimulus, any new ſtimulus finds excitability, and draws it forth, and thereby produces a further variation of the effect.

CCCX. Hitherto the ſtimulus of the motion, by which all the muſcles, which, from their ſituation on the ſurface of the body, by their contractions propel the blood along the veins to the heart, are thrown into action, has not been ſupplied (r); and, therefore, both upon account of the emptineſs of the veſſels, and the ſlow circulation from the want of that impulſe, the excitement is not ſufficiently arouſed over all that tract. After the ſtrength has, then, been ſo recruited, that rich food can now be taken, the body can now be rouſed, firſt by foreign, then by its own organs, of which the former is called geſtation, the latter exerciſe, and alſo refreſhed by air; when all that has happened, then it is, that the excitement is further raiſed in ſeveral points, and becomes more equal upon the whole.

CCCXI. The laſt ſtimuli to be mentioned, which, along with thoſe already mentioned, have a natural tendency to produce an equalization of excitement over the whole ſyſtem, ariſe from the action of the mind, the energy of paſſion or emotion, and a ſtill greater purity of air, than is attainable by perſons ſhut up in a room (s). In this ſtate

(q) See par. CCCVIII.

(r) See par. CXXXVII. α. ε. γ. δ. CCLXXIII. CCCIII.

(s) See and compare with theſe laſt mentioned ſtimuli the following paragraphs CCLXXV. CCCLXXVIII. CCLXXIX. π.

ſtate of convaleſcence, the ſame management, which was formerly mentioned upon the going off of ſthenic diſeaſes, perfectly applies (t).

CCCXII. The ſtimulant plan of cure, in all its parts, is new, whether the reaſoning part, or the merely practical be regarded; and, whether the cauſe and the exciting hurtful powers, or the indication of cure and the remedies, be conſidered. May it, therefore, be put as a queſtion, whether the whole doctrine, which has hitherto been delivered, has, at laſt, brought forward clear proof, that the art of medicine, hitherto conjectural (u), inconſiſtent

(t) The convaleſcent ſtate from either of the two general forms of diſeaſes, or from local ones, the effect of which had drawn the whole ſyſtem into conſent, is much the ſame; being a ſtate of ſome remaining debility in all; in the ſthenic from the excitement either going too low, by the remedies being puſhed to ſome exceſs, or not equally diffuſed over all the parts in conſequence of the natural ſupports only beginning to be brought fully into play; in the aſthenic from the perfect point of health being not quite gained, either from the ſtimulant remedies not having been carried exactly up to 40, or from ſome of them having been carried further than the waſted excitability could receive them with invigorating effect, and thereby an inequality left upon the whole. The convaleſcence, from the general effects upon the conſtitution ſometimes ariſing from local diſeaſes, is to be explained upon the principles laid down, with reſpect to the two other caſes of convaleſcence.

(u) Celſus ſays, ars noſtra conjecturalis eſt. And every man of ſenſe, whether of the profeſſion, or out of it, has held the ſame ſentiments of it. Nothing is more glaring than the contradictions in medical writings and reaſoning of every kind, nothing ever could be more incoherent. If a piece of knowledge, that ſets out with a fixed principle, which applies to all the parts of the detail, while they reflect on it, both illuſtration and confirmation, be entitled to be conſidered as a ſcience, the reader is deſired to conſider, how far that criterion will apply to this doctrine. The pedantry of mathematicians has contributed as much to bring their ſcience into diſgrace, as any other circumſtance, particularly in allowing no ſort of probation, but that which is made out by lines and diagrams; while, except the elements of that ſcience, every application of that department

ſiſtent with itſelf, altogether incoherent, is now reduced to an exact ſcience, proved not by mathematical principles, which is only one kind of probation, but by phyſical ones, and eſtabliſhed by the certain teſtimony of our ſenſes, nay, and by the very axioms of the mathematical elements?

## CHAP. XII.

*As the Action of all the other Powers, that act upon living Bodies, is the ſame, that that of the Remedies is alſo the ſame.*

CCCXII. As it is found certain, and proved, that the common effect of all the exciting powers is preciſely the ſame, to wit, the production of the phenomena peculiar to life, that is, that ſenſe, motion, intellectual operation, and paſſion and emotion, are the ſame; for what elſe is the effect of heat, of food, of ſeaſoned food, of drink, of the blood, of the colourleſs fluids ſecreted from it, and of the air, among external bodies; what elſe in the functions of the living body itſelf, is the effect of muſcular contraction, of thought, of the paſſions, and of ſenſation, but to excite, preſerve, and continue as the ſuſtaining cauſe of thoſe functions in common to animals? And, as it is from that evident, that the operation of all the ſame powers is alſo the ſame; (for it muſt be granted, that the ſame cauſe by an univerſal law in nature, tends to the ſame effect (a): and further, as the operation betwixt cauſe and effect depends upon

partment of knowledge has led to as many falſe concluſions as any other. If they will not allow the proof, that ariſes from our feelings, compared with thoſe of all men, whoſe organs of ſenſe are not deranged, what will they make of their own axioms? They muſt admit of other probation; while human reaſon holds its reign, truth and falſhood will be diſcriminated, without regard to ſuch empty and uſeleſs prepoſſeſſions.

(a) See par. XX, with the annexed note

upon ſtimulating (b), and that ſtimulus produces all the phœnomena of life, health, diſeaſe, and thoſe intermediate degrees between both, which are called prediſpoſitions (c); from theſe certain and demonſtrated facts it follows, and muſt be admitted, that the operation of the remedies, both in ſthenic and aſthenic diſeaſes is the ſame. For, if there is no difference betwixt health and ſthenic diſeaſes, except an exceſs of excitement in the latter, and none betwixt the former and aſthenic diſeaſes, but deficient excitement in theſe laſt, what elſe, can the operation of the remedies, to remove ſthenic diſeaſes be, but to diminiſh, and of thoſe that remove the aſthenic, but to encreaſe the excitement (d).

CCCXIII. Whatever thing produces the ſame effect as another, or ſeveral things, it muſt be the ſame thing as each of them, each of them the ſame thing as it, and every individual of them the ſame thing as every other individual.

ζ. In ſthenic diſeaſes, bleeding (e), vomiting, and purging (f), ſweating, abſtinence (g), reſt of body and mind (h) tranquility with reſpect to paſſion, all thoſe reſtore health by nothing elſe but a diminution of excitement.

CCCXIV. In aſthenic diſeaſes, the adminiſtration firſt of diffuſible ſtimulants, for the purpoſes of gradually bringing back the appetite for the greateſt remedy, food, as well as keeping the food upon the ſtomach, and of aſſiſting in the digeſtion of it (i), then the application of heat (k), then the uſe of the leſs diffuſible and more durable ſtimulants as animal food, without and with ſeaſoning, wine, geſtation, gentle exerciſe (l), moderate ſleep, pure air, exertion of mind, exertion in paſſion and emotion, an agreeable

(b) See XIX and XXII
(c) See XXIII.
(d) See LXXXVIII.
(e) See CCLXXXI.
(f) See CC. XXXIII.
(g) See CCLXXXIV.
(h) See CCLXXXV.
(i) See CCXCIV. to CCCII.
(k) See CCCII.
(l) See CCCII. CCCIII.

able exercise of the senses, all those reproduce health, by no other operation, but that of only encreasing excitement,

## CHAP. XIII.

*That all the Powers, which support any Sort of Life, or the fundamental Principal of Agriculture, are the same.*

CCCXV. AGAIN, are not the powers, which produce perfect health, the same as those, which, by an excess of force, produce, sthenic diseases; by a deficiency of force, asthenic, as well as the predispositions to both, are they not the same, with no other variation but that of degree (a)?

CCCXVI. Further, as we learn from the whole doctrine delivered above, the hurtful exciting powers, which produce sthenic diseases, are the remedies of asthenic; and those which produce the latter, are the remedies of the former (b).

CCCXVII. All the powers, therefore, that support any state of life, are the same in kind, only varying in degree; and the proposition is true, of every sort of life, to its full extent over the animal creation.

Such is the life of animals (c). Concerning which, all that has been said applies to the life of vegetables.

CCCXVIII. Accordingly, as animals, in every state of life, have their exciting powers (d) in predispositions and diseases, their hurtful exciting powers (e) in the cure of both those, their indications, and remedies adapted to each (f); all that, in every respect, is precisely the case in plants.

CCCXIX.

(a) See XXIII. LXXIII. (b) See LXXXIX. XC. XCI. XCIII. XCIV.
(c) See from X. to XIII. inclusive. (d) See LXII. LXVII. LXVIII. LXIX. LXXIII. CXII. to an CXLVII.
(e) See the same. (f) See LXXXVIII, LXXXIX. XC. XCI.

CCCXIX. The powers that ſupport plants, in every ſtate of life, are heat, air, moiſture, light, ſome motion, and their internal juices.

CCCXX. The action of plants alſo conſiſts in ſtimulus (g); by means of which, the phœnomena peculiar to that ſort of life, ſenſe, ſome motion, and verdure, are excited: and the cauſe of this ſtate is excitement, an effect in common to all exciting powers (h).

CCCXXI. Nay, in this caſe too the exciting powers, when applied in due proportion, produce health; but their too great or too ſparing action occaſions diſeaſes, or predispoſition to diſeaſes; of which the former depend on an exceſſive, the latter upon a deficiency of ſtimulus. Accordingly, exceſs or ſcantineſs of moiſture, exceſſive heat or cold, by an equality of hurtful operation, lead to diſeaſe and death, indirectly or directly. And, as the rays of the ſun or darkneſs, when their operation is either too great, or too long continued, prove debilitating, the former indirectly, the latter directly; ſo the alternate ſucceſſion of night to day, of darkneſs to night, ſeems to be the effect of an intention in nature, to prevent too great an effulgence of the light of day, or too long a continuance of it, from ſtimulating either in exceſs or in ultimate exceſs, and thereby inducing ſthenic diſeaſes, or thoſe of indirect debility; or to prevent an exceſs, or long continuance of darkneſs from producing direct debility, and the diſeaſes peculiar to it (i).

CCCXXII. Nor do plants want their excitability, which, equally as in animals, "is not different in diffe-"rent parts of its ſeat; nor is it made up of parts, but one, "uniform,

(g) See XVII. XIX. and notes. (h) See Part I. Chap. II.

(i) Chap. IV. We have no leſs proof, than that of the univerſal feeling of mankind, of the truth of what has been advanced, with reſpect to the ſtimulus of light and the debilitating effect of darkneſs.

"uniform, undivided, property over the whole ſyſtem (k)." The effect of which is, that, to whatever part of a plant any exciting power is applied, its operation, whether in exceſs, in due proportion, or in under-proportion, immediately affects the excitability over the whole.

CCCXXIII. This effect is alſo produced with the ſame inequality as in animals, being, for inſtance, greater in any part to which its exciting power is directly applied, than in any other equal part. And, as there are two reaſons for that fact in animals, the direct impreſſion of the power upon the part more affected, and a greater energy of the excitability of a part or relation to which it is ſo applied, than on that of any other equal part (l); the very ſame is the fact with reſpect to plants. Further, as the excitability bears a greater relation to the impreſſion of the exciting powers, on the brain, the ſtomach, and inteſtines, than on any of moſt of the other parts; ſo the part in plants, that correſponds to theſe parts, is the root, which is affected in the higheſt degree by the exciting powers. It is the root of plants, in preference to any of their other parts, to which the conflux of moiſture is made. The heat there is the beſt, which is neither exceſſive, and therefore liable to produce ſthenic affection, nor ultimately exceſſive, and therefore ready to induce indirect debility (both which diſadvantages are prevented by the depth of the ground); nor deficient, or what is called cold, which would bring on direct debility (m).

CCCXXIV. But the only uſe of the ſoil, through the pores of which the powers that have been mentioned penetrate,

(k) See Part I. Chap. IV. (l) See XLIX. and addition L. LI.

(m) Hence it would appear, that it ſhould be a general rule in ploughing and harrowing to adapt the depth, where the ſeed is to be laid, to the ſtate of the ſurrounding temperature. It would ſeem, when other circumſtances are equal, that the ſeeds of plants may more ſafely lie ſuperficially in warm than in cold countries. The ſame fact ſeems to be favoured by the difference of perfection that planted and natural woods attain

ſtetrate, is to furniſh that ſort of a ſtrainer, by which the powers may neither, from the pores being too patulous, go down in too great quantity, and produce firſt a ſthenic, or too luxuriant a ſtate of the plant, and then indirect debility; nor, from the contractedneſs of the pores, be inſufficiently admitted to the root, and occaſion indirect debility, or the decaying ſtate of a plant. But that the ſoil is not otherwiſe neceſſary to the production of ſome degree of vegetable life, is proved by plants often living, to a certain degree, in pure water. That however, it is uſeful as a filter, is proved by the good effect of ploughing, of breaking the clods, of dividing the tough clay by lime and other abſorbent earths, and by theſe means relaxing the pores: On the other hand, we have proof of the ſame thing in the ſucceſs of contracting the pores by making ground, naturally too friable, more tenacious with dung, and covering light ground with rags and ſtones, and thereby keeping in both heat and moiſture.

CCCXXV. From this view of the facts, the reaſon is evident, why every ſandy as well as clay ſoil, when the former has not received, and the latter parted with its toughneſs, is barren and unfruitful. Hence it is that very hot ſummers and countries are hurtful to clay grounds, by ſhutting up the pores; and ſerviceable to friable and lean grounds, by diminiſhing their poroſity. Hence, dry ſeaſons are ſuitable to low-lying rich grounds, which, from all quarters, conduct a quantity of moiſture around the roots of the plants; while rainy ſeaſons are thoſe that anſwer in grounds that are high and of a thin ſoil. Declivities facing the north, which are commonly of a thin and poor ſoil, are cheriſhed and protected by hedges and clumps of

attain in cold countries; the former, the ſeeds of which are lodged in a certain depth, turning to better account than the latter, which riſe from ſeeds that have randomly been ſcattered upon the ſurface. Might not the hills in the weſt of Scotland, upon ſome ſuch principle, be made uſeful oak foreſts?

of trees, and a great number of bare ſtones, covering every thing, which ſome perſons, of more induſtry than ſenſe, often remove with hurtful effect; their good effect being to give heat and keep in moiſture. But in thoſe places, the declivity of which looks towards the ſouth, there is not equal occaſion for ſuch protection from cold and dryneſs, as they, from their more happy ſituation, are cheriſhed by the ſun, defended from the cold winds, and expoſed to thoſe which blow from the ſouthern points that are ſeldom too dry (n).

CCCXXVI. To return from this digreſſion on agriculture to our proper ſubject; from what has been ſaid upon the cultivation and nature of plants, we learn, that their life is ſimilar to that of animals; that every thing vital in nature is governed by excitement, which the exciting powers only afford; that there is in no living, ſyſtem, whether of the animal or vegetable kind, any inherent power neceſſary to the preſervation of life; that the ſame powers which form life at firſt, and afterwards ſupport it, have at laſt a tendency to produce its diſſolution; that life, the prolongation of life, its decay and death, are all ſtates equally natural; that every living ſyſtem lives in that which it procreates; that the generations of animals and vegetables are in that way renewed, that the ſyſtem of nature remains, and maintains an eternal vigour; in one word, that all the phœnomena of nature are fabricated by one ſingle organ (o).

There

(n) While the northern winds, that is, the wind due north, and all the intermediate ones in every point of the compaſs from due eaſt to due weſt, are cold and dry, and commonly of a tendency to bring ſnow; the ſouthern, or the winds that blow from any point of the compaſs towards the ſouth, from the ſame points of due eaſt to due weſt, are as commonly warm and moiſt, and often productive of mild fertilizing rains.

(o) No diſcovery, of any importance or extent over nature, has yet been made, that does not warrant, as far as the ſmallneſs of the number of ſuch diſcoveries go, the truth of this aſſertion. See the Introduction to my Obſervations.

There are many circumſtances that give reaſon to believe, that this globe has undergone great changes, and that whatever is now ſea, has been land; whatever is land at preſent, has been ſea; and that the foſſil kingdom of nature has not been more retentive of the reſpective form of each of its individuals. But whether the laſt, like animals and plants, have a ſort of life, ſo as, after their manner, to be produced into living exiſtence, to grow, to run through a period equally without growth and diminution of bulk, to decay, to die, and, in death loſe their proper form; the great duration of their age, and the ſhortneſs of ours, deprive us of any poſſibility of learning.

CCCXXVII. As all the motions of the planets, which latter were formed to remain and continue their courſes for ever, depend upon this one principle, to proceed ſtraight onward, according to the manner in which 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 is indeed to ſupport life, but in a forced way, and then to bring on death, but by a ſpontaneous operation.

# PART THE THIRD.

## OF GENERAL DISEASES.

### THE FIRST FORM, OR STHENIC DISEASES.

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## CHAP. XV.

CCCXXVIII. IN every ſthenia, in all ſthenic diſeaſes, in the whole firſt form of diſeaſes (a) an univerſal criterion is encreaſed excitement over the whole ſyſtem, evidenced, during the prediſpoſition, by an encreaſe of the functions of body and mind (b), and demonſtrable, after the arrival of diſeaſe, by an encreaſe of ſome of the functions, a diſturbance of others, and a diminution of others; in ſuch ſort, that the two latter are eaſily perceived to ariſe from the hurtful powers that produce the former, and to depend upon their cauſe. As by that common band of union the diſeaſes of this form are connected together; ſo

CCCXXIX. There are certain circumſtances, by which they are diſtinguiſhed by a difference of their degree: for, there are ſome ſthenic diſeaſes, accompanied with pyrexia (c) and the inflammation of ſome external part; there are others without the latter of theſe, and others without both.



(a) See above par. LXIX. LXXXVIII. CXLVIII. CLI. CCLI. Chap. IX. (b) See par. CLI. throughout.

(c) See par. LXVIII. and the ſubjoined note, for the meaning of pyrexia, which will be juſt now repeated.

CCCXXX. The general ſthenic diſeaſes, with pyrexia and inflammation, are ſome of them called phlegmaſiæ, others exanthemata. But they will all, without diſtinction, be treated here according to their rank in excitement, from the higheſt to the loweſt degree of excitement.

CCCXXXI. The phlemaſiæ and exanthematic diſeaſes have the following ſymptoms in common to them. The firſt of theſe is that degree of ſthenic diatheſis, that diſtinguiſhes prediſpoſition (d). This diatheſis upon the formation of the diſeaſe, is ſucceeded by ſhivering, a ſenſe of cold, languor, and a certain feeling like that which we have in fatigue from labour, called by phyſicians, laſſitude. The pulſe at firſt, in every caſe, and in mild ones through their whole courſe is moderately frequent, and, at the ſame time, ſtrong and hard; the ſkin is dry, and there is a retention of other excretions (e): The urine is red; there is great heat and often thirſt.

CCCXXXII. The ſymptoms peculiar to the phlegmaſiæ (f), are an inflammation of an external part, or an affection nearly allied to it; while the general affection, for the moſt part, precedes this local one, and never ſucceeds to it (g). This general affection, for the greater



(d) From the firſt deviation from perfect health to the commencement of actual ſthenic diſeaſe, the ſthenic diatheſis takes place in an encreaſing ſcale from 40° to 55°.

(e) Such as that by the belly, and that which pours out the ſaliva and mucus, and forms the matter of expectoration.

(f) The phlegmaſiæ are ſthenic diſeaſes, accompanied with inflammation in an external part, as has been ſaid ſomewhere before, according to the definition of noſologiſts. But, as there is no difference betwixt them and ſynocha or the catarrh, which latter are unaccompanied with inflammation, we therefore pay no regard to the diſtinction; and ſhall regard nothing either in theſe or any other diſeaſes, but what is conſtituted by a real difference of excitement. It is the excitement by which we are to be guided through our whole diſtribution of diſeaſes.

(g) Long before any part of this doctrine was diſcovered, when I was in

convenience of diſtinguiſhing it from fevers, is to be denominated pyrexia (h). In the exanthematic ſthenic diſeaſes, an eruption of ſpots or puſtules, more or leſs crowded, according to the degree of the diathesis, covers and diverſifies the ſkin. The eruption appears upon the occaſion of a foreign, contagious matter, having been taken into the body, and detained below the cuticle.

CCCXXXIII. The explanation of all thoſe ſymptoms eaſily flows from the doctrine delivered above. The ſthenic diatheſis in the manner, that has been ſo fully explained

in ſearch of certain facts reſpecting peripneumony and pleuritis, I diſcovered one which I was not looking for, of more importance than all the reſt put together. It had been aſſerted, by moſt ſyſtematics and all the noſologiſts, that the primary ſymptom in the phlegmaſiæ was the inflammation of a part. I ſaw that was not true with reſpect to rheumatiſm, in which the general affection or pyrexia often rages one, two, or three days before the ſign of inflammation, pain, is perceived in any of the joints. I could alſo diſcern, that from the moment the pain and inflammation appeared in eryſipelas, or the roſe, there was alſo the general affection equally conſpicuous. In ſhort, in no one of that ſet of diſeaſes, did the fact appear that the inflammation was primary, and the pyrexia, or affection of the whole ſyſtem dependent upon it. But as peripneumony was ſaid in Edinburgh to be an exception, the detection I made equally diſproved that. In all the works of Morgagni, where peripneumony and eryſipelas are treated, and in all thoſe of Trillerus, a profeſſed writer on that ſubject, and in a theſis in Sandifort's Theſaurus, taken from no leſs than 400 caſes of that diſeaſe (for they are now by others, as well as me, conſidered as one), I found that in ſomewhat more than one-half of the given number, which was very reſpectable, the general affection appeared from one to three days before the pain came on, and in all the reſt of the caſes that, though for any thing theſe authors ſaid to the contrary, they might ſometimes have come on together, yet, there was not one, in which it could be fairly alledged, that the pain was the firſt and primary appearance. Hence I found, that all the theories raiſed upon that hypotheſis of courſe fell to the ground. Indeed the fact is quite conſiſtent with every one here.

(h) Of this deſignation warning has been given more than once. See note at CCCXXIX.

ed (i) precedes. The characteriſtics of the pulſe are never to be referred to the affection of a part, having been demonſtrated to ariſe from the diatheſis (k).

CCCXXXIV. The frequency of the pulſe in ſthenic diſeaſes is moderate, becauſe, while the ſtimulus in the ſyſtem cannot fail to produce ſome frequency, the quantity of blood, to be thrown into quick motion, ſets bounds to it and prevents its riſing to quickneſs. But, at the ſame time, it is evident, that a quantity ſo great cannot be tranſmitted with the ſame celerity, as an under proportion (l). The ſtrength of the pulſe is occaſioned by the degree of excitement in the moving fibres of the veſſels, which is commonly called their tone, and by that of their denſity conſidered as ſimple ſolids (m). The hardneſs of the ſthenic pulſe is nothing elſe, than the continuance for ſome time of each ſtrong contraction, cloſely embracing a great column of blood, and, thereby, as it were, reſembling a ſtretched rope (n).



(i) See above all the paragraphs, where the operation of the powers producing ſthenic diatheſis, are accounted for.

(k) See alſo par. CLV. and CLVI. and particularly CLXXIV.

(l) In fevers and other aſthenic diſeaſes of great debility, from the weakneſs of the ſtomach and other digeſtive organs, and the ſmall quantity of nutrient matter taken in, the quantity of blood which is diminiſhed in every one of thoſe diſeaſes, cannot be more than one-third leſs than that which overfills the veſſels in ſthenic diſeaſes. Conſequently, by a given power, it may be propelled in the ſame proportion, that is, one-third faſter than in the ſthenic diſeaſes, which alſo appears in fact; for while 100 beats in a minute is a frequent pulſe in ſthenic diſeaſes, till their approach or actual converſion to indirect debility, the common frequency in fevers and the other high aſthenic diſeaſes, is 150 beats in the ſame time.

(m) See above LIX. LX. and LXI.

(n) See par. CLV. If it ſhould be alledged, that, though in fevers and the other caſes mentioned juſt now in the note (a), the deficient quantity of blood to be put in motion will account for the greater celerity

CCCXXXV. That this is the exact ſtate of the arteries is proved by the great quantity of food taken with a good appetite, before the arrival of the diſeaſe, and during the period of prediſpoſition; it is proved by the ſame and other powers, giving an unuſually great excitement over the whole ſyſtem (o), and, therefore, among their other effects encreaſing the digeſtive energy; and it is proved by evacuant, with other debilitating remedies, both preventing and removing the diſeaſes. The confounding, therefore, this ſtate with one diametrically oppoſite (p), which has hitherto been an univerſal practice, was a very capital blunder, and could not miſs of producing the worſt conſequences, by equally perverting the theories and actual practice of the art.

CCCXXXVI.

rity of motion, than in the diſeaſes which make the preſent ſubject; ſtill the great weakneſs of the heart, for want of the ſtimulus of a due quantity of blood, as well as of many others, ſhould overbalance the effect ariſing from the ſmall quantity to be moved. But the anſwer to that objection is eaſy. It ariſes from the explanation of the ſtrength and hardneſs of the pulſe juſt now mentioned in the text. The febrile pulſe is indeed one-third quicker than the ſthenic pyrexial, but it is weak, and ſmall, and ſoft, while the other is ſtrong, and full, and hard. An equal force then of the heart to that in the ſthenic caſe is not required to account for the difference of the effect. A third leſs of blood, with an equal force behind, will be driven not only one-third faſter, but with ſtrength and hardneſs. The want of theſe two laſt then is to be ſet to the account of the heart's greater weakneſs. Though the blood then be driven one-third quicker, yet the impulſe communicated upon the whole is one third leſs, as the characteriſtics of both kinds of pulſe readily explain to us.

(o) See the whole of the firſt Chapter of Part II. upon the powers producing ſthenic diatheſis.

(p) Which authors and too many practitioners have univerſally done, in jumbling proper fevers with the preſent diſeaſes, under the vague and falſe denominations of febrile or feveriſh diſeaſes. In noſology the ſynochus is conjoined with typhus, the gangrenous ſore-throat, which is a typhus fever, with the common ſthenic inflammatory pyrexia.

CCCXXXVI. The ſhivering and ſenſe of cold depend for their cauſe upon the dryneſs of the ſkin. The languor and feeling of laſſitude point out a higher degree of excitement in the brain and fibres of the muſcles, than can be conveniently borne by the excitability, confined within certain boundaries (q). They are therefore functions impaired from a ſtimulant, not from a debilitating cauſe (r).

CCCXXXVII. The dryneſs of the ſkin is occaſioned by the great excitement and denſity of the fibres that encircle the extreme veſſels, diminiſhing their diameters to ſuch a degree, that the imperceptible vapour of perſpiration cannot be taken into them, or, if taken in, cannot be tranſmitted (s). This ſtate is not ſpaſm, is not conſtriction from cold, but a ſthenic diatheſis, ſomewhat greater on the ſurface, than in any other part. The ſtimulant energy of heat, eſpecially after the application of cold, which is otherwiſe a powerful exciting cauſe of ſthenic diſeaſes, is applied to this part with more force than to any of the interior parts, and encreaſes the ſum total of ſtimulant operation (t).

CCCXXXVIII. The ſame, in general, is the cauſe of the temporary retention of the other excretions (u); only that the operation of heat, juſt now mentioned (x), is foreign from the preſent explanation; and on that account, the diatheſis that affects the interior veſſels is more gentle. Theſe veſſels, for that reaſon, and becauſe they

(q) See above CLIV. (r) See above par. CLXVI.

(s) See LXIX. and CXIII.

(t) See XXXVII. θ. and CXIII. juſt now quoted.

(u) See CCCXXXI. and note (d); and alſo the par. CLIX. CLX. CLXIII.

(x) in the CCCXXXVIII. and the reaſon is, that heat being ſtationary in the interior parts, has not that force which it has upon the external ſurface. See above par. CXIII.

they are naturally of a large diameter, are ſooner relaxed in theſe diſeaſes, than the pores upon the ſkin (y).

CCCXXXIX. The redneſs of the urine is owing to the general diatheſis affecting the veſſels that ſecrete it, and proving an obſtacle to the ſecretion (z). Hence ariſes the ſtraining of the fluid to be ſecreted to diſtend the ſmall veſſels (a), and the counterſtraining of the moving fibres, by their contractions, to diminiſh the cavities which the diſtention encreaſes; and, in ſo far as they perform the function of ſimple fibres, to reſiſt the diſtention. But, as, in this forcible action of the veſſels, the coheſive force of all the ſimple ſolids yields ſomewhat, the effect comes to be the tranſmiſſion of ſome particles of blood. This tranſmiſſion happens not at firſt, becauſe the diſtenſion does not ſuddenly, but after ſome time, overpower the coheſion of the maſs of ſimple ſolids.

CCCXL. The cauſe of the great heat is the interruption of the perſpiration, preventing the heat generated in the inner parts of the ſyſtem to paſs off by the ſkin.

CCCXLI. The thirſt is occaſioned by the ſthenic diatheſis, cloſing up the excretory veſſels of the throat, and there oppoſing the excretion of the peculiar fluid (c). And the heat, by diſſipating what fluid is excreted, contributes to the effect.

CCCXLII. The inflammation and affection nearly allied to it (d), whether of a catarrhal or of any other nature, is a part of the ſthenic diatheſis, greater in the affected, than any other equal, part of the ſyſtem (e): Which is manifeſted

(y) It is reaſonable to think, that veſſels, which pour out a watery fluid, have a larger diameter than thoſe, which, like the perſpiratory, even in their healthy ſtate, only tranſmit an imperceptible vapour.

(z) See par. CLXIII. (a) Or tubuli uriniferi.

(c) See par. CLIX.

(d) mentioned above in par. CCCXXXII.

(e) CLXVIII. CLXIX. CLXX. CLXXI.

feſted by the exciting powers, alſo in this caſe acting upon the whole ſyſtem, by the ſymptoms of the diſeaſes ſhowing an affection in common to the whole, and by the remedies driving that affection, not from the inflamed part only, but from the whole ſyſtem (f).

CCCXLIII. The general affection, for the moſt part, precedes that confined to one part, or is ſynchronous with it, never comes after it, becauſe its cauſe, the exceſſive excitement (g), producing the diatheſis, exiſts before the diſeaſe itſelf (h); and, though it forms the rudiments of the affection of the part during the prediſpoſition (i), yet it does not, at that time, form that affection itſelf, and not always even during the diſeaſe, but only in a certain high degree both of the diſeaſe and of the particular affection itſelf (k). Hence, when the diatheſis is great, the affection of the part is in proportion (l) and ſlight under a leſſer degree of the diatheſis (m); while in a moderate and gentle diatheſis it does not happen at all (n) and for this reaſon, that a high degree of diatheſis is neceſſary to the formation of it. Thus in peripneumony, where the diatheſis is the greateſt, and in rheumatiſm, where it is next in greatneſs, the inflammation is found proportionably great (o). And even

(f) LXXXIX. See alſo part firſt, Chap. IV.

(g) See LXII. LXIX. (h) See CLXXIV.

(i) See above CLXIX. (k) See above CLXVIII. n.

(l) as in peripneumony and rheumatiſm, inflammatory ſore throat, and mild eryſipelas, ſore throat.

(m) as in the ſthenic.

(n) As in ſynocha, or the common inflammatory fever and catarrh.

(o) This propoſition does not go ſo far as to aſſert, that there may not be a ſthenic diſeaſe, without any actual inflammation, but with an affection of a part nearly allied to it, which depends upon an equally high diatheſis as either peripneumony or rheumatiſm, and even higher than the latter. Such we find, as I have formerly ſaid (CLVII and CLVIII.) in phrenitis. But the meaning is, that the inflammation, when it does happen, is always in proportion to the degree of diatheſis.

even in the meaſles, the danger of which turns entirely upon the degree of ſthenic diatheſis, the danger of inflammation is equal, by which, and often in a high degree, the lungs themſelves are affected. Synocha is never phrenitic, but when a great diatheſis occurs, threatening the brain with inflammation, or the danger of it. Nor is there any danger to be apprehended in eryſipelas (p), even when its inflammation affects the face, but when the pyrexia is violent. And the mildneſs of the diatheſis enſures a good termination. Simple ſynocha is nothing elſe but a phlegmaſia, conſiſting of a pyrexia and diatheſis, inadequate, upon account of their ſmall degree, to the production of inflammation. Yet, as all the hurtful powers producing it, and all its remedies are preciſely the ſame, with thoſe of any phlegmaſia; the ſeparating it from them, and uniting it with fevers, which are diſeaſes of extreme debility, was an unpardonable blunder (q); and ſo much the more ſo, that inflammation, which was falſely ſuppoſed eſſential to the nature of the phlegmaſiæ, does take place in it, as often as the diatheſis, neceſſary to produce it, is preſent (r). Yet this fact, upon account of another blunder, neither of a ſlighter nature, nor of leſs hurtful conſequence, that of ſuppoſing inflammation the cauſe of the phlegmaſiæ, could not be diſcerned. In fine, to remove all doubt of inflammation being compatible with the nature of catarrh, but commonly not taking place in it, upon account

(p) or the roſe, or St. Anthony's fire.

(q) This has been more than once hinted at, and once a little above. The Noſologiſts have excluded ſynocha from their order of phlegmaſiæ, becauſe forſooth, though it was in every other reſpect the ſame, it wanted the inflammation of a part, and they united it with proper fevers, though in the powers producing it, in its proper cauſe, and in the remedies that remove it, it was in every reſpect diametrically oppoſite to thoſe diſeaſes. But their rule of judging was different from ours.

(r) What is a peripneumony, a rheumatiſm, or any phlegmaſia, but a ſynocha, with a diatheſis ſufficient to produce inflammation?

account of the moderate general diatheſis, upon which it uſually depends ; even in it, as often as the diatheſis riſes high, which ſometimes happens, when the proper plan of cure for it has been neglected, and the effect of the exciting hurtful powers has been carried to exceſs, an inflammation, and a formidable one indeed, ariſes, often affecting the throat (s), and ſometimes the lungs, and producing there an affection riſing to all the rage of peripneumony.

CCCXLIV. It is in vain to talk of a thorn thruſt under the nail, wounding it, ſuperinducing inflammation upon the wound, and ſpreading a ſimilar affection along the arm to the ſhoulder, and a pyrexia over the whole body, As an illuſtration and proof of the manner, in which the phlegmaſiæ ariſe from inflammation. For nothing like a phlegmaſia follows this, or any ſimilar affection of a part, unleſs the ſthenic diatheſis previouſly happens to have taken place, and is now upon the eve of ſpontaneouſly breaking out into ſome one or other of its reſpective diſeaſes. But, without that diatheſis, no general affection takes place, and if an oppoſite diatheſis be preſent when ſuch an accident happens, an oppoſite general affection will be the conſequence, to wit, a typhus fever, ariſing as a ſymptom of gangrene (t), and dangerous to life.

CCCXLV. That the affection of the part depends upon the general affection is proved by the frequent occurrence of inflammation, without being followed by any phlegmaſia.

(s) When that happens it is ſtill commonly a mild diſeaſe, as will be ſhewn by and by.

(t) It is with much regret, that I ſhould have had occaſion to obſerve the bad, and too often fatal, conſequence of treating ſuch local affections, without diſcrimination of the habit with which they may coincide. The diſeaſe is treated by evacuation and ſtarving, even in habits the moſt weakened, and drink is withheld from perſons even the moſt accuſtomed to it. The diſeaſe increaſes, and, as if that were for want of more ſuch treatment, the ſame treatment is perſevered in till death cloſes the ſcene.

phlegmaſia. Which happens, as in the caſe juſt now mentioned, as often as the general diatheſis is abſent, or the inflamed part is not an internal one and of high ſenſibility (u). Accordingly, all the examples of phlegmone, all thoſe of erythema or eryſipelas, without general diatheſis (x), are foreign from the phlegmaſiæ, abſurdly conjoined with them, and more abſurdly ſtill conſidered as their prototypes; being in fact all only local affections, or ſymptoms of other diſeaſes. This concluſion is not weakened by a certain reſemblance of diſeaſes with inflammation in an internal part to the phlegmaſiæ; theſe diſcaſes being neither preceded by the uſual hurtful powers, that produce either the phlegmaſiæ, or any general diſeaſe whatever, nor cured by the uſual remedies of the latter. It was, therefore, a very bad miſtake, and of moſt hurtful conſequence to the practice of cure, to enumerate among

(u) See above CLXXI.

(x) See alſo par. LXXXI. The Noſologiſts, under their genus of phlegmone which in one of them is divided into two ſpecies, proper phlegmone, and erythema, have raked together a number of local, and moſt of them inſignificant affections, which they have conſidered as laying the foundation of their phlegmaſiæ, or general ſthenic diſeaſes with an inflammation in a part. But will any man in his ſenſes ſee any connection betwixt chill-blanes, which is one of them, or anthrax, which is a local ſymptom of the plague, or the ſlight inflammation upon the eye, called a ſtie, or the inflammation in the groins of children from their being ſcalded by their urine, or the bites of inſects, the effects of which are confined to the bit part; will he ſee any connection betwixt theſe and a peripneumony; which ariſes from hurtful powers affecting the whole ſyſtem, and no part in particular; and is cured by remedies that affect the whole ſyſtem, and the inflamed part not more, nor even ſo much as many others? All theſe, however, have been made the prototypes of inflammation, by which they meant their phlegmaſiæ; as if there were nothing to be regarded in them but the inflammation, which, in fact, is their moſt inſignificant part, bearing no higher proportion to the ſum of morbid ſtate over the ſyſtem than that of 6 to 3000, or even leſs. See above Part firſt, Chap. IV. and particularly par. L.

among the phlegmaſiæ thoſe diſeaſes, that ariſe from ſtimulants, acrids, and compreſſion, and are only curable by removing their local cauſe, which is ſeldom effected by art (y).

CCCXLVI. It is not without good reaſon, that the appellation of pyrexia has been given to the general affection, which appears in the phlegmaſiæ and exanthemata; they being by it moſt advantageouſly diſtinguiſhed on the one hand from fevers, which are diſeaſes of debility in extreme, and on the other from a ſimilar, but altogether different, affection, which is a ſymptom of local diſeaſes (z) and may be called a ſymptomatic pyrexia.

CCCXLVII.

(y) See above par. LXXXI. Take for an example gaſtritis, which the Noſologiſts have made one of their phlegmaſiæ, and put upon the ſame footing with the peripneumony and the other diſeaſes that may be admitted as phlegmaſiæ. That affection is an inflammation in a portion of the ſtomach, in conſequence of a ſolution of continuity from the previous ſwallowing of ground glaſs, ſmall fiſh bones, a quantity of Cayen pepper; or ſymptomatic of a ſchirrous obſtruction and tumor. Theſe, not the ordinary hurtful ones that operate upon the whole ſyſtem, as in the true phlegmaſiæ, are the powers that induce that affection. It has no connection with the excitement, the affection of which is only an effect of the local ſtimulating power, and of the ſenſibility of the ſtomach; its true cauſe being the ſolution of continuity or obſtruction, keeping up the inflammation; and its remedies ſuch, as are adapted to the removal of that local ſtate. It may happen to a ſound habit, where there is no diatheſis in any degree, in which caſe it is purely local; or it may accidentally coincide with either diatheſis; in which caſe it is a combination. When the combination is with ſthenic diatheſis, debilitating evacuant remedies can only palliate, but they bring life into danger when the aſthenic diatheſis is preſent, which is 17 times out of 20 for the other.

(z) The general affection ariſing in the ſyſtem from the effect of a thorn puſhed under the nail (ſee par. CCCXLIV. and note), and that occurring in the gaſtritis, mentioned in the laſt paragraph of the text (ſee the note on that garagraph) are good examples of caſes to which the term ſymptomatic pyrexia ſhould be applied.

CCCXLVII. The true ſthenic diſeaſes (a) accompanied, except one, with pyrexia (b) and external inflammation (c), are peripneumony, phrenitis, the ſmall-pox, the meaſles, as often as theſe two laſt are violent, the ſevere eryſipelas, rheumatiſm, the mild eryſipelas, and the cynanche tonſillaris. Thoſe free of inflammation are catarrh, ſimple ſynocha, the ſcarlet fever, the ſmall-pox, the meaſles; when in the two latter caſes, the eruption conſiſts only in a few puſtules.

*The Deſcription of Peripneumony.*

CCCXLVIII. The ſymptoms peculiar to peripneumony (d) (under which pleuriſy, and, as far as it is a general diſeaſe, carditis, are comprehended), are pain ſomewhere in the region of the cheſt, often changing its ſeat; difficult breathing; cough, for the moſt part bringing up an expectoration, and ſometimes a mixture of blood in the matter of expectoration.

CCCXLIX. The ſeat of the diſeaſe is the whole body, the whole nervous ſyſtem (e); which is proved by the diſeaſe being produced by an increaſe of the diatheſis, which took place in the prediſpoſition, and by no new circumſtance (f); by the inflammation within the cheſt, for the moſt part following the pyrexia at a conſiderable interval of time, and never preceding it (g), and by bleeding and other

(a) See above CCCXXIX.

(b) See par. CCCXXXII. (c) See CLXVIII.

(d) The ſymptoms in common to it and the other diſeaſes of the ſame form, enumerated in the laſt paragraph, have been deſcribed in par. CCCXXXI. Theſe peculiarly diſtinguiſhing the phlegmaſiæ and exanthemata, that is the diſeaſes either accompanied with inflammation, or an approach to it, are deſcribed in par. CCCXXXII.

(e) See par. XLVII. XLVIII. XLIX. LIV. LV. and not the inflamed portion of the lungs, according to the common opinion.

(f) See above LXXV. LXXVII.

(g) See above CCCXXXII. and the note (b).

ther remedies of ſimilar operation, which affect not the inflamed part, more than any other equally diſtant from the center of activity, removing the diſeaſe. The proper ſeat of the inflammation, which is only a part of the general diatheſis, is the ſubſtance of the lungs, and a production of the pleura, covering their ſurface, or any part of that membrane, whether the part lining the ribs, or that containing, within the external ſurface of it, the thoracic viſcera, different in different caſes, and in the ſame caſe at different times.

CCCL. Pain, in ſome part of the cheſt, depends upon an inflammation of the correſponding internal parts juſt now mentioned (h), which is proved by diſſection; only that it is oftener occaſioned by an adheſion of the lungs to the pleura coſtalis, ſeldom to an inflammation of that membrane, as we learn from the ſame evidence.

CCCLI. When the inflammation takes place on the ſurface of the lungs, it is impoſſible it can be confined either to the ſubſtance of the lungs, or the membrane covering their ſurface. For how can any perſon ſuppoſe, that the points of the ſame veſſels, either as diſtributed upon the membrane, or plunging into the ſubſtance of the lungs, or emerging from it, can alone be inflamed without a communication of the affection to the next points (i). The diſtinction, therefore,

(h) See above, par. CLXXIV.

(i) Yet one Noſologiſt, upon that very ſuppoſition, makes two orders of phlegmaſiæ, one ſeated on the membrane, the other in the interior ſurface of each viſcus. Into this error, he had been led, by obſerving, that, after death, the interior ſubſtance of the liver exhibited ſigns of previous inflammation. And, as other diſſections ſhowed the membrane upon other occaſions to have been in a ſtate of inflammation, he thence drew his raſh concluſion. But it is to be obſerved, that the firſt mentioned ſtate of the liver was not a phlegmaſiæ at all, as it had not during life exhibited any of the ſymptoms of that diſeaſe, or even given any ſign of the preſence of inflammation. It is a caſe, then, we have nothing to do

fore, of the inflammation accompanying the phlegmaſiæ into perenchymatoſe, or that affecting the ſubſtance of the viſcus, and into membranous: as well as the notion which makes the latter caſe univerſal, is equally remote from the truth. The reaſon of neither the membrane contiguous to the lungs, nor the ſubſtance of the latter, being always inflamed, but of the inflammation being ſometimes communicated to ſome part of the neighbouring membrane, is explained by the vicinity of the part inflamed in the laſt caſe to that which receives the air, and, therefore, varies in its temperature (k).

CCCLII. The pain often ſhifts its ſeat (l) in the courſe of the diſeaſe, becauſe its immediate cauſe, the inflammation, is equally liable to change, being diſpoſed to leave its firſt ſeat, or in part to remain in it, while in its greateſt part it ruſhes into another. Which is a fact proved by the compariſon of the known change of the pain with the

do with upon this ſubject, even ſo far as it applies to the liver. But the extending the application to all the viſcera, which he was pleaſed to make the ſeats of ſome phlegmaſiæ or other, was looſneſs of reaſoning, and careleſſneſs of matter of fact, in extreme. A gentleman, whoſe works have lately been buried, without any ſtruggle or ſigns of life, but that of a feeble unintelligible ſound from within the tomb, which no living reaſon could make any ſenſe of in their life time, took it into his head to maintain (for the ſake of ſeeming to differ with men of name and reputation, his higheſt ambition), that the inflammation in the phlegmaſiæ was always ſeated in the membrane: The anſwer to which is given in the text.

(k) So far is it from being true, that this ſort of inflammation can be confined to a few points of the affected veſſels (ſee the note here at (i), that in fact we find it, though not ſo often as has been ſuppoſed, ſometimes in the mediaſtinum, ſometimes in the external membrane of the pericardium, ſometimes in the ſuperior membrane of the diaphragm. Boerhave's notion of the tranſlation of inflammation from one viſcus to another, was an error in the oppoſite extreme.

(l) See above CCCXLVIII.

the traces of inflammation in the correſponding parts, diſcovered after death (m).

CCCLIII. This fact, added to thoſe already produced, brings another ſolid argument (n) in refutation of the opinion of the diſeaſe being produced or kept up by inflammation, or in any ſhape depending upon it; confirms that here advanced, and proves that the inflammation is regulated by a ſtrong general diatheſis, and directed by it ſometimes to one part, ſometimes to another; that, as depending on that cauſe, it increaſes and is in a manner multiplied. And the ſame concluſion is confirmed by the inflammation abating, becoming more ſimple, and at laſt receding from every part it had occupied, in proportion to the progreſs of the cure in relieving or removing the diatheſis. The ſame fact is confirmed by the nature of rheumatiſm, the pains of which are ſeverer and greater in number, in proportion as the diatheſis runs higher; and milder and fewer in proportion to its gentleneſs. Theſe pains, that have their dependance upon the general diatheſis, and are a part of the general diſeaſe, ought to be diſtinguiſhed from local ones, which often occur, and may accidentally precede this diſeaſe (o).

CCCLIV. The difficult breathing is owing to no fault in the lungs, as an organ, to no defect of excitement in them, but to the air alone in inſpiration, by filling and diſtending its own, compreſſing the inflamed, veſſels.

CCCLV. The cauſe of the cough is a large ſecretion and excretion of the exhalable fluid, and mucus, irritating the

(m) Many ſuch are to be found in Morgagni, Bonnetus, and Lentaud.

(n) See all that has been ſaid.

(o) Stitches, as they are called, frequently happen from ſlight accidents, and may appear before the arrival of rheumatiſm, but they ſhould be diſtinguiſhed from the pains that ariſe from the diatheſis, conſtituting that diſeaſe; a diſtinction, that has ſeldom been attended to, for want of a right principle to lead to ſuch attention.

the air veſſels, encreaſing their excitement, as well as that of all the powers, that enlarge the cavity of the thorax; then ſuddenly ſuſpending it, and thus performing a full inſpiration, and a full expiration, partly in conjunction with the operation of the will (p).

CCCLVI. The cough is leſs or none at all at firſt; becauſe, on account of a ſtrong diatheſis occupying the extremities of the veſſels, the ſame fluids flow on in the form of an inſenſible vapour, are leſs irritating in that form, and diſmiſſed with leſs effort.

CCCLVII. Again, the cough is afterwards followed by expectoration; becauſe the accumulated fluids, with their effect, the effort of coughing, are carried forward in the rapid action of the air ruſhing out, as it were, in a torrent (q). And the mixture of blood with them point out the force of ſecretion formerly explained.

CCCLVIII. The ſoftneſs of the pulſe, commonly taken into the definition of the diſeaſe (r), has been here rejected, becauſe the characteriſtics of the pulſe do not follow the inflammation, but the general diatheſis (s). With reſpect to the diatheſis, the proper language is, that the pulſe, inſtead of ſoft, is leſs hard; and when the effect, that the cure has produced upon the pulſe, is conſidered, it may then be ſaid to be ſoft (t).

CCCLIX. Nor is the varying feeling of pain, which is deſcribed as ſometimes acute, and pungent, ſometimes obtuſe, gravitative, and rather to be conſidered as an uneaſineſs than pain, though immediately dependent upon the

2 inflammation,

(p) See above CLX. and CLXI. (q) See above par. CCXXXIX.

(r) at leaſt, when they called it peripneumony,

(s) See above CLV. CLXXIV.

(t) It is an univerſal effect of ſthenic diatheſis to render the pulſe hard in one degree or another. And peripneumony is not an exception from that fact. But the diſtinction aroſe from the miſtake of inflammation being the all, inſtead of an unimportant part of, the diſeaſe.

inflammation, to be considered as of any consequence in pointing out the state or seat of the inflammation: because, however great the inflammation is, wherever it is seated, whatever danger it denounces, the only means of removing it, and of averting the danger, is to remove the general diathesis. The notion, therefore, of the membrane being inflamed, when the pain is acute, and the interior substance, when it is obtuse, must be rejected as good for nothing, must be guarded against as destructive (u). For often, when the disease has arrived at an advanced stage, a sudden abatement of the pain taking place, without a proportional relief of the breathing, to an unskilful person gives an appearance of a return of health. But the cause of that, while it has nothing to do with the seat or sort of inflammation, is that degree of excitement, which shows, that the excitability is exhausted, the excitement come to an end, and that the vigour, before excessive, is now converted into direct or indirect debility (x). Hence arises in the vessels, especially the labouring vessels, in place of the excessive excitement, with which they were before affected, no excitement at all; and extreme laxity takes place of their former density. Hence, instead of an excretion encreased by violence, an immense discharge takes place without force, without effort, and merely by the watery part of the fluid, from the inert state of the vessels, leaving the more consistent; and a sudden suffocation takes place, in consequence of an effusion of fluids from all quarters into the air vessels.

CCCLX. The carditis, or inflammation of the heart, is a disease of rare occurrence, is ill understood, and for



(u) See par. CCCLI. and the note under it at (i).

(x) The direct debility may be owing to the proper cure, which is directly debilitating, having been carried too far, or to the indirect debility arising in the course of the disease, seldom now to alexipharmac treatment. See above par. XLVII. and the subjoined notes.

the moſt part a local affection. When the latter is the caſe, there is no uſe for the interference of a phyſician. And, if ever it be a general diſeaſe, it admits of no other definition or cure but thoſe of peripneumony. From peripneumony then, as it ariſes from the ſame antecedent hurtful powers, and is removed by the ſame remedies, it is not to be ſeparated.

*The Deſcription of Phrenitis.*

CCCLXI. Phrenitis is one of the phlegmaſiæ (y), with a ſlight inflammatory or catarrhal affection of ſome one, or more joints, or of the fauces, with head-ach, redneſs of the face and eyes, impatience of light and ſound, watchfulneſs, and delirium.

CCCLXII. Inflammation, in its proper form, appears not in this caſe. And yet there is an approach to inflammatory ſtate in the joints, in the muſcles, and eſpecially over the ſpine, or about the cheſt, or in the bottom of the throat; or there is a catarrhal ſtate, which is an affection depending, however, upon the ſame cauſe, as inflammation, and only differing from it in being leſs.

CCCLXIII. The head-ach, and redneſs of the face and eyes, ariſe from an exceſſive quantity of blood in the veſſels of the brain and its membranes, diſtending, ſtimulating in exceſs, exciting in exceſs, and contracting the veſſels, to a degree that gives pain (z). To the production of which laſt inflammation is not neceſſary; independent of which, this exceſſive action is painful, becauſe it exceeds that mediocrity in which agreeable ſenſation takes place (a). The redneſs both points out and explains the over-proportion of blood. And that the over-proportion gives pain by its diſtending operation, is ſhewn by the relief

(y) See above par. CCCXLVII. (z) See above CLVII. and CLVIII.
(a) See par. CLXXXII. CLXXXIII.

lief that bleeding and every thing that diminiſhes the quantity, and moderates the impetus of the blood, adminiſters.

CCCLXIV. It is the overabundance alſo that produces the impatience of light and ſound. For, as a certain impulſe of the blood is neceſſary to the exerciſe of every ſenſe, by wheting the organ of ſenſation (b); ſo, when the cauſe riſes to exceſs, an equal encreaſe of the effect muſt be the conſequence. But theſe very ſymptoms, with pain, ariſe in an oppoſite ſtate of excitement, to wit, the aſthenic.

CCCLXV. The vigilance and delirium are occaſioned by the ſame exceſs of excitement, produced by the exceſſive ſtimulus of the abundance of blood and of the other powers. Other hurtful powers, contributing their effect, are intenſe thinking, and a high commotion of paſſion. Excited by thoſe, no body, even in health, ſleeps; and, therefore, the wonder is the leſs, that a high degree of them, and under the influence of a violent diſeaſe, ſhould repel ſleep. Both encreaſed watching and delirium are ſymptoms of diſturbance.

*An Explanation of the Sthenic Exanthemata.*

CCCLXVI. The ſthenic exanthemata, after the application of a contagious matter, and of the uſual hurtful powers which produce ſthenic diatheſis, appear firſt in the form of a ſthenic pyrexia, or ſynocha, and then after a ſpace of time, not certain to a nicety, are followed with ſmall or larger ſpots.

CCCLXVII. That the exanthematic ſthenic diſeaſes differ not from the other ſthenic diſeaſes not exanthematic,



(b) There is commonly in the organ where any nicety of ſenſe is to be exerciſed an extraordinary apparatus of blood veſſels. Blood flowing into theſe, encreaſes, by its heat and the ſtimulus of its motion, the ſenſe, to which it is ſubſervient.

in any circumſtance of conſequence, is proved by this ſtrong argument; that, except the eruption and the phænomena peculiar to it, there is nothing in the ſymptoms, and except the contagion, there is nothing in the hurtful exciting powers, but what happens in any ſthenic diſeaſe; and the preventatives, as well as the remedies, are the ſame in all. While that is the ſtate of the fact, it was the height of abſurdity, merely for the ſake of the eruption and its peculiar phænomena, to ſeparate the exanthematic from their kindred diſeaſes, and to unite them with the moſt oppoſite diſeaſes both to them and to one another (c). For how,

(c) The noſologiſts have ſeparated the exanthematic diſeaſes, real or imaginary, into a claſs or order by themſelves, which they have filled up with diſeaſes, of which there is not two, but the ſmall-pox and meaſles, that have any other connection, than their mere eruptive appearance, while they are ſeparated from others, with which, in every reſpect, they have the moſt eſſential connection. Thus the ſmall-pox and meaſles are taken from the natural place to which they are here reſtored. And it is unaccountable, that we ſhould have it to ſay, that even eryſipelas, which has ſurely no right even to the ſlim diſtinction of eruptive, has alſo been placed among them. Again, the plague, which is to all intents and purpoſes a typhus fever, its eruptive part not always disjoining it from that, is ſeparated from it, though it is ſo nearly the ſame, ſcarcely excepting degree, and conjoined with ſthenic diſeaſes of a diametrically oppoſite nature. And the gangrenous ſore throat, which is alſo a typhus, has neither been placed among fevers, in its proper place, nor among the exanthemata; to which the efflorescence, that it produces on the external ſurface, according to their own rules of arrangement, ſeemed better to entitle it than ſome others, eſpecially the eryſipelas. And it again (for there is no end of the confuſion of this pretended order of ſome phyſicians), is conjoined not only as a genus with ſthenic diſeaſes, but even as a ſpecies of one of thoſe genera. The truth is, that ſyſtematics, who were otherwiſe no noſologiſts, have made too much work about eruptive and contagious diſeaſes, and have never dived into the interior nature either of them or almoſt of any other. They have all followed each other from their firſt leader, and never once deigned to turn a glance of their eye upon the phænomena of nature as theſe

aroſe

how, when the uſual plan of cure removes the effect of the eruption, whatever that be, and thereby ſhews it to be the ſame, can any one imagine, that the cauſe ſhould be different and not preciſely the ſame? unleſs we muſt again have to do with thoſe who maintain, that the ſame effect may flow from different cauſes. Truly, the operation of contagion, in ſo far as it affects general diſeaſe, is not of an oppoſite nature to the general ſthenic operation, but preciſely the ſame.

CCCLXVIII. Contagion is a certain matter, imperceptible, of an unknown nature, and like moſt of the phænomena of nature, only in any meaſure open to our enquiry in its evident effects. Taken from the body of one affected with it, or from any groſs matter (ſuch as clothes or furniture, where it happens to have been lurking), and received into a ſound body, it ferments without any change of the ſolids or fluids, it fills all the veſſels, and then is gradually ejected by the pores.

CCCLXIX. And, as no effect, except ſthenic diatheſis, follows it, and the hurtful powers, that otherwiſe uſually produce the diatheſis, always precede it, and an aſthenic or debilitating plan of cure always, and only, ſucceeds in removing it, and conſequently its effect no ways differs from the diſeaſes hitherto mentioned; it is, therefore, with juſtice, that the diſeaſes ariſing from it, are conjoined with thoſe others, as belonging to the ſame form.

CCCLXX. Betwixt them there is only this difference, that in the exanthematic caſes of ſthenic diſeaſe, the matter requires ſome time to paſs out of the body, which time is different in different caſes: and it paſſes out more copiouſly

aroſe before them. Hippocrates miſled his followers, they miſled theirs from age to age, and they all miſled the poor noſologiſts. Who have laid on the cap-ſtone of the abſurdity of the art, and, having finiſhed the fabric of folly, left mankind, if they are not pleaſed with it, to look out at their leiſure for a better and more ſolid.

ly or ſcantily, the more free or impeded the perſpiration is (d). But it is impeded by no ſpaſm, by no conſtriction from cold, and only by the prevalence of ſthenic diatheſis upon the ſurface of the body; as is evident from this fact that cold, by its debilitating operation, procuring a free iſſue for the matter, clearly promotes the perſpiration (e). And that it produces this effect, by diminiſhing the diatheſis, not by removing a ſpaſm, has been demonſtrated formerly. As the iſſue of the matter is in this way promoted by inducing a free perſpiration; ſo

CCCLXXI. Whatever part of it is detained below the cuticle, by that delay, it acquires a certain acrimony, produces little inflammations, and conducts them, when produced, to ſuppuration. Theſe, by irritating the affected part, create a ſymptomatic pyrexia ſymptomatic ſthenic diatheſis, which ſhould be diſtinguiſhed from the general pyrexia and general ſthenic diatheſis (f).

CCCLXXII. The period of eruption is more or leſs certain, becauſe the operation of fermentation, being in ſome meaſure certain and uniform, to that extent requires a certain uniform ſpace of time, for being finiſhed, diffuſed over the ſyſtem, and reaching the ſurface of it, as is atteſted by the effect. Again, it is not exactly certain, becauſe the perſpiration, in the varying ſtate of vigour, that muſt occur, muſt, at different times, and under different circumſtances, be more vigorous or more languid.

CCCLXXIII. The pyrexia, ſymptomatic of the eruption, ſometimes takes on the form of an actual fever: The reaſon of which is, that the high degree of ſtimulus, which the eruption throws upon the whole ſurface, produces ultimately

(d) See above par. XXI. and LXXVI.

(e) See par. CXVII. CXVIII. CXX. CXXI.

(f) See above par. CLXXV. and CCCXLVI.

ultimately exceſſive excitement, and therefore puts an end to it in the eſtabliſhmeut of indirect debility (g).

*The Deſcription of the violent Small-pox.*

CCCLXXIV. The violent ſmall-pox is a ſthenic exanthema, on the third or fourth day of which, ſometimes later, ſmall ſpots or points, inflamed, and by and by to be transformed into exact puſtules, break out; containing a liquor which, generally on the eighth day after the eruption, often later, is changed into pus, and dwindles away in the form of cruſts. The eruption, the degree of which is always in proportion to that of the ſthenic diatheſis, in this caſe is the greateſt that ever occurs.

CCCLXXV. All theſe phænomena are governed by the laws of fermentation, lately mentioned (h). The number of puſtules, being proportioned to the degree of diatheſis, ſhows that, without the hurtful powers, that otherwiſe, and without any co-operation of contagious matter, produce that diatheſis, the contagion has not much effect in producing the real morbid ſtate, and that it chiefly regulates the exterior form of the diſeaſe (i).

CCCLXXVI. But a violent ſmall-pox is diſtinguiſhed by the following ſymptoms: Before the eruption there is a very ſevere pyrexia; this is ſucceeded by an univerſal cruſt of puſtules over the whole body. Antecedent to which the hurtful powers are very violent ſthenic ones, and particularly heat; the remedies that remove it are very aſthenic, and in preference to any of them cold.

*The Deſcription of the violent Meaſles.*

CCCLXXVII. The violent meaſles is a ſthenic exanthematic diſeaſe (k), beginning with ſneezing, watery eyes, dry

(g) See par. CCXV. CCXVI. (h) See above par. CCCLXVIII.

(i) Which, without diatheſis, is of no conſequence, and does not amount to general morbid ſtate. (k) See above par. CCCLXVI.

dry cough, and hoarſeneſs; on the fourth day of which, or later, there appears an eruption of ſmall numerous papulæ, or little points; that on the third day, or later, terminate in an appearance of branny ſcales. This diſeaſe, when preceded with a high degree of ſthenic diatheſis, is proportionally violent.

CCCLXXVIII. The ſneezing, watery eyes, dry cough, and hoarſeneſs, are catarrhal ſymptoms, and, therefore, depend upon ſthenic diatheſis (l). And, ſince they appear, four days or more, before the eruption, that is, before the matter might ſeem to have reached the affected parts, and are conſtant and univerſal; hence are we to ſuppoſe, that the ſthenic diatheſis follows the hurtful powers, that uſually produce it, and not entirely the peculiar matter in this caſe, and that it is indiſpenſably neceſſary to the meaſles. But though that ſuppoſition ſhould be rejected, and it ſhould be contended, that thoſe ſymptoms ariſe from the contagious matter; it ſtill muſt be granted, that this diſeaſe differs, however, in nothing from the other ſthenic diſeaſes, but equally depends upon ſthenic diatheſis, and yields to antiſthenic or debilitating remedies. And it muſt be allowed, that, ſince the matter produces the ſame effect as the uſual hurtful powers, its operation muſt be abſolutely the ſame, and the cauſe of the diſeaſe the ſame. Conſequently, we find nothing in the indication of cure, but what is in common to this diſeaſe with other ſthenic exanthematic ones, which is, that time muſt be given to the matter to paſs out of the body, and the perſpiration be conducted in the ſame manner, as the ſthenic diatheſis is uſually treated upon other occaſions (m).

CCCLXXIX. The eruption admits of the ſame reaſoning that has been delivered (n). The circumſtance of

(l) See above par CLXXV.
(m) See above par. XCVI.
(n) See above par. CCCLXXV.

of its being a violent diſeaſe when preceded by a violent ſthenic diatheſis, and mild in a mild degree of that diatheſis, is a further inſtance of the little difference that there is betwixt the operation of contagion, and that of the ordinary powers producing ſthenic diatheſis.

CCCLXXX. When the diatheſis runs ſo high as to ſuppreſs the perſpiration, the eruption often diſappears for a time, as if it went into the interior parts of the body: Which is a danger, that is chiefly threatened at the end of the diſeaſe; and ſhows, that this matter, in the ſame manner as the variolous, kindles up a ſymptomatic inflammation over the ſurface of the body, and then, by a further increaſe of the diatheſis, ſuppreſſes the perſpiration. Hence, with other viſcera, the lungs (p) are often inflamed.

CCCLXXXI.

(p) That the lungs ſhould be inflamed in a violent ſtate of the diatheſis in the meaſles is not to be wondered at; as the common catarrh, when its diatheſis runs high, is liable to produce the ſame effect. (See par. CCCXLIII. towards the end). But, conſidering how many facts in medical writings I have found falſe, the effect of that on my mind, is to render the weight of teſtimony in favour of the various internal viſcera being ſo liable to be inflamed, from this ſuppoſed ſtriking in of the meaſly eruption, very light, and to diſpoſe me to doubt of the fact altogether; Which I am the more inclined to do, from the analogy of a broad fact in direct contradiction to it: Which is, that the inflammation, depending upon the general diatheſis in ſthenic diſeaſes, never, as I have yet found, affects an interior part. (See par. CXIII. CLXVIII.) Neither is inflammation, from any other ſource, near ſo frequent in internal parts as vulgar opinion has taught us Diſſection has ſhown inflammation in the inteſtinal canal in dyſentery, or what is called in Engliſh the bloody flux. But that only happened under the evacuant, debilitating vegetable, plan of cure: and, even in that caſe, ſeems to have been an ultimate, not an early, effect, much leſs a cauſe. And it has been ſhown, that what has been conſidered as a burning inflammation in the firſt paſſages, is not an inflammation at all. (See above par. CXCVIII). Nay, even when inflammation does happen internally, it is never of the

CCCLXXXI. The violent ſtate of the ſmall-pox, often from the great ſtimulus of the eruption, converts both the ſthenic diatheſis and eruption into the aſthenic ones, and thereby produces the confluent ſmall-pox, of which we are afterwards to treat. Whether any thing like that is the conſequence of the meaſles, is not yet aſcertained: But, as every exceſs of exitement, as in the converſion of peripneumony into a dropſy of the cheſt, is liable to run into indirect debility, it is, therefore, ſcarce to be doubted, but that the ſame thing happens to this diſeaſe, which is inferior to none in violence.

*The Deſcription of the violent Eryſipelas.*

CCCLXXXII. The violent eryſipelas is a phlegmaſia, always beginning with pyrexia, and followed by inflammation. The inflammation is ſeated in ſome external part of the body, oftenеſt in the face, ſometimes in the throat, with redneſs, of an unequal edge, ſomewhat raiſed, creeping from one place to another, and attended with a ſenſe of burning.

CCCLXXXIII.

the ſthenic, but always of the general, or local aſthenic kind, and, when quickly cured, cannot be inflammation. If there be any truth in the frequency of inflammation towards the end of the meaſles, it muſt be of the aſthenic kind. Which is the more likely from its late appearance, and from a circumſtance that, though no where taken notice of, has great weight with me; which is, that the diſtinct ſmall-pox paſſes into the confluent, peripneumony into dropſy of the cheſt, and any ſthenic diſeaſe with its diatheſis, into any aſthenic diſeaſe, and the diatheſis on which it depends; there is nothing in the nature of the animal œconomy and of the powers acting on it, to prevent the ſame converſion of ſthenic into aſthenic ſtate in the meaſles. And if, which is moſt probable from the alexipharmac practice, that was then uſed in this diſeaſe, indirect debility can induce ſuch a change, no diſeaſe has a fuller chance for it than the meaſles. But I am ſure, were the debilitating plan uſed from the beginning, no ſuch conſequence would happen.

CCCLXXXIII. It is peculiar to this inflammation, and foreign from the other general ones, to invade the corpus mucoſum. To aſſign a reaſon for which is of no conſequence; ſince this inflammation does not differ from the others either in the operation of the exciting powers producing it, or in that of the remedies which remove it.

CCCLXXXIV. The cauſe of the redneſs of the inflammation, in this as well as in every caſe, is an exceſſive quantity of blood in the inflamed veſſels; for the queſtion about the degree of redneſs is of no importance. There is leſs ſwelling in the inflamed part, than in other ſthenic inflammations, becauſe there is here a free ſpace betwixt the ſcarf-ſkin and true ſkin, allowing the effuſed humour room to ſpread and diffuſe itſelf. The ſame is the cauſe of the ſlow motion of the inflammation, and of the inequality of its edges. The ſenſe of burning is owing to an acrimony of the contained fluid, acquired by ſtagnation.

CCCLXXXV. The attack of the inflammation upon the face is not more dangerous than upon any other place, except when the diatheſis, upon which it depends, is great, rendering the inflammation proportionally great (q). In which latter caſe, whatever part is inflamed, the diſeaſe muſt be held for a ſevere one; but ſtill ſeverer, if the inflammation ſeizes the face; in which caſe a great tumult of affection internally accompanies the diſeaſe.

CCCLXXXVI. When ſuch a ſthenic diatheſis, and affection of the head depending on it, happens, no diſeaſe is more dangerous, none more rapid in its race to death; while in a mild diatheſis no diſeaſe is milder.

*A Deſcription of the Rheumatiſm.*

CCCLXXXVII. Rheumatiſm is a phlegmaſia, eſpecially in that temperament, which inclines to the ſanguine.

(q) See par. LXXXV, CCCXLIII.

guine. It is a conſequence of heat ſucceeding to cold, or ſo alternating with it as to prove the more ſtimulant: It is accompanied with pain nigh, or between, the joints, chiefly the greater ones, and proportioned to the degree of the diatheſis (r): And the inflammation always comes after the pyrexia.

CCCLXXXVIII. External temperature is hurtful in this diſeaſe in the ſame way, as it has been often now explained (s).

CCCLXXXIX. The rage of the pain is in the parts that have been mentioned (t), becauſe it is in theſe parts that the inflammation, or more encreaſed part of the general diatheſis (u), chiefly acts. Which again happens, for this reaſon, that the nearly moſt powerful of the exciting hurtful cauſes, the temperature, that has been mentioned (x), is only directed thither. There is no tranſlation of the inflammation to the internal parts, for this reaſon, that theſe parts, which preſerve nearly an equal temperature amidſt every change of it externally, are not acted upon by the ſame hurtful power which annoys the external parts.

CCCXC. Cold, according to the common opinion, is not hurtful in this diſeaſe; becauſe the rage of the diſeaſe is greateſt under the operation of heat, which has an effect quite oppoſite to that of conſtriction (y). This fact is confirmed by ſtimulant diet, in all its articles, proving always hurtful, and by abſtinence being always ſerviceable, and often alone making out the cure. And it brings a ſufficient refutation of that miſtaken notion, according to which, temperature is alleged to be more hurtful, and ſweating more ſerviceable, than is conſiſtent with the truth; as if there were no other hurtful powers but the former, no other remedies but the latter. In this, as well as in all other general ſthenic diſeaſes, it is the general ſthenic diatheſis

(r) CCCXLIII. (s) CXIII. et paſſim. (t) CLXVIII.
(u) Ibid. (x) CXIII. (y) Ibid.

diathesis alone that produces, and the solution of it alone, that removes the disease. Which is a clear fact, and supported by the evidence of every part of this doctrine that has yet been delivered. The pains of parts, which sometimes precede this disease, oftener happen without being followed by it, and that, in both cases, have nothing to do with sthenic diathesis, upon which this disease entirely hinges, are a local affection, or belong to a very different general disease, rheumatalgia, of which more afterwards (z).

CCCXCI. The reason of the greater joints being affected in this disease, and the lesser ones in the gout, is the following: In rheumatism, because both the rest of the disease and the pains depend upon a violent sthenic diathesis; therefore it is, that the greater joints, which, for the reasons assigned, undergo more of the diathesis, have also a greater share of the disease. But as the gout consists in debility, its influence will be greatest, where there is naturally the greatest debility, and therefore in the extreme parts, and those most remote from the centre of activity (a).

*A Description of the mild Erysipelas.*

CCCXCII. Both the definition and explanation of the violent erysipelas (b), delivered before, suffice for those of

(z) CCCLIII.

(a) To make this subject simple to any apprehension. A person has been exposed to intense cold a whole day. He comes home at night, is set by a warm fire, receives hot meat and warm cordial drink. He is next covered up in his bed with an addition of clothes, receives more warm strong drink. He falls asleep, and next morning feels a pain in some part or other of his upper extremities, nigh, or between, the great joints; and, previous to that, a high state of heat and bouncing pulse, with a certain feeling of uneasiness in different parts of his trunk. The pains encrease in the bed next night in proportion to the encrease of the general affection: and cold, evacuation, and abstinence from food, from alternation of temperature, cure him.

(b) From CCCLXXXII. to CCCLXXXVII.

of the mild; but in ſuch ſort, that the latter, both in its antecedent hurtful powers and ſymptoms, and in the whole nature of its cauſe, muſt be underſtood to be much milder than the former, and not only ſo, but a remarkably mild diſeaſe.

CCCXCIII. It is often not ſo much a ſequel of the ſthenic cynanche, which is commonly called tonſillar, or the common inflammatory ſore-throat, as a ſupervention upon it before it has finiſhed its courſe. It often appears alone and unaccompanied with the cynanche, ariſing from a ſimilar lenity of the hurtful powers, and manifeſting a ſimilar mildneſs of ſymptoms through its whole courſe.

CCCXCIV. Nay, in the ſame perſons, in the ſame ſtate of the hurtful powers, ſometimes the eryſipelas, ſometimes cynanche, ſometimes catarrh, promiſcuouſly ariſe, and are all removed by the ſame gentleneſs in the method of cure (c).

*A Deſcription of the Cynanche Sthenica.*

CCCXCV. The ſthenic cynanche is a phlegmaſia, with an inflammation taking place in the throat, and eſpecially the tonſils, never preceding the pyrexia. It is accompanied with ſwelling and redneſs, and an aggravation of pain in ſwallowing, eſpecially any thing fluid.

CCCXCVI. The reaſon for the inflammation occupying the place mentioned here, has been given before (d).

And,

(c) I have often experienced them all, ſometimes ſingly, ſometimes all three, in the courſe of the ſame diſeaſe, oftener a combination of inflammatory ſore-throat, and the mild eryſipelas, and, as far as I could obſerve, could diſcern, that the degree of phlogiſtic ſtate that produced them, and of remedies that removed them, were both gentle, the former as ſtimulants, and the latter as debilitating powers; and both ſo nearly of the ſame degree, that in arranging them, I was at a loſs which to place over the other in the ſcale.

(d) See CXIII. CCCXLII

And, when it has once taken place, it is afterwards liable to frequent recurrence, becauſe its ſeat being in the way of the moſt hurtful power (e), and leſs covered than other parts (f), is expoſed: And the veſſels firſt diſtended by the inflammation, and then afterwards relaxed, take in an over-proportion of blood upon every increaſe of its impetus (g).

CCCXCVII. As the inflammation, like that of the other phlegmaſia never precedes the pyrexia (h), for the reaſon aſſigned (i); ſo, if an unſkilful perſon ſhould think it did, the reaſon of that is the gradual degeneracy of the general ſthenic inflammation into a local diſeaſe, from its frequent recurrence, and always leaving a taint behind it in the affected part. This latter inflammation may happen, without a general ſthenic diatheſis, and therefore, without being followed by a ſthenic cynanche; and it may accidentally coincide with the former, or ſthenic diatheſis, and, therefore, precede the latter or ſthenic cynanche: But, in both caſes, it ought to be diſtinguiſhed from the pure general caſe, for the ſake of guarding againſt the commiſſion of a hurtful miſtake in the cure (k). In an aſthenic habit, whether ſucceeding to the former or not, there is again another

(e) Heat and alternation of temperature. See XXXVI. with addition,

(f) See par. CLXVIII. Ione is walking in the evening, when a ſudden fog comes on, with cold and chilline ſs, he may cover his throat externally, but it is impoſſible to defend it internally.

(g) This is ſo liable to happen, when any perſon has once experienced this diſeaſe, that the encreaſed motion of the blood in walking in a warm day, and then ſitting down in a cool place, has ſometimes produced ophthalmia, ſometimes this ſore-throat.

(h) See the definitions of them all, &c.

(i) See par. CLXVIII. CCCXLIII.

(k) This might happen to a perſon under an aſthenic diatheſis, which would be encreaſed by the debilitating plan of cure, and would be uſeleſs in the abſence of diatheſis.

other general inflammation, to be referred to asthenic diseases.

CCCXCVIII. If any person can explain why the pain is aggravated in swallowing, he may communicate his knowledge; if he cannot, it is no matter.

CCCXCIX. The cynanche oesophagaea has been here omitted, because it is a rare affection, and admits of the same reasoning and cure as the tonsillar, from which it differs not but in the inflammation being farther down, and in some redness only coming within view. But, as a suspicion that it may be local, as when the aesophagus happens to be eroded or burnt, by a stimulus, or some acrid matter; the distinctions, therefore, should be attended to (l), and made use of for the sake of practice.

CCCC. There is likewise a rare disease, sometimes happening in certain countries, never in others, called the croup (m). In it the respiration is laborious, the inspiration sonorous, with hoarseness, a ringing cough, and a swelling scarce to be discerned (n). It is a disease that infests very young children almost only. And in all other particulars it is of a doubtful nature (o).

CCCCI. Concerning which, when it happens to occur in practice, use the following marks of judgment. As the sthenic diathesis, in the degree requisite for the formation of actual disease, which depends upon a high degree of

2 diathesis

(l) See above LXXXI. LXXXIII. CLXX.

(m) by nosologists cynanche stridula.

(n) It is perceived upon dissection of the dead subject.

(o) I never saw this disease, but when I was so young a student, that any observations I could make, can be of no use to me now. There have been many battles of words about, whether it be inflammatory or spasmodic, without any adequate meaning of the difference betwixt these two words, at least so far as to influence the practice; which remained much the same betwixt the parties, and probably the right one missed by both.

diatheſis, happens leſs, either in the beginning, or towards the end of life; becauſe the high degree of excitability in the former, and the low degree of it in the latter, admit a ſmaller degree of the effect of the exciting power, that is, a ſmaller force of excitement (p), than the long period of human age betwixt theſe two extremes; yet it is not altogether foreign from either (q). In childhood, the high degree of excitability compenſates for the ſlightneſs of the ſtimulus; while, in old age, the high degree and force of the latter may compenſate for the deficiency of the former, and ſuffice to induce ſome ſthenic diatheſis, even to that degree which conſtitutes diſeaſe. In this way infants undergo wonderful viciſſitudes of excitement, and within the ſhorteſt ſpaces of time. This day they will ſhow every ſign of extreme debility, next day every one of reſtored vigour; becauſe the operation of any ſtimulus given them ſoon riſes to its higheſt, upon account of their high degree of excitability, and ſinks as ſoon to its loweſt, upon account of its own ſmall degree (r . Hence every ſthenic diatheſis, that happens to them, is ſhort, acute, and ſoon removed (s); nor is their aſthenic ſtate of long continuance, or difficult to be removed; provided there is no local affection (t), and a proper method of cure is employed (u).



(p) See par. XXV. and XXVI.

(q) Though it is ſeldom that either a child, or very old man, will be ſo ſthenic as to need bleeding and much evacuation, yet they will ſometimes.

(r) A child of mine was given over for death by his nurſe: His mother gave him ſome of the diffuſible ſtimulus. He ſlept two hours, and waked he waked made ſigns; for he could not yet ſpeak, to have a little pie, moſt of which he ate.

(s) A ſingle gentle purge will do it.

(t) which very ſeldom, indeed, happens,

(u) Which, till of late, has been very rare: The antiphlogiſtic cure has made away with three-fourths of mankind, before they arrived at the ſeventh year of their age.

CCCCII. The marks of ſthenic diatheſis at this age are, great frequency of pulſe, when compared with that of adults, more frequent than their own in health, diſtinctly meeting the finger upon feeling it; a boundiſhneſs of belly at firſt, which becomes more free in the progreſs of the diſeaſe; dryneſs of the ſkin; burning heat, thirſt, watching, ſtrong crying.

CCCCIII. The ſigns of the aſthenic diatheſis at the ſame age are, a pulſe not to be reckoned from its frequency, ſmall, falling ſoftly like ſnow upon the finger of him who reckons it, ſo that he is uncertain if he touch it at all; a very looſe ſcouring belly, with green matter; frequent vomiting; dryneſs of the ſkin, heat greater than natural, and greater in ſome parts than others; interrupted ſleep, never refreſhing; a feeble voice in crying, fit to excite compaſſion.

CCCCIV. The former diatheſis, beſides other hurtful powers, is preceded by the uſe of ſound milk, animal food, an abuſe of opium or ſtrong drink; exceſſive heat after cold and moiſture, which latter encreaſes the debilitating effect of the former; a ſtrong ſet of ſimple ſolids.

CCCCV. The latter, together with the known hurtful powers, is preceded from the uſe of milk by a weak, ſickly nurſe; that of vegetable food, with ſugar in it; watery diet; watery drink; habitual vomiting, habitual purging, both by other means uſed for the latter, and particularly by magneſia, given with the intention of abſorbing an acid; cold not followed by heat; a weak maſs of ſimple ſolids.

CCCCVI. Conſider which of theſe ſets of ſigns precede or accompany the croup, and whether its pyrexia be ſthenic or aſthenic. Weigh the different ſentiments of authors upon the ſubject. Suſpect their theories, but their facts ſtill more. Be on guard not to be miſled by the vanity, emptineſs, and raſhneſs of young phyſicians; as well

as

as by the obſtinacy and bigotry of the older ſort, that encreaſes with their age and practice, to be bent by no force of reaſoning, no weight of truth, ſcarce by the power of God: Regard their minds as bound in the fetters of prejudice: Remember, that a whole age of phyſicians were in the wrong, except one man (x), and perſiſted obſtinately in their error, in the caſe of the Alexipharmac phyſicians: And, reflect within yourſelf, good reader! whether the preſent phyſicians, who follow the doctrines delivered in the ſchools, judge better than their predeceſſors, and do not run into the contrary extreme of madneſs, doing as much miſchief in fevers, and diſeaſes of pure debility, as they did in ſthenic diſeaſes, and in fact take a wide range of ſpreading deſtruction among mankind. Thus ſecured againſt miſtake, conſider the cures of this diſeaſe that have appeared. If in thoſe, or in any trial that you may make, you ſhall



(x) The improvement that Dr Sydenham made was good for the length it went, which was, to uſe cool and gentle evacuants for the cure of the ſmall-pox, peripneumony, and one or two more of the ſthenic diſeaſes. The bias, in favour of the alexipharmac practice, for the cure of catarrh and meaſles, he never got over. His theories were vague, but with reſpect to the practice in the diſeaſes among which his reformation lay, they were innocent. He attained not any idea of the nature of diſeaſes depending on debility: And his practice was hurtful in them: He fell a victim to his gout, which could not have happened had he been acquainted but with one diſeaſe of the debility. His practice, even when right, was deſtitute of principle: he had no ſort of comprehenſion of the doctrine of life as a whole, and as a department of knowledge diſtinct from all others. It would have been lucky, however, for poſterity, had his ſucceſſors done as much in aſthenic, as he did in ſthenic diſeaſes. From that beginning, the ingenuity of ſome, at laſt under a right direction, might have brought out more information, and by gradual and ſure ſteps, at laſt attained a comprehenſion of their whole ſubject. But profeſſors of univerſities ruin every thing: For while they find out nothing themſelves, they throw into falſe lights the uſeful hints of others. This was the effect firſt of the Boerhaavian, then of the Hoffmanian and Stahlian doctrines. See our Obſervations, Outlines, p. lxxxiv. to cxlix.

find that either bleeding and purging, or antiſpaſmodics, as they are called, that is, ſtimulants ſucceed; then be aſſured, that in the former caſe, the diſeaſe is ſthenic, in the latter aſthenic; of which you will be ſtill more certain, if you ſhall find that the exciting hurtful powers and ſymptoms, which have been enumerated, at the ſame time agree with the other marks of judgment.

*A Deſcription of Catarrh.*

CCCCVII. Catarrh is a phlegmaſia, in which, to the general ſymptoms mentioned before (y), are added cough; hoarſneſs; and firſt a ſuppreſſion, or ſlight encreaſe of the excretion from the noſe, fauces, and bronchia, followed afterwards by a further encreaſe; ariſing from ſtimulant powers, often heat alone, but chiefly after a previous application of cold; and to be removed by debilitating powers, often by cold alone, guarding againſt heat (z).

CCCCVIII. The explanation of the cough is the ſame as that given before. But it is freer, than in peripneumony, and not avoided, becauſe there is no inflammation in the neighbourhood to aggravate it, and raiſe pain (a).

CCCCIX. That the hoarſeneſs is owing to a ſuppreſſion of the vapour that ſhould be exhaled into the bronchia, may be known from this; that, when the hoarſeneſs has remained long, almoſt without expectoration and cough, or with a moderate degree of them, while the ſthenic diatheſis continued in full force, and did not abate in the bronchia; upon the diatheſis giving way, and the expectoration and cough becoming more free, the hoarſeneſs abates, or goes off. That this can be effected by a ſtimulus

(y) CCCXXXI.

(z) See par. CXII. CXIV. CXVII. CXXII. and all the ſtimulant powers, from CXII. to CXLVII.

(a) See par. CLX. CCCLV.

ſtimulus of that kind and degree, that conſtitutes ſthenic diatheſis, is ſhown by the effect of ſtrained ſpeaking producing temporary hoarſeneſs, by ſilence removing the hoarſeneſs, and cold drink relieving it.

CCCCX. The ſuppreſſion of excretion is that of the mucus and exhalable fluid, related before (b), and it admits of the ſame explanation that was formerly given.

CCCCXI. That ſtimulants produce catarrh is evident from this, that heat alone, fulneſs in food, ſtrong drink, and moderate exerciſe, for certain produce it; cold, cold drink, ſpare diet, and reſt, as certainly and effectually remove it. It was, therefore a very unlucky miſtake, to think it aroſe from cold alone, and was to be cured by heat. On the contrary, cold is never hurtful in it, but when its action is ſucceeded by that of heat, to be explained as before (c). The occurrence of catarrh ſo often in ſummer, where its action can be a thouſand times traced back to heat, but not to cold; the influenza never needing the aſſiſtance of cold, which catarrh often does, in the manner juſt now ſaid; its never ſucceeding to pure cold, but immediately to heat, facts known to old women, to ſhoemakers and taylors, to ſore-eyed perſons and barbers, unknown to medical authors and profeſſors, all confirm the ſame fact.

*A Deſcription of the ſimple Synocha.*

CCCCXII. The definition of ſimple ſynocha is the ſame with that of phrenitis (d), excepting the ſymptoms affecting the head. It is a ſlight diſeaſe, ending in health, often in one, always in a few days, unleſs when new hurtful powers, either accidentally, or from the uſe of a ſtimulant plan of cure, have been ſuperadded.

*A De-*

(b) See par. CCCCVIII. (c) See CXXII.
(d) See par. CCCLXI.

*A Deſcription of the Scarlet Pyrexia.*

CCCCXIII. The ſcarlet pyrexia is an exanthema (e); about the fourth day of which, or later, the face ſwells ſomewhat, and at the ſame time the ſkin is here and there affected with a red efflorescence, and then chequered with large ſpots; which are afterwards to unite, and in three days to end in little ſcales, as if branny ones. This eruption does not ariſe, but in conſequence of ſthenic diatheſis produced from another ſource. And there is another ſimilar to this, which accompanies an oppoſite diſeaſe, afterwards to be mentioned.

CCCCXIV. The eruption, appearing at a certain time, and remaining for ſome time, muſt be imputed to the fermentation, requiring a certain time, different in different diſeaſes, and is to be explained in a ſimilar manner as before (f).

CCCCXV. The ſwelling of the face depends upon a greater degree of ſthenic diatheſis there, than any other equal part. And we are to imagine, that, beſides the hurtful powers that uſually produce it, it is encreaſed by the contagious matter, now approaching the ſurface.

CCCCXVI. This matter of itſelf produces no morbid ſtate, only giving the exterior and exanthematic form (g), and following the nature of the ſthenic or aſthenic diatheſis. Hence, after its application, the diſeaſe that ariſes is ſometimes ſthenic, as this is, of which we have given a definition, ſometimes aſthenic, as that diſeaſe which we are afterwards to mention in its proper place. This view of it ſerves to reconcile the jarring and contradictory explanations, and methods of cure of authors, who have gone into ſuch controverſies to ſettle its nature.

*A De-*

(e) See CCCXXX. (f) See par. CCCLXVII. and CCCLXXVIII.
(g) See par. CCCLXXV.

*A Deſcription of the mild Small-Pox.*

CCCCXVII. The definition of the mild and violent ſmall-pox is the ſame; excepting that there are often very few puſtules, never exceeding one or two hundred in number: Sometimes the place only, which was inoculated, is beſet with puſtules, without any other in the reſt of the body; and beſides theſe, there may be only one.

CCCCXVIII. The number of puſtules and crowded eruption is occaſioned not by the nature of the contagious matter, nor by its quantity, but by the ſthenic diatheſis, in ſo far as it is induced by the ſthenic hurtful powers, in which the matter has very little participation (h). If, therefore, that diatheſis be prevented, and eſpecially upon the ſurface, the eruption will never be crowded; and, after it has appeared, if it be immediately removed, the eruption will never be dangerous.

CCCCXIX. As the contagious matter does not contribute much towards ſthenic diatheſis, for the reaſons alledged (i); ſo, that it does contribute ſomething, is proved by a crowded eruption both appearing and encreaſing, when the diatheſis, after the reception of the contagion, was not encreaſed by the ordinary hurtful powers (k).

CCCCXX. And, therefore, while the excitement ſhould be reduced below that degree which ſuits perfect health; there are, however, certain boundaries, beyond which we ſhould not proceed in the debilitating proceſs.

CCCCXXI. For, when the ſthenic diatheſis is very much reduced, and the excitement immoderately diminiſhed,

(h) See par. CCCLXX. CCCLXXII. CCCLXXV.

(i) From CCCCXVII. to CCCCXIX.

(k) This indeed is a clear proof, that the matter contributes ſomething, and that there may be a degree of diatheſis, compatible with health, unleſs when it is encreaſed, and the perſpiration diminiſhed, by ſuch contagious matter.

ed, there appears over the whole body, an eruption quite unlike the variolous, of a high ſcarlet colour, and in its progreſs proceeding conſtantly from a ſpotted appearance into a continued ſheet of efflorescence (l); which, unleſs treated upon a ſtimulant plan, would prove fatal.

*A Deſcription of the Mild Meaſles.*

CCCCXXII. The definition of the mild meaſles is the ſame with that of the violent. To which all the reaſoning that has been employed about the ſmall-pox will apply. If, immediately upon the arrival of the catarrhal ſymptoms, the aſthenic diatheſis contrary to every mode of curing this diſeaſe hitherto thought of, be removed; often no diſeaſe of that kind which affects the whole body, follows. And the diſeaſe always proceeds with the ſame gentleneſs as the ſmall-pox treated in the ſame way (m).

CCCCXXIII. The catarrhal ſymptoms are of the ſame nature as in the catarrh, and admit of the ſame cure, that is, aſthenic (m).

CCCCXXIV. Catarrh, and ſimple ſynocha, are free from all inflammation, whether general or local. The ſcarlet fever, and the mild ſmall-pox and meaſles, are free from the general, and exhibit upon the ſurface a local inflammation of no conſequence (n).

*A Deſcription of the Sthenic Apyrexiæ.*

CCCCXXV. The ſthenic apyrexiæ which are equally free of pyrexia (o) and every degree of inflammation, ariſe from

(l) from the top of the head to the ancles. See above par. CCXX, and two notes.

(m) All this has been well proved by every one of my children, and by an hundred patients at once.

(n) See par. CLXX. and CCXI. (o) See par. CCCXXIX.

om a ſthenic diatheſis, that has leſs effect upon the vaſcular ſyſtem, than the other ſthenic diſeaſes (p).

*A Deſcription of Mania.*

CCCCXXVI. Mania is a ſthenic apyrexia; in which the mind is diſordered, and forms falſe ideas of every thing.

CCCCXXVII. In ſo far as mania does not ariſe from a fault of the ſubſtance of the brain, which is a local caſe that ſometimes happens: the powers that have the chief ſhare in producing it, are exceſſive exerciſe of the mental function, and a high exuberance of paſſion. Theſe, however, while they act more upon the brain than any other part, at the ſame time do act more or leſs alſo upon the whole body, though not to the degree of drawing pyrexia after them (q). Which is proved by the diſeaſe being cured by a debilitating plan, and by other ſtimuli, as well as thoſe juſt now mentioned, not immediately applied to the brain, but to a diſtant part of the ſyſtem from it.

CCCCXXVIII. The moſt powerful of thoſe ſtimuli are, ſpirituous or vinous drink, and opium, and, perhaps, ſome other things, taken into the ſtomach, and firſt acting there. Of the other aſthenic hurtful powers, ſome of themſelves, and operating alone, have leſs effect in inducing mania, and yet, even they, by their ſtimulant operation encreaſe the force of thoſe, that have that hurtful effect; as is proved by the effect of removing them in relieving the diſeaſe.

CCCCXXIX.

(p) So much ſo, as never to have been thought in any ſort connected with that affection we call pyrexia.

(q) Compare this with par. XLIX. L. LI. LII. LIII. and indeed with that whole chapter, as the ſevereſt trial of the truth of it; nothing being more natural, than than the ſuppoſition that a mad man is only affected in his head, but we ſhall find that not true.

CCCCXXIX. If poiſons ſometimes produce mania, without hurting the ſubſtance of any ſolid part, their operation muſt be ſuppoſed the ſame, as that of the general ſtimulants, their effect the ſame, and the diſeaſe a genera one, and the ſame (r). But if theſe very poiſons act by deſtroying the texture of a part, they muſt be conſidered as the origin of a local diſeaſe (ſ).

CCCCXXX. The heart and arteries are leſs affected in mania, than in any of the pyrexial diſeaſes; becauſe, the hurtful power, which chiefly affects the veſſels, too much food, has leſs concern in the number of the hurtful powers here. And yet that the food, ſuperadded to the other hurtful powers, does prove hurtful even in this diſeaſe, is evident from a contrary power, abſtinence, being, among other remedies, found of very great efficacy in reſtoring the healthy ſtate. Which, with what has been ſaid above, proves that mania is not a diſeaſe confined to a part, but extended to the whole ſyſtem.

CCCCXXXI. Although, in the diſeaſes that have juſt now been mentioned (t), the pulſe is commonly ſaid, and believed, to be not at all affected, that, however is not exactly the truth; for in mania, ſo long as it continues to be a ſthenic diſeaſe (u), more or leſs of ſthenic ſtate can be perceived (x).

*The Deſcription of Morbid Watchfulneſs.*

CCCCXXXII. Pervigilium, or morbid watchfulneſs, is a ſthenic apyrexia (y); in which there is no ſleep, or

(r) See par. XX. (ſ) See par. V. VI. XX.

(t) from CCCCXXV. to CCCCXXXII.

(u) that is, ſo long as it is realy mania,

(x) The characteriſtic of hardneſs of the pulſe is never wanting, and therefore alſo fulneſs. See CCCXXXIV.

(y) See par. CCCCXXV.

or no ſound ſleep, and the mind, in a ſtartled ſtate, is agitated with vivid, ſtrong, or uneaſy impreſſions.

CCCCXXXIII. The hurtful powers, that produce perviligium, are the ſame with thoſe that produce mania, but inferior in force. It is evidently produced by hard thinking, commotion, or diſturbance of mind, in preference to other hurtful powers. The degree of thought, that has that effect, is not ultimately exceſſive; for, if it were, by effecting a temporary waſte of the excitability, it would produce ſound ſleep; or if it repelled ſleep, it could only act ſo, by means of indirect debility, the conſideration of which is foreign from this place (a). And the ſame is the degree of diſturbance of feeling, that proves hurtful, in ſo far as it produces this diſeaſe: Every ultimate exceſs of which (b), either ends in ſleep, or induces that vigilance, of which indirect debility is the cauſe. But it is not a ſingle operation of the intellectual faculty, or of the ſtate of any paſſion, or one that happens but rarely, that proves adequate to the effect. For the effect, in that caſe, would be either too ſlight, or of too ſhort continuance; to merit the title of diſeaſe. It is an often returning, or deeply affecting, irritation upon the brain, and, therefore, one that leaves a laſting impreſſion, which has any conſiderable force in producing this diſeaſe. In this laſt way, an eager, inordinate, and vaſt deſire for the attainment of high objects of purſuit, the impulſe that hurries on to the revenge of a great injury, and the horror that ariſes upon the perpetration of it, the fear of future puniſhment for crimes, are held up to us as productive of high commotion of mind, in the examples of Cataline, Oreſtes, and Francis Spira. As often, therefore, as the mind is ſo excited in its ideas and paſſions, as not to be capable of being compoſed to reſt and ſound ſleep, after a certain ſhort continuance of thoſe, or

(a) See CXLI. (b) See CXLI.

or other ſtimuli; ſo often are we to conclude, that this diſeaſe takes place.

CCCCXXXIV. As the hurtful powers juſt now mentioned (c), produce this diſeaſe; ſo there are others, which belong not to this place, but are to be mentioned, that alſo repel ſleep.

CCCCXXXV. To pervigilium belong all the hurtful powers that have been already mentioned in mania (e), whether acting within or without the brain, but acting with leſs force, and which yield to the aſthenic plan of cure.

CCCCXXXVI. As the powers ſtimulating vigourſly ~~in~~ this way (f), and without any dimunition of their ſum of ſtimulating, produce pervigilium; from that we learn that the cauſe of this diſeaſe is the ſame with that of the reſt of the ſthenic form of diſeaſes (g), and that the ſame is the ſtate of the body in which every one of thoſe diſeaſes conſiſt: Nor is it underſtood, that different hurtful powers, but preciſely the ſame, with only a variation in the proportion of their force, which often happens to other ſthenic diſeaſes precede this diſeaſe.

CCCCXXXVII. The ſame fact is alſo diſcovered from the functions, of which, though theſe diſeaſes are called apyrexiæ, or without pyrexial ſtate, the pulſe, however, is not altogether free of diſeaſe (h). On the contrary, it is as much ſtronger than in health, or in the prediſpoſition aſthenic to diſeaſes, or in thoſe diſeaſes themſelves, as there is more vigour, and more excitement upholding that vigour, in the ſyſtem (i). And the ſtate of the other functions,

(c) See the par. CCCCXXX. and CCCCXXXIII.
(e) See from CCCCXXVI. to CCCCXXXII.
(f) See CCCCXXCIII. (g) from CXLI to CXLVIII.
(h) See CCCCXXX. and CCCCXXXI. and the note to the latter.
(i) For a proof of their vigour maniacs have often four times the ſtrength, they uſed to have in health.

tions, except thoſe of the brain, that are chiefly affected, is truly the ſame as in the milder ſthenic affections, or in the prediſpoſition to theſe. But, if the brain in this diſeaſe, and in mania, is much more affected than the reſt of the body; there is nothing unuſual in that circumſtance; it being an univerſal fact with reſpect to both diſeaſes and the prediſpoſition to them, that ſome part is more affected than any other part (k).

*A Deſcription of Obeſity.*

CCCCXXXVIII. Obeſity is a ſthenic apyrexia (l); in which in conſequence of an exceſſive health, rich living, eſpecially in the article of food, and an eaſy ſedentary way of life, the fat riſes to the degree of incommoding the functions.

CCCCXXXIX. That obeſity, ſo defined, is a diſeaſe, is underſtood from the definition of diſeaſe (m); and that it is a ſthenic diſeaſe, appears from the certain ſigns of ſthenic diatheſis in it. Of which, the ſtrong action of the ſtomach, whether the appetite or the digeſtion be conſidered (n), and the ſtrength of the other digeſtive organs, are a glaring proof.

CCCCXL. And as in this diſeaſe, the ſtimulus of the exciting powers, raiſes the excitement above that degree of it which ſuits good health, to that in which ſthenic diatheſis conſiſts, without which laſt there could not be ſuch force in the action of the ſtomach, and of the organs that form chyle and blood; ſo it is in common to this with the other diſeaſes called ſthenic apyrexiæ that the ſum of all the ſtimuli is much leſs than in the other diſeaſes of the ſame form, that is, thoſe with pyrexia and inflammation; that it never riſes to the extreme height at which indirect debility is produced, and is never indeed ſo

(k) See part firſt, Chap. IV. and in it XLIX. and LII. CLIX. CCV.
(l) See CCCCXXV. (m) See IV. (n) See par. CCLXII.

ſo great as to be ſufficient to have any conſiderable effect on the heart and veſſels.

CCCCXLI. But it happens to all thoſe diſeaſes, that both theſe laſt and all the other functions, get ſomewhat above the ſtandard of the ſound functions, and a great deal above aſthenic diatheſis. And the ſthenic apyrexiæ differ from the other ſthenic diſeaſes chiefly in this, that the exiting powers keep much within that degree of force, that waſtes the excitability much; as is perceived from the proof of the effect; for they are diſeaſes of much longer ſtanding than any other aſthenic diſeaſes.

CCCCXLII. From which fact, however much the brain may be affected by its own proper ſtimuli; however, great the quantity of blood in its veſſels may be; unleſs to the excitement ariſing from theſe, that excitement, which the other ſtimulant powers produce, be added, it is certain, that the general effect will be much leſs, and that the united energy of all the powers has more effect, than the ſeparate force of any.

CCCCXLIII. The diatheſis, then, in theſe diſeaſes, is upon the whole, leſs than in the reſt of the ſthenic diſeaſes; that of a part, as of the brain in mania and pervigilium, and of the blood veſſels in obeſity, is pretty conſiderable. The whole is in general as great as that in the prediſpoſition to the other diſeaſes, and exceeding its force in the labouring part. Hence it comes out, that, contrary to the nature of thoſe other diſeaſes, and ſimilar to the prediſpoſition to them, they are uſually of long ſtanding and duration, and for this reaſon, that the mediocrity of the ſum of ſtimulant operation never conſumes the excitability, and always produces too much excitement. The great tumult of ſymptoms in the brain and blood-veſſels in theſe diſeaſes does not imply a great ſum of excitement, for this reaſon, that the affection of a part, however formidable, compared with the affection of all the reſt of the body,

body, is infinitely inferior in its degree (o). However much then, any ſtimulus preſſes upon a part, and from that ſpreads at large over the reſt of the body; unleſs, however, other ſtimuli, applied to other parts, ſuſtain its operation, ſo as that the ſum of the operation of them all may deeply affect the whole body; the effect of the ſolitary ſtimulus, making a figure in a part, will be leſs conſiderable in the reſt of the body: In fine, it muſt be kept in mind, that every violent diſeaſe always ariſes from the excitement which the united force of ſeveral ſtimuli has produced.

CCCCXLIV. In theſe ſthenic apyrexiæ, as a certain part, the brain in the two firſt, and the blood veſſels in the laſt (p), is much more affected, and in greater proportion, than in the other ſthenic diſeaſes, becauſe the affection of the part is much leſs ſupported by ſtimuli acting upon the other parts; ſo the ſtimuli, acting in that way upon the labouring parts, are, however, underſtood to affect the reſt of the body, though leſs conſiderably. That this is the fact, is proved by there being in this caſe, no aſthenic diatheſis, and evidently ſuch a ſthenic one, as upholds the prediſpoſition to other diſeaſes of the ſthenic form; by the remedies, which affect other parts, as it will by and by appear, being aiding in the cure here, and by powers of a contrary nature, always proving hurtful. Whence, it is an evident and certain truth, even here, where it might have been leaſt expected, that every ſtimulus that affects a part, affects the whole body, upon account of the excitability being one uniform, undivided, property over the whole.

CCCCXLV. With reſpect to obeſity in particular; that the other hurtful powers, as well as food have more or leſs effect, one may know from the certain fact of the digeſtive

(o) See par. XLIX. to LIII. (p) See par. CCCCXLIII.

digeſtive powers, which depend upon the influence of theſe powers, being of ſuch force and vigour, as to perform their functions more perfectly in fat perſons, than in others, who are, nevertheleſs, not by any means weak. Yet theſe hurtful powers are applied in a degree ſhort of that, which being ultimately exceſſive, or approaching nearly to that, puts an end to excitement by waſting the excitability, or which tends, by a high degree of diſturbance, to exhauſt the body.

CCCCXLVI. Thus paſſions are not with ſuch perſons too ſtimulant; a circumſtance known to the generality of mankind, among whom it is an adage, that fat perſons are commonly good natured (p), while moroſe perſons are for the moſt part lean. Thus it is obſervable, that fat perſons are averſe to thinking, which is a great ſtimulus (q). They are averſe to bodily motion, by which all the functions, and particularly that of the veſſels, are much excited, and the perſpiration proportionally promoted; and they have ſo far reaſon for it, that all motion is more fatiguing to them than to others. Hence, that quantity of

(p) This muſt be taken with more than grains of allowance; ſince ſuch is the effect of the different motives to human action received from example and education, that the paſſions themſelves are drawn into a ſubſerviency to every perſons predominant purſuit. I have known a perſon in Edinburgh get great credit for his integrity, though that was not extraordinary, from roughneſs of manners and an affectation of paſſionateneſs, while the diſſimulation of that real diſpoſition is the more general engine among men of promoting their intereſt. At any rate, ſo much more than mere appearance of temper, which may be ſo much over-ruled, is neceſſary to the eſtabliſhment of maxims; that I ſhould think my life or property upon an inſecure footing, if it depended on the good nature of a perſon, for which the only ſecurity was his fatneſs.

(q) The moſt poring perſons are the atrabilarians, who, though they are not calculated for the elevation of mind that diſcovery requires, have by their aſſiduity, contributed much to the improvement of many of the arts. They are commonly very meagre indeed, and indefatigable in any purſuit, to which they give themſelves up.

of fluids, which under motion is uſually thrown off by the pores on the ſurface, and turned out of the courſe to the adipoſe cells, has a great opportunity of quitting the direction to the former, and of turning aſide, in a ſtate of reſt, to the latter.

CCCCXLVII. After explaining the peculiarities of theſe diſeaſes; it is now to be obſerved, that, ſince the affection of a part in general diſeaſe, depends upon the general affection, is of the ſame kind, ariſes from the ſame exciting powers, and is removed by the ſame remedies (r); it is from that reaſonable to believe, that the affection of a part, whether it be inflammation, or a greater affection of the brain or veſſels, than of any other part, is not different in different caſes, but altogether the ſame in all; that it only differs in ſome trifling circumſtances of no ſignification, and by no means requires a different plan of cure, or affords fundamental diſtinctions; and that a miſtake, which has had the moſt ruinous effect upon the art, muſt be done away. It is with propriety, then, that all the diſcaſes that have been treated of have been reduced not firſt to two genera, and after to ſpecies, but without regard either to genera or ſpecies, only to two forms.

CCCCXLVIII. Further, as in all thoſe diſeaſes the whole morbid ſtate, either in ſo far as it is univerſal in the ſyſtem, or confined to a part, proves hurtful by giving too much excitement; and as the remedies, that remove the general morbid ſtate, alſo remove the portion of it confined to a part, and are never to be directed to a part (t), with the view of removing, by their action upon it, the diſeaſe, as if all locked up in it; the meaning of all that is, to lay a ſure foundation for the eſtabliſhment of a certain ſeries, or ſcale, of encreaſing ſtrength from perfect



(r) See Part firſt, Chap. IV. and particularly par. LIII.

(t) See par. LVI. and XCII.

health to the moſt ſthenic diſeaſes. In that ſcale peripneumony holds about the higheſt, and obeſity the loweſt, degree.

CCCCXLIX. Peripneumony and phrenitis in the upper end are followed by two diſeaſes, that ſometimes equal them; the violent ſmall-pox and meaſles. Theſe two are ſucceeded by a diſeaſe, that ſometimes vies with them, the eryſipelas, when accompanied with a moſt ſevere affection of the head. Equal to this, not in danger, but for the moſt part in the degree of diatheſis; rheumatiſm comes next. Next to rheumatiſm is marked the mild and gentle eryſipelas, far ſhort of thoſe above it in violence, and claiming nearly an equal place to the ſthenic cynanche, being much more nearly allowed to the latter than any of the former. Thoſe are the diſeaſes accompanied with pyrexia and inflammation.

CCCCL. Of theſe two which ſtand loweſt, the mild eryſipelas and the ſthenic cynanche, or common inflammatory ſore throat, are of ſo doubtful a rank with reſpect to each other and catarrh (u), a diſeaſe without the accompaniment of inflammation; that it is doubtful which of them all ſhould be ſet above the others. Below them, however, the ſimple ſynocha and ſcarlet fever, in ſo far as the latter is an aſthenic diſeaſe, and in ſo far as the uſual ſtate of them both is conſidered, are to be placed without any heſitation (x). The loweſt part of the ſcale of ſthenic diſeaſes

(u) See CCCXCIV. and the note to it.

(x) The ſimple ſynocha is ſo ſimilar to a gentle typhus, that it requires great judgment to diſtinguiſh them at firſt. The ſafeſt way, when the doubt cannot be determined, is to keep the patient in a moderate temperature, and in a ſtate of reſt; as any debilitating power, in caſe the diſeaſe ſhould turn out a typhus, would be dangerous; and, though it ſhould afterwards manifeſt itſelf a ſynocha, ſtill its mildneſs renders the omiſſion of any thing that might have been done, innocent; and it is always eaſy to take down ſthenic diatheſis.

diſeaſes with pyrexia, is aſſigned to the ſmall-pox and meaſles, in their mild ſtate.

CCCCLI. Through this whole ſcale it is not ſo much the titles and names, that have been made uſe of, but morbid energy, that is regarded; it being the certainty derived from the cauſe, not the uncertain and perfectly deceitful conſideration of ſymptoms, that was to be conſidered (y). The inveſtigation of ſymptoms, which has hitherto been devoid of all benefit, has been of the higheſt detriment to the art; and as much in medicine the moſt productive ſource of fundamental blunders, as the queſtion about abſtract cauſes had been in the other departments of philoſophy (z), muſt be laid aſide, and Noſology damned.

CCCCLII. Below the laſt mentioned diſeaſes, mania, pervigilium, and obeſity are ſet. Betwixt which, and the diſeaſes mentioned above, is the point of perfect health to be fixed (a).

*The Cure of the Sthenic Form of Diſeaſes.*

CCCCLIII. To apply the indication of the cure of the ſthenic form of diſeaſes to practice; that mentioned before (b) will be accommodated firſt to a violent degree of the diatheſis and danger of parts, in ſuch a manner, as that regard only will be had to the degree of force in the remedies (c).

CCCCLIV. When, therefore, a violent diatheſis is diſcerned, as in peripneumony, phrenitis, the ſmall-pox, the meaſles, and eryſipelas, in the higheſt degree of theſe three laſt, immediate recourſe muſt be had to the moſt powerful



(y) See par. LVIII.

(z) See par. XVIII. and look into Obſervations on the different ſyſtems of phyſic, and in it the introduction throughout.

(a) It will be eaſy for the reader with the direction above to make out the table for himſelf.

(b) See par. LXXXVIII. (c) See alſo par. XCII.

and quickly effectual remedy; and ſo much blood ſhould not be taken, as many who entruſt nearly the whole cure of the diſeaſe to it, think (d), but more, however, than others are of opinion, ſhould be taken away (e).

CCCCLV. No meaſure ſuits all caſes; the quantity to be taken being different in different caſes, as thoſe differ in age, ſex, ſtrength, and in the degree of force applied by the exciting hurtful powers. In childhood, which, excepting the meaſles, and ſmall-pox (f), is ſeldom affected with the diſeaſes we have mentioned, and in a very advanced age, which is alſo in leſs danger than that at the flower of human life; ſparing bleeding ſucceeds for this reaſon, that, at both thoſe ages, it is a leſſer degree of excitement that upholds the diſeaſe as a cauſe; while in the former, the high degree of excitablility, in the latter the neceſſity for more ſtimulus or exciting power, than formerly, ſet bounds to the meaſure of the remedy.

CCCCLVI. A better rule for limiting the degree of bleeding is the relief, or temporary ſolution, of the urgent ſymptoms. If, therefore, after blood has be been taken, the great heat, the hardneſs of the pulſe, the affection of the head or the lungs, and dryneſs of the ſurface, ſhall have gone off, or been much abated; and now the temperature is diſcerned to be much more moderate, the pulſe more ſoft and leſs frequent, and the ſurface of the body more moiſt, at leaſt leſs dry; if the pain is every where quieted, the

(d) which is the common practice;

(e) The moſt early among the Alexipharmac practitioners, after once making his eſcape from peripneumony without bleeding, fell a victim to the folly of his theory in the next attack. The Alexipharmacs in general were too moderate in their bleedings in the true, though few ſthenic diſeaſes that require it, and all in the wrong in their uſe of heating ſtimulant preſcriptions in them.

(f) See par. CCCCI.

the breathing relieved, and the delirium removed (g); then it may be looked upon as certain, that enough of the vital fluid has been ſhed for the time.

CCCCLVII. To obtain that benefit, in the moſt vigorous adult ſtate 10 or 12 ounces, and much leſs either before or after that period of life, will for the moſt part be found ſufficient. As this rule will not anſwer in every caſe, when it fails, recourſe muſt be had to that, which recommends the abatement of the ſymptoms as a direction more to be depended upon (h).

CCCCLVIII. Since the local affection depends upon the degree of the general (i) diatheſis, remember, therefore that there is no occaſion for any particular direction with regard to it, any farther, than to take advantage of its being acceſſible to help the general remedy by an application of it to the part (k).

CCCCLIX. When that has been done, and the firſt violence of the diſeaſe is now broken; we muſt next have recourſe to purging the belly, as a great remedy in point of efficacy (l). To effect which, we ſhould not employ violent means, ſuch as many formerly employed (m); the ſtimulus accompanying the firſt operation of which being liable to be hurtful; but it is the gentle cathartics that ſhould be depended upon, ſuch as Glauber's ſalts, which are highly debilitating, and carry a great quantity of fluids out of the veſſels. Though a man of good ſenſe in the laſt century uſed theſe day about with bleeding; yet, if the

(g) The references for facts are CLIX. CLV. CCCXXXIV. CLVII. CLXXIV. CCCXLIX. to CCCLV. CLIV. CLIX. CLXXXIV. CCCXXXIII. to CCCXXXVI. CLV. CCCXLIII. CCCLIV. CLVIII.

(h) See CCCCVI. (i) See above LVI. and CCCXLII. to CCCXLVI.

(k) Ibid. an inſtance of ſuch aſſiſtance may be the local bleedings over the pained part in rheumatiſm and the gout, and ſome other aſthenic remedies are aided by local ſtimuli.

(l) See CCLXXXIII. (m) the Alexipharmacs particularly.

the violence of the diſeaſe ſhould be urgent, there is nothing to hinder the uſe of them the ſame day that the blood has been taken.

CCCCLX. Purging, after a ſparing bleeding, has more effect in overcoming ſthenic diatheſis, than any bleeding without it; becauſe, as it has been mentioned above, in that way the debilitating power (which has always more debilitating effect in the place to which it is firſt applied than in any other), is applied to more parts; and not only to the greater blood-veſſels, but alſo to a prodigious number of their terminations; and the excitability is more extenſive, and therefore, with more equality diminiſhed (n).

ω, Vomiting, which, in aſthenic diſeaſes, where it is pernicious, has hitherto never been admitted in the common practice, and in ſthenic ones, where it is of the greateſt benefit, ever neglected, comes in here as a proper part of cure; being of the ſame evacuant nature, and in another part of the ſame canal, and admitting of all the reaſoning that has been applied to purging.

CCCCLXI. At the ſame time that the exceſſive, and therefore hurtful, uſe of the lancet is ſuperſeded by thoſe two laſt mentioned evacuations; its uſe, however, is not altogether to be laid aſide in the diſeaſes of exceſſive excitement: and for this reaſon, that the excitement, by its ſtimulating operation often riſes to that high degree, that, from the conſumption of excitability which puts an end to its exiſtence, threatens inſtant death (p).

CCCCLXII. Beſides, thoſe remedies (q), the patient ſhould always be required to abſtain from every ſort of food but vegetable, and in a fluid form, as well as from all ſtrong drink, and indeed all but watery drink, accidulated (r)

This

(n) See par. CCCCLXXXIII. CCCCLXXXVI. alſo CCCV.
(p) See par. CCLXXXI. and CCLXXXIII. CCLXXXIV.
(q) From CCCCLIV to CCCCLXII. (r) See CCLXXXIV.

This direction does not seem to have been so much neglected in words by former writers and authors, as in fact and actual application to the practice; it having been delivered slightly, by the by, and as if it had been thought of no consequence, with such effect, that its force made no impression upon the mind of the reader or hearer. No stimulus is more powerful, and, therefore, in this part of the practice, more hurtful, than that of the articles of diet: Consequently, whatever quantity of blood is taken from its vessels, whatever quantity of serous fluid is carried off by the mouth and anus, if that stimulus is not roundly guarded against, all this evacuation may easily be frustrated. While that is the case, still fluid vegitable matter is not to be discharged, and for this good reason, that watery matter is not kept in the vessels; but, easily entering the smallest of them, flows out in all directions by their various outlets; and, at the same time, supports the efficacy of another remedy (s), by and by to be mentioned.

CCCCLXIII. Conjointly with the use of the first bleeding, of the first vomiting and purging, and that of abstinence and watery drink, it must not be forgot, that particular regard must be paid to temperature (t); For, if cold always debilitates, and if that is its proper operation (u), if it only seemingly acts otherwise, because heat succeeding to its action, or alternating with it (x), converts it into a stimulant one, if it alone is adequate to the cure of the small-pox (y), and prevents the violence of that disease, if it is the best remedy for catarrh (z), and, when heat is avoided, of the greatest assistance in every sthenic disease; it is not to be doubted, but that it is of the greatest benefit in the diseases of the highest sthenic diathesis.

CCCCLXIV. Its operation in the small-pox, and in the rest of the sthenic diseases, is not different, but altogether

(s) sweat. (t) See par. CCLXXXII. (u) See par. CXVII.
(x) See XXXVI. (y) See par. CXXI. (z) See CCCCVII.

ther the ſame. Nay, in all the diſeaſes of this form, as cold alone is ſufficient to effect the cure; ſo whenever the diatheſis, which is the caſe in the diſeaſes that make our preſent ſubject, riſing to its greateſt rage, demands inſtant relief; becauſe, in that caſe, every moment's delay brings inſtant danger; becauſe the remedies, which we have mentioned, are ſufficient for the ſolution of the diſeaſe, of which we have the direct proof in the practice; becauſe that degree of cold, which could produce that effect, is neither always within our reach, nor can be managed by every perſon; and many perſons might not be diſpoſed to believe its effects ſo beneficial: For thoſe reaſons we ſhould not deſiſt from the plan of cure here laid down (a), and do our beſt for our patient, by taking off the blankets, and other clothes, by cooling the room, and, inſtead of laying him on a couch or bed, putting him into a chair.

CCCCLXV. This plan of cure ſhould, for the moſt part, be preferred to that of the moſt intenſe cold, for this further reaſon, that the ſhortneſs of the time in which any one could poſſibly remain in it, would oblige him immediately to return to higher temperature, which would produce a greater ſtimulus of excitement, than that he had been under before his expoſure, at leaſt too great a ſtimulus (b).

CCCCLXVI. Since ſuch is the operation of cold (c), the power falſely imputed to it of occaſioning the ſtriking in of the meaſles, is to be imputed not to cold alone, but to heat and other ſtimuli; giving, as has been explained, more excitement (d), than if it had not preceded And why not? If cold does not interrupt the eruption in the ſmall-pox; but, on the contrary, by an enlargement of the diameters of the perſpiratory veſſels, which are ſhut up by ſthenic diatheſis, highly promotes the diſcharge of that

(a) From CCCCLIV. to CCCCLXV. (b) See XXVI.
(c) Look back from CCCCLXIII to CCCCLXVI.
(d) See XXVII. and the addition, and CCCLXXX.

that matter (e): Why, in a moſt particular caſe, ſhould its operation be ſuppoſed different, not to ſay, diametrically oppoſite? Muſt we again have the trouble to refute the falſe notion of thinking a cauſe preciſely the ſame ſhould produce contrary effects? Cold diminiſhes the eruption in the ſmall-pox: It makes it diſappear in the meaſles. What then? Take a nearer view of the fact: Is its effect in both theſe caſes to be ſuppoſed the ſame, or different? How comes any perſon to know, that the matter, which has diſappeared, is driven into the intetior parts? What proof will you bring of that? Confeſs the truth: And be candid enough to acknowledge, that this is another relic of the alexipharmac doctrine, handed down to us, which ſuppoſed, that the ſtimulus of heat as well as other ſtimuli promoted, and that cold impeded, perſpiration. And after a great man had ſhown the error of that doctrine, both in the ſmall-pox and other diſeaſes (f), becauſe he did not carry the application ſo far as the meaſles, neither has any one of his followers, who never could ſtep a nail's breadth beyond his words. But it might have been obſerved, if obſervation had been any part of their employment, that the meaſles was a ſthenic diſeaſe as well as the ſmall-pox. Are not all the ſucceſsful remedies in both of the debilitating kind? And as was manifeſt, that in the ſmall-pox alſo cold debilitated, or in the common language, acted as a ſedative; might not ſome ſuſpicion have, from that very circumſtance, occurred to their mind, that cold, in the meaſles, did not ſtimulate, or act as an aſtringent; and in that way, repel the eruption, but perform the ſame operation as in the ſmall-pox? Is it, to ſuch a degree, difficult and up-hill work, to think and uſe one's own good

(e) See CCCLXXVI.

(f) In peripneumony he took his patients out of bed, and ſet them in a chair, for the ſake of cooling them, and avoiding the hurtful effect of heat.

good ſenſe, that, a great part of mankind, even thoſe who take upon them the buſineſs of teaching and taking the lead of others, in no caſe ever think of exerciſing a moment's reflection of their own? But, in this caſe, it may be contended, that the action of cold is peculiar, becauſe, after the eruption which is ſuppoſed to check, has diſappeared, all the ſymptoms encreaſe in rage and violence. Conſider what that circumſtance makes for the argument, or whether it makes any thing, and not abſolutely againſt it? Was the action of cold, that is ſuppoſed, followed by that of ſtimulant or debilitating powers? If it was by the former, the cauſe of the miſchief muſt be imputed to them; which, as has been ſaid juſt now (g), produce exceſſive excitement after a previous application of cold, and more than without it; if the latter, or debilitating powers were uſed, then there would not be wanting a ſuſpicion, that cold had a concern in the effect. But it is not ſo: And, in every caſe, in which the action of cold has been followed by ſthenic diatheſis, the true cauſe of that effect is not ſufficiently guarding againſt the ſtimulus of heat, as well as that of other noxious powers. And this is moſt clearly proved by the uſe of heat being poſitively ordered, inſtead of being forbid, in the common practice. Nor is that to be wondered at: For if the cauſe of catarrh (h) deceived phyſicians ſo much, the catarrhal ſymptoms in the meaſles could not fail to deceive them. And, if doctrines, diſcarded in words, are often kept up in fact: what was there to hinder this part of the alexipharmac doctrine from meeting with a ſimilar fate?

CCCCLXVII. If cold, therefore, can ſcarce be ſo managed, as that the effect occaſioned by the accompaniment, the ſucceſſion, or the alternation, of ſtimulants with

(g) in the laſt paragraph but one.
(h) See from CCCCVII. to CCCCXII.

with it, may be prevented, whether that be the fault of the phyſician, or owing to the difficulty of the nature of the thing (i); it is, notwithſtanding, a rule in common to the meaſles and other exanthemata of the ſame ſtamp, to avoid heat, and compenſate for the degree by the greater duration of cold, and to guard with all poſſible care againſt every ſtimulant power. It is now then moſt evident, that the opinion of cold being peculiarly hurtful in the meaſles, both in that and every other diſeaſe of the ſame form, falls to the ground.

*A Repetition of the Cure.*

CCCCLXVIII. After uſing the Remedies which have been mentioned (k), when the ſymptoms are renewed, the ſame train of medicines muſt be again gone through: Blood muſt be again taken, emetics and purgatives again adminiſtered; nor muſt we deſiſt from the uſe of the refrigerant and attenuant plan: And all theſe particulars muſt be executed, till the tumult of the ſymptoms be allayed, and the healthy ſtate, at leaſt for the time, be reſtored; and perhaps the repetition may be required a third time or oftener: After doing which;

CCCCLXIX. If the diatheſis ſeems now nearly removed, if the affection of the head, of the lungs, or any internal one, ſeems alleviated or repelled; and yet there is ſome apprehenſion of a likelihood of the return of the diſeaſe: in that caſe, recourſe muſt be had to more gentle debilitating powers. Sweating, the ſtimulus accompanying the firſt operation of which, the body, as the diatheſis is now rendered mild or ended, will be able to bear, muſt be preferred to bleeding, vomiting, and purging. But before proceeding to ſpeak of it, it ſeems proper to ſay a few

(i) Turn back to CCCCLXV. and CCCCLXVI.
(k) from CCCCLIV. to CCCCLXVIII.

few things upon the ſum total of blood that ſhould be taken during the courſe of the whole diſeaſe.

CCCCLXX. As in ſingle bleedings, ſo alſo in the whole quantity of blood to be taken, the ſum ſhould be a mean betwixt thoſe, which the common run of phyſicians approve, while ſome think too much, ſome too little, ſhould be taken. The reaſon for this recommendation is ſtrengthened, by the conſideration of their being now leſs occaſion for ſhedding a great deal of the vital fluid, ſince the cure is now more divided among the other remedies that have been ſpoken of. The age muſt be regarded, as was formerly recommended (l), the former mode of life muſt be looked to, the quantity of ſtimulus, that may lately have preceded the morbid ſtate, muſt be conſidered, and the ſtate of the body compared with the degree of the ſymptoms and the effect of the cure. From thoſe circumſtances a judgment ſhould be formed of bleeding and other evacuations; and it ſhould be eſtimated, what further of the ſame ſort may ſeem proper to be put in practice, or what difference of management may be required. Upon the whole, it will be found, that there will be the leſs occaſion for any one medicine, the more freely others have been brought into uſe; and it will be underſtood, that the danger of too great evacuation will be thereby avoided, and the health better ſecured (m).

CCCCLXXI. With reſpect to the kind of bleeding, it ſhould always be made from a very large vein; becauſe the cutting a leſſer one, or opening an artery, does not afford a ſufficient quantity for the relief of the veſſels, and arteriotomy is further attended with certain inconveniences (n). As far as any certain rule, in an affair of ſuch variety,

(l) See CCCCLV. (m) See CCLXXXVI. and CCCV.

(n) The blood is ready to break out again after the tying up; and if, as ſome adviſe, the arterial twig ſhould be cut through, it diminiſhes the number

variety, can be eſtabliſhed, two pounds of blood in three or four days, with the aſſiſtance of the other remedies, will for the moſt part, be ſufficient at the middle age of life, and leſs at a more early or later period.

CCCCLXXII. All bleeding ſhould be followed by vomiting and purging, ſo long as any conſiderable part of the ſthenic diatheſis remains; nor ſhould the other parts of cure, that have been pointed out, be neglected. But purging, a ſingle doſe of which can at any time, bring back a fit of the gout; which cures the ſthenic cynanche or common inflammatory ſore throat, and the mild eryſipelas, when even the face or head is affected; which is of manifeſt detriment in fevers, which, in dyſpepſia, in aſthma, and every ſort of diſeaſes depending upon debility, whether direct or indirect, does very great and conſpicuous miſchief; and is a great part of the very bad, common method of cure over the whole form of aſthenic diſeaſes; in proportion as it ought to be avoided in all thoſe diſeaſes, ſhould be as certainly laid hold of in ſthenic diſeaſes, and not omitted in any conſiderable one, ſuch as thoſe are that require bleeding, but be managed according to the directions given (o) lately, and as it was directed to be managed before (p). And we muſt, above all things, be on our guard againſt that diffidence in the uſe of this remedy, as well as in that of vomiting, where they are ſerviceable, and that confidence in them when of diſſervice, both introduced by the ſpaſmodic doctrine; and know that they were both admitted upon a falſe and abſurd principle (q).

CCCCLXXIII.

number of the few acceſſes to this mode of bleeding; neither does there ſeem to be any uſe in deſtroying ſuch veſſels, eſpecially as no good purpoſe can be ſhewn for doing ſo.

(o) See CCCCLXI. (p) See CCLXXXIII.

(q) The principle, at leaſt with reſpect to purging, was, that it diminiſhed perſpiration, and, therefore, was underſtood not to act as an antiſpaſmodic.

CCCCLXXIII. As nothing in aſthenic diſeaſes has been more uſed than theſe two modes of evacuation, nothing with more hurt, and often with inſtantaneous deſtruction; ſo, for that very reaſon, nothing is more happy and ſucceſsful than their uſe in the cure of ſthenic diſeaſes.

CCCCLXXIV. It is ſcarce credible to ſay, how far the averſion to the alexipharmac method of cure has had the effect of branding the very beſt medicines, what a depraved uſe of them it has ſuggeſted, and to what a degree it has perverted their proper uſe. Not to repeat what has been formerly ſaid of that kind in other inſtances; ſweating, which is of the higheſt ſervice, and a moſt efficacious means of cure, in every moderate ſthenic diatheſis, in every degree of it, that is not the higheſt, or where it preſſes not upon any organ of importance to life; that is, in all the diſeaſes of this form, except in the beginning of thoſe of which we are here treating, has, however, of late been completely baniſhed from the cure of every one of them, but one, not only, as uſeleſs, but as hurtful; which has chiefly happened ſince the ſpaſmodic doctrine began to be received into this country, and, for a few years only, gradually to gain ground (r).

CCCCLXXV. But, in truth and fact, except rheumatiſm (which, at leaſt as produced by one form of a medicine, it is allowed to cure), if it moſt certainly either relieves or removes the ſthenic cynanche, eryſipelas itſelf, and catarrh, and the ſimple ſynocha, in proportion to the more free or ſparing uſe of it; if that be known to the very vulgar,

tiſpaſmodic. A balance betwixt the excretion by the belly, and that on the ſurface was talked of, and they were held for oppoſite operations. In ſuch theoretical nonſenſe they deſerted their only good leader, at leaſt in thoſe diſeaſes, who alternated his bleedings and purgings, and, as I have found upon the beſt foundation,

(r) Turn back to CCCCLXIX.

gar, and moſt certainly to phyſicians, of any other than the ſpaſmodic practice; what reaſon, what certain and well proved fact, will any one bring, to ſhew why ſweating ſhould not be uſed, after the moſt violent diatheſis as much diminiſhed by the other medicines, and is now reduced to that ſmall degree, to which that remedy is adapted; what eloquence would be requiſite to bring any man of ſenſe into ſuch a perſuaſion?

CCCCLXXVI. They will ſay, that the heat, which accompanies the firſt part of the operation of ſweating, may be hurtful; for as he never made trial of it, he has it not in his power to ſay, that for certain it will be hurtful (s). As that effect will readily be admitted in an high rage of diatheſis, threatening indirect debility (t); it will not alſo be granted, that in a moderate degree of the diatheſis, either from the beginning, or effected by the other remedies, and, conſequently, after the plan of cure, that we have laid down, has been executed, that ſuch heat will not be compenſated by the great profuſion of fluids taken away over the whole body; and that, when this part of the vaſcular

(s) It is laughable to hear ſuch perſons talk of their practice, from which they never can receive information; it being not the effect of any thing they know themſelves, but what they have been told by others. In that way, without any exerciſe of judgment; without a ſingle obſervation, that they can call their own in the courſe of a long life, do they jog on, like the blind beggar led by his more faithful dog, or, like children in the play of blind Harry, groping about with their eyes tied up, through the whole courſe of a practice boaſted of, God knows, by no body who knows it but themſelves.

(t) If the diatheſis ſhould riſe within two or three degrees of indirect debility, in that caſe the heat of the firſt part of a ſweat, by exhauſting the little excitement that remains, may have a moſt hurtful effect. But if the diatheſis be any where below that high point, the addition of ſtimulus can be borne for the ſhort time of its continuance; and be afterwards much more than compenſated by the large and continued flow over all.

vaſcular ſyſtem has been freed from a violent ſtimulus, the diminution of excitement will not be more equal in all the veſſels, and over the whole nervous ſyſtem. If the numerous veſſels, that open into the inteſtines and into the ſtomach, are ſo powerful in diminiſhing ſthenic diatheſis, how ſhould a ſimilar evacuation in the ſimilar perſpiratory veſſels have no tendency to produce the ſame effect? With which reaſoning, if the facts juſt now related be further conjoined, what will any perſon have to ſay againſt the uſe of ſweating, when a degree of heat, not greater than what cannot be avoided, attending the operation of the ſweat, can no longer be hurtful, and the ſweat itſelf certain to be of great ſervice u) Let the ſpaſmodic caviller againſt the uſe of that remedy, in the caſes of ſthenic affection where it is admiſſible muſter up all his facts and all his theories, let him turn himſelf into all ſhapes, he will never produce a ſolid argument againſt this remedy. But what, again, is all this about? Will there never be an end of running from one extreme of error into the oppoſite? Shall no mean be found betwixt the Alexipharmac plan of cure, and an equally bad or worſe one? If that doctrine heſitated not to preſcribe ſweating in the rage of a peripneumony, and that too by means of the moſt heating ſtimulant powers; does it therefore follow that a plan of cure muſt be admitted, which rejects the certain and ſafe uſe that remedy, when conducted by the moſt gentle means? If it was the opinion of

2 Dr.

(u) In an excitement of ſixty-ſeven, within three degrees of indirect debility, the heat in the firſt part of the ſweat, by adding theſe, might kill the patient, if you will, without leaving any chance of relief from its evacuant effect. But if the excitement be no higher than 60°, the addition of the three degrees will keep greatly within the point of indirect debility, and therefore, be ſafe; while the ſucceeding evacuation may reduce the excitement perhaps 10°, and bring it within the range of predifpoſition; and a new courſe, or a little prolongation of this, carry it down to the point of health, and finiſh the cure.

Dr Sydenham, that heat ſhould be avoided in the cure of ſthenic diſeaſes, which was quite right, as heat certainly encreaſes the excitement; are we, for that reaſon, to avoid that tolerable degree of heat which accompanies a remedy the moſt powerful in reſtoring the healthy ſtate, and, thereby, deprive ourſelves of great benefit upon the whole? If ſuch perſons did not know, that ſeveral remedies diminiſhed excitement more powerfully than any one; and, if they were to be forgiven for that; were they alſo to be excuſed for not ſeeing, what any empiric might have ſeen, that is, that ſome things were of ſervice, and others of diſſervice; was that want not of genius, which is not required of them, but of common ſenſe, alſo to be pardoned? If thinking without a leader, and making any ſort of diſcovery, was too much, and not to be expected from them; is it not ſomewhat ſurpriſing, that out of a thouſand perſons, who had treated of every part of medicine, and entertained different ſentiments from one another, in ſome meaſure right, and, no doubt, wrong too, they could ſqueeze no information, but always trod in the footſteps of one ſingle man?

CCCCLXXVII. Sweat, therefore, after the management that has been mentioned, is to be excited, and ſo much the more determinedly, if there ſhould ſeem ſomething ſtill wanting to the complete return of health, ſome degree of ſthenic diatheſis ſtill remaining, and a ſpontaneous tendency to it ſhould appear.

CCCCLXXVIII. When the ſigns of a ſpontaneous ſweat ariſing are perceived, nothing more is to be done, but firſt to lay the clothes about the patient, remove the ſheets, put the blankets next to his body, guard againſt the approach of air, and keep up the diſcharge for a ſufficient length of time, at leaſt ten or twelve hours. If, by this management, there ſhall enſue a copious and univerſal flow of ſweat, there will be no occaſion for giving a me-

dicine. After it has ſucceeded, and encreaſed the relief formerly procured; if it ſhould ſink in toward the end, it ſhould at laſt be ſupported by Dover's powder, or by laudanum alone, covering the body, ſo as that it may get as quickly as poſſible to the ſurface, till the expected benefit be obtained. And to this management it muſt be added, that, if a draught of cold water be ſometimes given, and then the body well covered up and properly managed, the buſineſs often ſucceeds to our wiſh. But, as in the other caſes, that belong to this part of our indication, the ſweating muſt then only be ſet on foot, when the mediocrity of the diatheſis, procured by the other remedies, will permit; ſo in the ſmall-pox and meaſles, becauſe there is occaſion for a certain time to allow the matter to paſs away, we muſt alſo keep that in our eye, and never be too early in making trial of this remedy. Laſtly, if the heat ſhould happen to prove hurtful, if at any time the flow of the ſweat ſhould be attended with leſs relief, or with ſome inconvenience, it ſhould be immediately ſtopped: For it was not for no purpoſe, but for that of making the remedies ſupply the defects of one another, and of reducing the excitement more equally over the whole body, that a number was recommended.

CCCCLXXIX. In all the caſes of a violent diatheſis, all the remedies that have been mentioned, are more or leſs, and differently on different occaſions, in proportion as the remaining part of diatheſis may require, each in a higher or lower degree, or in a larger or ſmaller quantity, to be brought into play, and the curative circle enlarged: And beſides them,

CCCCLXXX. Some of ſlighter conſequence, ſuch as acids and nitre; ſome of uncertain uſe, ſuch as leeching, cupping, and bliſtering, are mentioned, as of the firſt conſequence. Of theſe, the acids, in ſo far as they render the drink more agreeable, and, in an affection of the lungs do not produce cough, and prove, in a certain meaſure, refrigerant,

refrigerant, are to be permitted; and more certainly, if there ſhould be a deſire for them. Every body ſhould know, that the refrigerant power of nitre is leſs than is commonly thought. In rheumatiſm, and the ſthenic cynanche if the latter ſhould be unuſually ſevere, bliſters, leeches, and cupping-glaſſes, applied in the neighbourhood of the inflamed parts, may, in ſome meaſure, be of ſervice. Nor does there ſeem to be any reaſonable objection to the clapping a cap of recently dug-up earth upon the head in the caſe of phrenitis.

*The other Part of the Indication of Cure.*

CCCCLXXXI. To paſs over to the other part of the Indication of cure (y): When there is a gentler diatheſis in the habit, as in the other phlegmaſiæ, and ſthenic affections, that have not been yet named in the cure; as in the mildeſt ſtate of eryſipelas, of the ſthenic cynanche, catarrh, ſimple ſynocha, the ſcarlet fever, and the mild ſmall-pox and meaſles; a ſmaller force of debilitating power is required; and, therefore, neither all the remedies that have been mentioned, nor in general ſo much of each, as in the other part are demanded.

CCCCLXXXII. In all theſe caſes, not even with the exception of rheumatiſm, which depends upon a very great diatheſis, bleeding is not neceſſary; and with the exception of that diſeaſe, bleeding, with any degree of freedom, is hurtful: For, when the excitement is not the greateſt, and, on the contrary, is moderate, ſcarce exceeding that degree that produces the prediſpoſition to other diſeaſes; in that caſe it is abſurd to make uſe of a moſt debilitating power, by way of a remedy, as if we had to combat a very violent diſeaſe. And, ſince the intention in bleeding is to prevent an ultimate exceſs of exciting power from



(y) CCCCLI.

producing a ceſſation of excitement in death, an event of which there is not the leaſt danger, in a moderate diatheſis, ſuch as that, which is the cauſe of the diſeaſes here in queſtion; for that reaſon, the cure muſt be adapted to the cauſe, and bleeding muſt be either abſtained from altogether, or very ſparingly uſed.

CCCCLXXXIII. It is not, therefore, only in diſeaſes of debility, which belong to the other form (in moſt of which it has, nevertheleſs, been, and ſtill is, the cuſtom, to ſpill more or leſs of the vital fluid), but alſo in all the diſeaſes of this form, except the very violent ones, that the lancet is to be reſtrained.

CCCCLXXXIV. Though in rheumatiſm the diatheſis often runs conſiderably high, the uſual profuſe bleeding, is not, however, required. For, as every diatheſis is always greater in ſome parts than in any other equal one, ſo it is with the ſthenic diatheſis in this caſe; which is found much greater upon the ſurface of the body, than in any other equal ſpace within. And the reaſon is, that the moſt powerful noxious agent, heat, ſucceeding to cold, or ſo alternating with it, that its own ſtimulus is encreaſed by its effect (z), directs its principal energy to the ſurface of the body. Hence, after exceſſive bleeding, the diſeaſe, notwithſtanding, often obſtinately recurs. The cauſe of which fact, if the principles of this doctrine be well underſtood, cannot be obſcure. Bleeding diminiſhes the ſthenic diatheſis chiefly in the red veſſels, leſs in any of the extremities, leaſt of all in the perſpiratory veſſels, and thoſe diſpoſed of in the tract of the muſcles; and ſtill leſs in the laſt, becauſe the operation of the bleeding is counteracted by that of heat: Which is an explanation confirmed by the certain teſtimony of phyſicians; who often complain that their favorite remedy fails them.

CCCCLXXXV.

(z) See XXXVII. and addition.

CCCCLXXXV. Upon which account, ſweating, which we ſpoke of ſo lately, is remarkably adapted to the cure of this diſeaſe: To it, therefore, after a previous bleeding to twelve ounces, and obſerving the rule of temperature and diet before directed, muſt we have immediate recourſe, if the diatheſis happens to be conſiderably violent, and is ſignalized by heat of the body, by pains raging moſt in the night time, and by a ſtrong and hard pulſe. In order to render the ſweat univerſal, and of ſufficient duration, it ſhould be brought out by Dover's powder, or laudanum, as before hinted, and kept up for twelve hours in full flow, and then ſome hours longer, or till the abatement of the ſymptoms, in the form of a moiſture or free perſpiration, and repeated when the ſymptoms return. The reſt of the cure muſt be entruſted to low diet and an exact temperature.

CCCCLXXXVI. In this caſe, after the ſweating courſe, and alſo in that of a ſimple ſynocha, of the ſcarlet fever, of the ſthenic ſore-throat, of catarrh, eryſipelas, and the gentle ſmall-pox and meaſles, when the diatheſis is ſomewhat conſiderable, but far ſhort of that rage which conſtitutes the caſe of cure firſt taken notice of; we ſhould uſe either a very ſmall bleeding, and then chiefly the evacuations before mentioned (a); then a ſlight and ſhort ſweat ought to be kept up not longer than eight or ten hours; and, during the whole time of the cure, we ſhould go on with abſtinence, weak drink, reſt of body and mind, and cold, unleſs in the time of ſweating, and even then with as little heat as poſſible; and, finally, with tranquillity of mind, as theſe were formerly enjoined: The united uſe of which is perfectly equal to the removal of any of theſe diſeaſes; but there will not always be occaſion for them all.

CCCCLXXXVII.

(a) See CCCV.

CCCCLXXXVII. Often ſo gentle a diatheſis occurs, that one or two of them, once or twice employed, is ſufficient for the cure: So ſlight a diatheſis that is, in which, unleſs for a little at firſt, the ſhivering, languor, and then heat, is very moderate, pointing out a proportional ſlightneſs of diatheſis upon the ſurface; in which there is ſcarce any laſſitude, ſhowing the ſame moderation of diatheſis in the organs of voluntary motion; in which the vigour of the ſtomach remains, manifeſting a moderate exceſs of excitement in it; in which, in fine, the other functions, over the whole body are ſufficiently calm, and only ſuffer conſpicuouſly in the labouring part: In theſe caſes often a ſingle purge with Glauber's ſalt, often, without that, cold, reſt, and abſtinence, have conducted the morbid excitement to its ſalutary degree. A thouſand times has the ſthenic cynanche, a thouſand times has catarrh and the ſimple ſynocha, nay eryſipelas itſelf with affection of the face, been in that way removed. And the ſcarlet fever is often ſo gentle as to yield to the ſame management.

CCCCLXXXVIII. In this way muſt a conſtant regard be had to the degree of excitement and diatheſis in the method of cure, and often terms muſt be diſregarded. For, as it was with this view, that the ſimple ſynocha was before diſtinguiſhed from the phrenitic, and the gentle eryſipelas from the violent; ſo, it often happens, that catarrh riſes to that magnitude that threatens or brings on a peripneumony, and that the latter proceeds with much more gentleneſs than uſual. In which circumſtances, it is the degree of excitement alone, that ought to govern the phyſician, without reſpect to names.

CCCCLXXXIX. Another uſeful caution here is, to judge of the ſtate of the pulſe, of the temperature upon the ſkin, and the ſkin in other reſpects, with good ſenſe, and due reflection upon theſe principles. The frequency of the pulſe in all ſthenic diſeaſes is moderate: With that there

there is conjoined ſome hardneſs and fulneſs. Whenever, therefore, the pulſe is very quick, it is to be ſuſpected, that the ſthenic diatheſis has paſſed into the aſthenic, the exceſſive excitement into a ceſſation of excitement, or that the diſeaſe has been ſthenic from the beginning. To remove which doubt and aſcertain the truth, the habit of body, the age, muſt be conſidered, and an enquiry be made to know whether the diſeaſe has been preceded, or not, by contagion. Heat of the ſkin is in common to theſe diſeaſes and fevers, which are diſeaſes of an oppoſite ſtamp and therefore a doubtful mark. Which, as it depends upon an interruption of perſpiration, from whatever ſource, is never to be ſtrained into a proof of the ſtate of excitement. And, ſince dryneſs of the ſkin, which is in common to the ſame diſeaſes however different from each other, in the aſthenic diſeaſes depends upon debility; in order to know the amount of what that ſymptom means, the other ſymptoms and the exciting hurtful powers, ſhould be conſidered. In fine, the only enquiry ſhould be, whether the excitement is abundant or deficient, and all the ſigns ſhould be conſulted with that view; nor are we to judge raſhly of any peculiar form.

CCCCXC. When, therefore, the ſigns, than have been related, are compared with all the reſt and with the diatheſis, we are then to ſet about the antiſthenic or ſtimulant plan of cure. The violent ſthenic diſeaſes, which we firſt conſidered can ſcarce be confounded with the contrary ones; the more gentle are daily confounded. But, while it is eaſy to diſtinguiſh them from the aſthenic diſeaſes reſembling them; if, however, any perſon ſhould think the marks of diſtinction ambiguous, let him know, that, upon account of that gentleneſs, though the diſeaſe under examination ſhould be aſthenic, blood is not even to be let, much leſs under the apprehenſion that they may turn out aſthenic to which laſt ſo debilitating a power is deſtructive, as

it has so often already been said upon former occasions; and, with that information, let him understand, that his method of cure conducted in that way, will be fenced and secured from all mistake. For, if the diathesis, though sthenic, be slight, bleeding will often precipitate it into the opposite, and will at the best be useless (b). If, on the contrary, the disease that passes for a sthenic one, should, in its progress, show itself an evident asthenic one; in that case every drop of blood that may have been taken will go to the encrease of the disease (c). Yet this pernicious and daily practice sends more men out of this world, than all the curses of human life (d).

CCCCXCI. As abstinence, cold, and the management of the belly are sufficient to prevent a gentle state of the small-pox; so when that proper preparatory plan has been neglected, and now a crowded eruption appears; besides those, trial must be made also of the other remedies (e), except sweat. But sweat must be avoided, because the tendency of the stimulus accompanying it, by encreasing the sthenic diathesis on the surface, would be to check the perspirable fluid, and detain the contagious matter under the scarf-skin, and produce that pyrexia, symptomatic of the inflammation, which is called the secondary fever. This particularity of cure is taken from the particularity of the symptom just now mentioned, and forms no

(b) Suppose the diathesis be two degrees above the highest of the points of predisposition, at 57°; and bleeding to the degree of producing 35° of debilitating influence be employed; it is evident, the excitement will go down not only the 17° necessary to bring it to the point of health, but sink to 22°, that is, 3° below the range of predisposition to asthenic disease, and therefore complete the conversion of the sthenic into an asthenic disease.

(c) See CCXLIX. CCLXXXI. CCXC.

(d) See par CCC. VI. towards the end.

(e) CCCCLIII. to CCCCLXVIII.

no objection to the principles of this work. In perfect conſiſtency with which, though there is all the proof that can be derived from ſure practice, that the remedies we have mentioned are ſufficient; yet, before the eruption comes on, there is nothing can be objected either to ſweating or bleeding, as remedies in common to this with every other ſthenic diſeaſe (f). In fine, as the ſucceſs of low diet, cold and purging, in this manner, is certain; at the ſame time, the other remedies that remove ſthenic diatheſis, in this caſe likewiſe operate to the ſame effect (g). It was proper to ſay ſo much for the ſake of ſhowing the unexceptional ſteadineſs and univerſality of the principles of this work. Nor are we to think, that the ſmall-pox and meaſles, differ from other ſthenic diſeaſes attended with pyrexia, but in the particularity of their eruption in running a certain courſe, and not admitting of an accelerated cure.

CCCCXCII. We are not to wait the arrival of the ſymptoms of debility, that follow a violence of diatheſis, and threaten certain death by indirect debility, with the view, forſooth, that, when they have happened, we may cure them: On the contrary, they ought to be prevented by the early adminiſtration of the remedies, now ſo fully commented upon. If that ſhould be omitted, the conſideration of the diſeaſes that will be the conſequence, and which is altogether an aſthenic conſideration, muſt be referred to the aſthenic form.

CCCCXCIII.

(f) The ſmall-pox is, in one word, to be treated as any ſthenic diſeaſe, according to its degree of morbid ſtate, and the eruption is only to be regarded during the period of its exiſtence, either with reſpect to the exception of ſweating then, or of any thing elſe.

(g) It is not, that low diet, cold, and purging, operate by any peculiarity, but becauſe they debilitate to the degree, and in the manner required of the other remedies.

CCCCXCIII. As often as ſthenic diatheſis happens to be conjoined with the pyrexia, which is induced by the operation of ſtimulants, of acrid ſubſtances, of compreſſion, of obſtruction, and ſimilar hurtful powers acting upon a ſenſible part, of which we have examples in gaſtritis, enteritis, nephritis, cyſtitis, hyſteritis, hepatitis, or the inflammations of the ſtomach, of the inteſtines, of the kidneys, of the bladder of urine, of the womb, of the liver (h); the diatheſis, becauſe it aggravates the pyrexia, ſhould be removed by its reſpective remedies, to wit, the debilitating ones. And, when neither it nor the aſthenic diatheſis is preſent, nothing ſhould be attempted: But, if the aſthenic diatheſis ſhould be preſent, which very readily may happen; the ſtimulant plan ſhould be proceeded upon, to prevent a very bad diſeaſe (i). Nor, when that is as much as poſſible attended to, are we to forget, that, in ſo doing, the principal affection is not touched; that, on the contrary, it is its effect, not its cauſe, that is tampered with; and that the full conſideration of ſuch caſes belongs to the local diſeaſes afterwards to be taken notice of.

CCCCXCIV.

(h) See LXXXI. LXXXIII. LXXXV. LXXXVII.

(i) As aſthenic diſeaſes to ſthenic ones are in the proportion of ninety-ſeven to three of the hundred; ſuch alſo muſt be the frequency of prediſpoſition to them: The inference from which is, that as we are ſeldom in the moſt perfect ſtate of health, and conſequently, for the moſt part, under the ſame degree of prediſpoſition, all the chances are greatly in favour of that prediſpoſition being the aſthenic one. Hence the impropriety of treating all local diſeaſes in the ſame way, and as if they were general ſthenic ones. Death has been too often the conſequence of that practice, when the local fault, for which it was intended, was no more, perhaps than a thorn puſhed under a nail, a cut, or contuſion of a finger. In ſuch circumſtances, however fully the perſon may have lived, wine is withheld, fluid vegetable matter preſcribed, and the rotine of every ſpecies of evacuation gone through. Diſmal are the conſequences of gun-ſhot wounds on this plan of cure. Turn back to the paragraphs LXXX. and LXXXI. and the notes ſubjoined to them.

CCCCXCIV. Beſides all the remedies now mentioned, it is of advantage in every degree of diatheſis to keep the mind eaſy and unruffled with paſſion or emotion; a practice that in the very high degrees of the diatheſis is indiſpenſably neceſſary. Our attention will eſpecially be directed to this particular, when we obſerve, that the ſtimulus of thinking and of any paſſion, carried to a great height, has had a ſhare in the production of the diſeaſe.

CCCCXCV. In mania, therefore, and pervigilium, this direction muſt be particularly, and as much as poſſible, attended to. In the latter of which diſeaſes, thinking, and every ſtate of commotion, and more certainly an habitual practice in them, muſt be ſhunned, eſpecially before going to bed. When the patient is reſting there, he ſhould have ſtupid books read to him, all inordinate deſires, the propenſity to revenge, the remembrance of any degree of criminality, of which he may have been guilty, ſhould be diverted from his recollection (k).

CCCCXCVI. That fact of great conſequence, to give corroboration to this whole doctrine, is confirmed by this other, that the ſame things, which are ſerviceable in pervigilium, or the morbid watchful ſtate, are alſo ſerviceable in mania, or madneſs, only adminiſtered in a higher degree, as that is a diſeaſe of a higher degree of excitement. Thus, it is not eaſe and tranquillity of mind that are to be preſcribed here, both of which are quite gone, but a ſtate oppoſite to that high commotion of ſpirits and irregular vigour in the exerciſe of the intellectual function: And, as an exceſſive energy of the intellectual powers, or of the animal ſpirits, or both, are the moſt noxious powers in this caſe; for that reaſon, the patient ſhould be ſtruck with fear and terror, and driven, in his ſtate of inſanity, to deſpair:-As a remedy againſt the great excitement of the organs

(k) See above par. CCCCXXXIII.

gans of voluntary motion, the labour of draft-cattle ſhould be impoſed on him, and aſſiduouſly continued; his diet ſhould be the pooreſt poſſible, and his drink only water(l): In water as cold as poſſible, the patient ſhould be immerſed, and kept under it, covered all over, for a long time, till he is near killed.

CCCCXCVII. If, in phrenitis the brain, in peripneumony the lungs, in rheumatiſm the external joints, poſſeſs more diatheſis than any other part; why may not mania and pervigilium conſiſt more in an affection of the brain, upon which the principal noxious powers act, than of the other parts, over which the influence of thoſe powers is leſs conſiderable? Laſtly, ſince remedies, the firſt action of which falls upon other parts, are of ſervice in thoſe diſeaſes (m), that proves, that not even in them, where you might moſt be diſpoſed to believe it, the whole morbid affection depends upon the part conſpicuouſly affected; but that the whole body is concerned in it, that the excitability is one uniform undivided property over all; that the force both of the exciting hurtful powers and of the remedies is directed to the whole, with the inequality ſo often mentioned (n); and that the foundations of this doctrine are ſure and ſtable.

CCCCXCVIII. As theſe are the principal hurtful powers in mania and pervigilium, and the brain principally affected; ſo in obeſity, the hurtful powers moſt conſiderable are animal food (o) and reſt, or ſedentary life; in conſequence of which laſt, the ſtimulus of exerciſe, which, by

(l) See CCCXXVIII. CCCCXXX. CCCCXXXV. CCCCXXXVI.

(m) Part I. Chap. II.

(n) Part I. Chap. IV.

(o) Becauſe no effect can ariſe without a cauſe, the exciting powers, therefore muſt here have operated with more force, than in the other caſe; and if it ſhould be objected, that the circumſtances in both caſes were equal, the difference then muſt be ſet to the account of the greater vigour of the excitability in the caſe of obeſity.

by wearying and fatiguing the body, tends to indirect debility, is underſtood to be wanting. But, ſince, in conſequence of uſing the ſame food, both in quality and quantity, and the ſame indulgence in reſt and eaſe, ſome perſons become fat, others continue lean; from thence it is aſcertained, that all the digeſtive powers have more force in the former, than in the latter, and conſequently, that the other exciting hurtful powers have contributed to the effect, and that a proportional excitement follows. Of the hurtful powers, that belong to this place, an eaſy exerciſe of the intellectual faculty, and tranquillity of mind, which are moderate ſtimuli, favour obeſity; over ſtrained thinking, and habitual indulgence in any paſſion, ſuch as that of anger, the repetition of which conſtitutes ill nature, oppoſe it. Corporeal motion, which diminiſhes the quantity of fluids in the ſyſtem, and as often as it is conſiderable, proves fatiguing and debilitating, oppoſes it. Equally unfavourable to it is hard drinking; which, in a ſimilar manner, wears out the excitement, by conſtantly waſting the excitability from the high degree or long continuance of its ſtimulus. On the contrary, the powers that favour it, are thoſe that act gently, and with ſome exceſs: but never attain that high degree of activity, that inclines to indirect debility: They are powers that go on ſoftly and pleaſantly, that particularly keep up moderation in the perſpiration, and thereby fill the veſſels with blood; but, becauſe motion is avoided, they do not very much encreaſe the excitement of the veſſels, and by means of the tranquillity of motion kept up in the latter, allow a fluid, that would otherwiſe paſs off by the external pores of the ſurface, to turn aſide into the cells of fat. Hence, though as it has been ſaid before, an abundance of blood is indeed a very great ſtimulus; yet, without other ſtimuli, and that moſt powerful one, which muſcular motion affords; it is evident, that a conſiderable degree of ſtimulus can be borne

without

without any conſiderable diſeaſe, and that it always produces a prediſpoſition to ſthenic diſeaſes, but does not immediately bring them on. Hence, it is underſtood what place in the ſcale of exceſſive excitement, or of ſthenic diatheſis, obeſity holds; what the degree of ſtimulant power is, and what the ſtimuli in particular, are that produce it.

CCCCXCIX. As the degree of curative force muſt be accommodated to the degree of force in the cauſe (p); hence it muſt be obſerved, that for the cure alſo of this diſeaſe the common indication is ſufficient (q); that is, that the exceſs of excitement muſt be reduced to the ſalutary degree, and a remedy oppoſed to every hurtful power, equal to the removal of it.

D. In this caſe, therefore, as food is the principal hurtful power, leſs of it ſhould be given, and more exerciſe engaged in. Theſe are ſufficient for the cure (r).

DI. But, for the ſake of bringing both further confirmation, as well as illuſtration of this doctrine; it is to be obſerved, that all the powers, which very much affect the excitement, and in a greater degree, than the hurtful power of this diſeaſe mentioned above, and that have a tendency, by their ſtimulant operation, to indirect debility, have the ſame effect; that they either prevent or cure obeſity, and continue productive of that effect, till they induce that degree of meagerneſs which is connected with debility.

DII. The beſt method of lowering the diet, is to combine a quantity of vegetable matter with a moderate portion of animal. The next rule to that, is to refrain from the latter, and uſe the former in greater abundance. The firſt of theſe is ſuitable to all ſuch perſons as are liable to diſeaſes of debility, ſuch as the gout, the indigeſtion that after a long time ſucceeds to luxury, aſthma, epilepſy and ſimilar

(p) See CIX. (q) XLVIII. CCCCLIII. (r) CCCCXCVIII.

ſimilar others. The latter management is more accommodated to thoſe, who otherwiſe enjoy great vigour, are under prediſpoſition to ſthenic pyrexia, and in the flower of their age. But, it is not, even in the latter ſtate of the body, to be proſecuted, unleſs for a time; becauſe, ſuch is the debilitating influence of that practice, that, while it is ſufficient to remove any degree of obeſity, eſpecially with the additions of exerciſe, it is found to have ſignal efficacy in producing aſthenic diatheſis, and all the diſeaſes depending on that.

PART

# PART THE FOURTH.

## THE SECOND FORM OF GENERAL DISEASES.

## OR

## THE ASTHENIC DISEASES.

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## CHAP. I.

DIII. THE form of aſthenic diſeaſes, and which is to be called aſthenia, for the ſake of diſtinguiſhing it from the form of ſthenic diſeaſes, which is called ſthenia, is a ſtate of the living body, in which all the functions are more or leſs weakened, often diſturbed, almoſt always with a more conſpicuous affection of ſome function. In the treatment of which, that order will be obſerved, in which the progreſs from the ſmalleſt degree of his kind to the greateſt through all the intermediate degrees, is to be followed out.

DIV. In this part of our ſubject, there occurs a great variety of ſymptoms; of which, becauſe it is without meaning, and even miſleading, no uſe is to be made in marking the ſcale of diſeaſes. But, for the ſake of placing what is about to be delivered in a clearer, if not more ſpecious, point of view, we ſhall begin with a ſimple enumeration of the principal diſeaſes to be afterwards fully treated of.

DV. The aſthenic diſeaſes are macies, inquietude, or reſtleſſneſs without ſleep, the aſthenic amentia, the ſcabby

eruption, the ſlight diabetes, the aſthenic ſcarlet fever, the rickets; the hæmorrhæae, or general bleeding diſcharges, ſuch as menorrhæa, or a morbid exceſs of the menſes, epiſtaxis, or bleeding from the noſe, hæmorrhois, or the piles; and alſo three morbid ſtates ſeemingly in appearance oppoſite to theſe, the loitering, impaired, or ſuppreſſed menſtruation; next come thirſt, vomiting, indigeſtion, diarrhæa, or looſe belly, and colic without pain; after theſe the affections of children, as the worms, the general conſumption, called tabes, dyſentery and cholera in the gentle ſtate of theſe two; angina, the ſcurvy, the gentle hyſteria, rheumatalgia, aſthenic cough, cyſtirhæa, or mucous diſcharge from the bladder; the gout of ſtrongiſh perſons, aſthma, cramp, anaſarca, dyſpepſia with pain, the violent hyſteria, the gout of weakened perſons, the hypochondriaſis, dropſy, chin-cough, epilepſy, or the falling ſickneſs, palſy, the lock-jaw, apoplexy, tetanus; laſtly fevers, as the quartan, tertian, and quotidian, intermittents or remittents, dyſentery, and cholera, both in their violent degree, ſynochus, ſimple typhus, the gangrenous ſore throat, the confluent ſmall-pox, the peſtilential typhus, and the plague.

DVI. This ſcale of aſthenic diſeaſes is to be underſtood in this way, that thoſe diſeaſes, which in their moſt uſual ſtate are ſlight, and claim a higher place in the ſcale, are ſometimes more, ſometimes moſt, violent; and thoſe that in their moſt common ſtate are ſevere, ſuch as the gout of weakened perſons, the peſtilential fevers, and the plague itſelf, ſometimes proceed with the greateſt gentleneſe (a).

DVII. The affections of parts, which often accompany thoſe diſeaſes, ſuch as ulcer, tumor, encreaſed excretion, bleeding diſcharge, inflammation, ſpaſm, convulſion, point out indeed ſome degree of debility as their cauſe, but in

U ſuch

(a) See par. CCCCL.

ſuch ſort that the ſame degree may happen without them. Hence, becauſe it is the influence of debility that is fundamentally regarded in this ſcale; with the diſeaſes, that are often conjoined with theſe affections, others, without them, as hyſteria and the cramp are blended; and, with the caſes that are accompanied with ſpaſm and convulſion, dropſy is conjoined, by keeping to the idea of an equal degree of debility; and all this without any regard to remarkable ſymptoms, but keeping the degree of debility only in view. Neither is the violent cholera kept back from its place among fevers, which laſt are diſtinguiſhed by failure in the intellect and affections of the head, becauſe it ſhews a degree of debility equal to the febrile. The idea in proportioning this diviſion is to ſhow, that true morbid energy does not conſiſt in an affection of any parts, but of the whole body; and that the reſtoration of health is not to be attempted by a change of the ſtate of parts only, but, without excluding that, by a change of the ſtate of the whole ſyſtem.

### *Of Leanneſs.*

DVIII. Leanneſs is an aſthenia, leſs diſcernable in the other functions, but evident from the weakneſs of the digeſtive function; in conſequence of which, the ſyſtem, though receiving proper aliment, does not become plump.

DIX. Since the cauſe of this diſeaſe is debility, both in the reſt of the ſyſtem, and in the ſtomach and other organs of digeſtion; it thence follows, that the general indication for the cure of it, ſhould be chiefly directed to the moſt languid part, that is, the organs of digeſtion and the perſpiratory veſſels. More nouriſhing food, therefore, ſhould be uſed, leſs labour undertaken, and moiſture on the ſurface, or too free perſpiration, ſhould be checked by more reſt of body, by proper geſtation, and rubefaction, and a plan

plan, quite contrary to that which is ſuited to the cure of obeſity ſhould be purſued.

*Of Reſtleſs Watching.*

DX. In the aſthenia called inquietudo, or reſtleſs watching, the other functions are under ſome degree of languor, and the patient is affected with a conſtant neceſſity to change his poſture, and toſs about his limbs without being able to fall aſleep.

DXI. As the cauſe in this caſe, in the ſame manner as in every other general diſeaſe, is univerſal over the ſyſtem; ſo it affects the organs of voluntary motion, and the brain in particular, with the inequality ſo often formerly mentioned (b): Conſequently, to remove the diſeaſe, ultimate exceſs in either mental labour, or exertion in any paſſion, as well as the oppoſite extreme of deficiency in either, ſhould be avoided; and that ſtimulus of both, which is agreeable, ultimately exceſſive corporeal labour when it has proved hurtful, as well as deficient when it has had a concern in the cauſe, ſhould be guarded againſt; and the proper medium betwixt the extremes of exceſſive activity and indolence reſtored: Or the diſeaſe ſhould be repelled by wine, and the other ſtimuli have, each its proportion, in the cure.

*Of the Scabby Eruption.*

DXII. In the ſcabby eruption, the face is pale, the ſkin diſcoloured, dry, lank, and variouſly disfigured with puſtules; there is a lowneſs of ſpirits, and the functions of the body weak and ſluggiſh.

DXIII. In this caſe, while the debility is univerſal, there is a prevalence of it in the perſpiratory veſſels. And, therefore, the chief parts of cure are, together with the remedies,



(b) See par. XLIX.

medies, the operation of which is directed to the whole ſyſtem, ſuch as nouriſhing food, ſtrong drink, to ſupport the perſpiration by its reſpective remedies; to bathe the ſurface of the body in tepid water, to render it acceſſible to air, to order clean linen for the patient, and every thing clean about his cloathes.

*Of the Gentle Diabetes.*

DXIV. In that aſthenia, which is named the gentle diabetes, there is an exceſs in the quantity of urine diſcharged, but the profuſion is not immoderate as in the moſt violent caſe of the ſame name. The organ of reſpiration labours under the ſame weakneſs and ſluggiſhneſs, as in the ſcabby eruption.

DXV. To remove this affection much more frequent than it has been hitherto believed, the ſyſtem ſhould be ſtimulated by food (c), by ſtrong drink (d), and by proper exerciſe (e, ſuch as is neither immoderately exceſſive, and therefore debilitating nor deficient in degree, and therefore, not ſupplying enough of ſtimulus: And, above all things, the perſpiration ſhould be ſuſtained. The contrivances for checking the flow of urine, which have no exiſtence, are to be paſſed from.

*Of the Rickets.*

DXVI. The rickets is an aſthenia; to the general ſymptoms of which are added an unuſual bulk of the head, eſpecially the fore part of it, and likewiſe of the knees and abdomen, a flatneſs of the ribs and meagerneſs.

DXVII. The rickets is a diſeaſe of children, chiefly ariſing from uncleanlineſs, want of dandling or exerciſe, cold, either without moiſture or with it, food not giving ſufficient nouriſhment, and bad air.

DXVIII.

(c) See par. CCLXVI. (d) See par. CCLXVIII. (e) CCLXX.

DXVIII. For its cure the common aſthenic indication muſt be employed; remedies, of an oppoſite nature to the hurtful powers that excite the diſeaſe, muſt be looked out for; the ſurface of the body ſhould be kept clean (f), the perſpiration ſhould be carefully reſtored by the ſtimulus of pure air and of heat; the child ſhould be more carefully dandled, and kept much in the open air, animal food ſhould be adminiſtered, vegetable withheld, and ſtrong drink allowed (g).

*Of Retarded Menſtruation.*

DXIX. Retarded menſtruation is alſo an aſthenia: In which, beſides the diſcharge not making its appearance at that time of life, when it ſhould, other evidences of debility, ſuch as a ſlender make of body, weakneſs, laxity of habit, want of appetite, or a craving for things not alimentary, paleneſs of the ſkin, and ſimilar ſymptoms, appear.

*Of Impaired Menſtruation.*

DXX. Impaired Menſtruation is that ſtate of aſthenia, in which after it has appeared, and the flow continued for ſome time, the diſcharge is made in too ſparing quantity, or after too long intervals of time, with other ſigns of weakneſs accompanying it.

*Of the Suppreſſion of Menſtruation.*

DXXI. Suppreſſion of menſtruation is that degree of aſthenia, in which the diſcharge is totally ſtopt at any period betwixt their natural commencement and the time when, in the courſe of nature, they ceaſe altogether.

DXXII. An enquiry muſt be made into the cauſe of natural menſtruation, before it ſhould be proper to enter upon that

(f) See DXIII. (g) See CCXCV. CCCIII.

that of the retardation, or deficiency, of the diſcharge in any of its degrees.

*Of the Cauſe of Menſtruation.*

DXXIII. The cauſe of menſtruation is a conformation of the veſſels that pour out the blood in this diſcharge, taking place at a certain time of life, that is, about the age of puberty, and a ſtimulant energy in women, more powerful than in the females of the other ſpecies of animals.

DXXIV. Of other animals there are very few, the females of which undergo any ſort of menſtruation out of the venereal orgaim.

DXXV. As all the veſſels are gradually unfolded in the courſe of the growth of the body, ſo the ſame thing happens to the genital and uterine veſſels, but laſt of all to theſe. The ends of the latter, terminating, on the ſides of the womb about the age of puberty, are at laſt ſo very much expanded, as now to tranſmit firſt the ſerous part of the blood, and then, after an effort kept up for ſome time, paſs to formal blood.

DXXVI. At this time of life a great change over the whole ſyſtem takes place. Now the deſire for coition, a ſtimulus, never experienced before, produces a commotion over the whole body; and, in preference to other parts, in the genitals of both ſexes, in the female, over the whole region of the ovaria, womb and vagina: By this ſtimulus, the uterus, its ſeat, being nearly inceſſantly ſolicited, is the more powerfully affected, the more there is of excitability, hitherto acted upon by no ſuch ſtimulus, exiſting in the ſyſtem. Hence, among other organs, the muſcular fibres of the next veſſels, as well as the nerves interwoven with them, undergo the higheſt degree of excitement: This excitement encreaſing over the whole ſyſtem, again encreaſes that in the uterus: The mutual contact of the ſexes, whether

whether in kiſſing, in ſhaking hands, or otherwiſe, fires both ſets of genitals, and the uterus in a remarkable manner; but the actual embrace produces the higheſt degree of that effect. The remembrance of each embrace remains, renews the dear idea of the delightful ſcene, and continues more or leſs to excite the uterus.

DXXVII. This new affection is further cheriſhed and nouriſhed by every ſtimulus that is uſually applied to the ſyſtem: Hence, in the abſence, in the preſence, of the beloved object, at all times generally, ſcarce with the exception of that which paſſes in dreaming, a ſtimulus ſo ſteady, and the more powerful, that its novelty implies, that the excitability in this caſe is entire, rouſes the fibres of the veſſels, already ſufficiently unfolded, to violent contractions. The blood is carried into the region of the uterus with the greateſt rapidity, a rapidity momentarily encreaſed, in proportion as the blood, by powerfully diſtending the veſſels, and agitating them by its impetuous flow, ſtimulates the fibres more and more, and thereby encreaſes the activity by which it is driven on. This is the firſt cauſe of menſtruation: In that way the two circumſtances, a ſufficient enlargement of the diameters of the veſſels, and the ſtimulus acting more powerfully, from its novelty, upon the unwaſted excitability (h), are ſufficient for the whole buſineſs.

DXXVIII. This ſtate is not inconſiſtent with other ſtates of the body, but bears an analogy to ſome well known ones: Accordingly, different veſſels, from the mere difence of their diameters, are ſubſervient to different purpoſes: The perſpiratory veſſels are deſtined to the tranſmiſſion of a vapour, the excretory veſſels of the alimentary canal to that of a thin fluid, the renal veſſels to that of a groſſer one; ſo as to take off our ſurpriſe at finding veſſels fitted

(h) See DXXIII.

fitted by their degree of diameter, for the purpoſe of tranſmitting red blood.

DXXIX. The reaſon that the females of other animals do not menſtruate but in their orgaſm, and not at other times, is, that it is only at certain times that they are expoſed to that energy of ſtimulus which produces menſtruation.

DXXX. How much is owing to the ſtimulus juſt now mentioned (i), in the production of menſtruation, is further evident from the following chain of facts: Which are, that, the leſs addicted to love women are, the leſs they menſtruate; the more they give way to that paſſion, the freer do they experience this diſcharge within certain boundaries; that, before puberty, and after the time of life when menſtruation ceaſes (which are the two periods, at which the fitneſs for effective love has not yet commenced, or is now paſſed), the menſtrual diſcharge is conſtantly wanting; that the privation of enjoyment, which, by its debilitating effect, produces chloroſis (k) and other ſimilar diſeaſes, is remarkable for bringing on a menorrhœa, or a retention of menſtruation; and, finally, that girls, who are of a forward growth, of great ſtrentgh, and large limbs, and conſequently ſooner ripe for love, are alſo more early in menſtruation; while thoſe, who are weakly, puny, and of a ſmall ſize, and, conſequently, later in attaining to the period of puberty, are proportionally late in attaining the firſt menſtrual diſcharge. Laſtly, if, like all the other functions, that of love is limited at the ſame time by its duration and degree; and if, as the commencement of the love embraces it more or leſs early, it is proportionally more early or late in coming to its final termination, and if the duration of menſtruation does not uſually exceed that period; that fact alſo, which it certainly is, added to thoſe

(i) See DXXIII. DXXVI.

(k) or the green ſickneſs,

thoſe above, gives weight to our concluſion, and ſhows, in a clearer point of view, how much menſtruation depends upon the venereal emotion. It is to be aſſerted, therefore, again (k), that, beſides the conformation of the veſſels, ſuited to the function of menſtruation, and the ſtimulus which has been mentioned (k), there is occaſion for no other circumſtance to explain either commencement, eſtabliſhment, or continuation, of the menſtrual diſcharge.

DXXXI. The cauſe of full menſtruation, and that of a moderate degree of it, happening within the boundaries of health, is the ſame; only differing in degree; the degree of the latter being ſmaller, and that of the former greater.

DXXXII. And, as the ſtimuli, mentioned above, explain, why women menſtruate more than the females of other animals; ſo their immoderate operation upon women ſerves to ſhow, why their effect, the menſtrual diſcharge, becomes greater than natural (l).

DXXXIII. The ſtimuli that produce abundant menſtruation, ſhort of morbid ſtate, are unchaſte ideas, and a high energy of paſſion. In this way, the influence of reading to ones' ſelf, or to others, of converſation, of pictures, contrived to kindle up luſtful appetite, and the uncovering of parts that modeſty conceals, which all produce a lively impreſſion on the imagination of the thing ſo much deſired, can be indiſtinctly felt by none perhaps but eunuchs. The ſame is the effect of nouriſhing food, and generous drink, and high ſeaſoning; and hence the proverb, without meat and drink love ſtarves: Likewiſe, that degree of exerciſe, or even labour, that does not prove fatiguing, but that keeps within the boundary of ſtimulant operation;

(k) DXXIII. DXXVI.

(l) Women menſtruate more than other females, becauſe they are ſubjected to a higher degree the ſtimulus, which is its cauſe; and ſuch women as are expoſed to more of the ſame ſtimulus than others, will alſo experience more of the effect; preciſely upon that ſame principle.

operation; as alſo an abundance of blood, both from that circumſtance and from rich diet; laſtly, frequent and ardent dalliance, or inconceſſa hujus imitatio; all theſe, encreaſe the menſtrual diſcharge, in proportion to the high degree of their ſtimulus, but ſtill do not carry their effect to morbid exceſs.

DXXXIV. The ſame concluſion applies to the effect of theſe ſtimuli, which was formerly applied to an over-proportion of blood producing ſthenic diatheſis: For the ultimate end of all the ſtimuli, that produce exceſſive menſtruation, is ſuch, that, if exceſſive menſtruation and an encreaſe of love be the conſequence of the exceſs of the ſtimuli, one or other of the following muſt be the effect: that is, it will either be ſuch as remains within the latitude of health, or ſuch, as firſt produces ſthenic diatheſis, and then, in a higher degree of it, runs rapidly into indirect debility.

DXXXV. That that is the fact, is proved by the hurtful powers that produce exceſſive and morbid menſtruation; and by remedies, that are ſtimulant and ſuited to fill the veſſels, removing the diſeaſe according to our late diſcovery; and alſo by the unfortunate effect of the debilitating evacuant plan of cure in the ſame diſeaſes.

DXXXVI. As it is ſtimulant operation that produces both proper menſtruation and that which goes to a little exceſs; ſo when once menſtruation is eſtabliſhed, the conformation and ſtimulus, that have been mentioned, remaining, are ſufficient to ſupport it. The ſame operation is renewed during every interval of menſtruation: The ſtimulus acts and quickens the motion of the blood in every part, but chiefly in that where it is moſt powerful and moſt required, that is, in the region of the womb: The blood thrown into quick motion, and ruſhing with a more rapid flow, encreaſes its cauſe, the ſtimulus: And, as this mutual ſtimulus continues inceſſantly to affect the

women through the whole interval, when they are allowed ſcope of love; the uterine veſſels gradually unfolded, till at laſt, within three weeks, or a lunar month, they are opened to their ultimate extremities: And, when the fluid, firſt ſerous for a little, and afterwards ſanguine, and afterwards ſerous again for a little, has flowed one, two, or three days, in healthy perſons, the veſſels are at laſt ſhut up.

DXXXVII. During the whole time of this proceſs, the more excitability there is, and conſequently at the beginning of each menſtrual effort, the more violently the ſtimulus acts, and produces proportionally more excitement: And it has, from this time, always leſs and leſs effect to the end, in proportion as the excitability is more waſted; though, till the excitibility, in ſo far as it has a relation to the ſtimulus, is altogether exhauſted, the ſtimulus always adds ſomething to the ſum of excitement (m), though conſtantly leſs and leſs. The ſame is the explanation of the operation of food, of drink, and of all the exciting powers.

DXXXVIII. As what has been ſaid of the ſtimulus, productive of menſtruation, is conformable to the effects of all the other ſtimuli; the ſame is its conformity to the whole ſum of menſtrual effect from the beginning to the end of the proceſs. Thus, in the beginning of that long period, the force of the ſtimulus is far the greateſt, upon account of its novelty, and the unwaſted ſtate of excitability that relates to it. At this period, above all others, love in perſons in health is exquiſite; and, in conſequence of the ſtimulus which excites it, menſtruation, when once eſtabliſhed, is moſt exactly performed; that is, it does not, either from deficiency or exceſs, deviate into morbid ſtate.

DXXXIX. But after the beginning of this function, and when now the office of menſtruation is eſtabliſhed; becauſe

(m) See XXXVI.

becauſe in this, as well as every other function, the excitability is gradually diminiſhed in the progreſs of life, the ſtimulant power alſo has gradually leſs, and, at laſt, no effect: Conſequently, in the ſame gradual way, the power of love in women, and, in proportion, that of menſtruation, is diminiſhed, and at laſt altogether extinguiſhed.

DXL. While both the faculties, that of love as well as that of menſtruation, in this way decreaſe from the beginning to the end; ſo, menſtruation is often interrupted, in pregnancy, in ſuckling, in the diminution or ſuppreſſion of of menſtruation. This interruption in the two former is natural, and ſuitable to health; but in the diminution or ſuppreſſion of the menſtrual evacuation, it becomes morbid.

DXLI. Since the ſtimulus with the conformation of the veſſels is the cauſe of menſtruation, and the latter depends upon the former; ſo again the defect of the ſtimulus, and, therefore, of the conformation, produces both the retardation, diminution, and, at laſt, the complete ſuppreſſion of the diſcharge.

DXLII. Whether ever the defect of menſtruation, like that of perſpiration, or of any internal excretions, as that in the fauces and alimentary canal, is ſometimes to be imputed to ſthenic diatheſis, is uncertain, for this reaſon; that, while the diameters of the ſmall veſſels on the ſkin and in the inteſtines are more nearly allied to ſuch a contraction for a reaſon formerly aſſigned (n); ſo great a force of excitement, ſo high a degree of ſthenic diatheſis, as would be ſufficient to ſhut up veſſels deſtined to the tranſmiſſion of blood, is not eaſy to be conceived. And the doubt is further encreaſed by a certain fact; which is, that both in the retardation of the menſtrua, and all the degrees of their diminution to their total ſuppreſſion, when local affection

(n) LVII. LXII. CXII. CXIII.

fection is out of the queſtion, there are evident proofs of a debilitating cauſe.

DXLIII. To aſcertain that fact, which is of the greateſt conſequence for this reaſon, that it directly intereſts the method of cure, and, if not explained, would leave a gap in our principles; we have to obſerve, that, as ſome men, in conſequence of the ſtimulus of exceſſive love, in the caſe of a moſt beautiful woman being the ſubject of it, have, by means of ſthenic diatheſis, been ſo inflamed as to fall into a temporary fit of impotence, and been cured by bleeding; ſo, beſides that that is a rare fact (o), it is not very probable, that the patulous uterine veſſels can be ſo contracted in their diameters, as to be incapable of tranſmitting their fluid. Nay facts contradict it: The retardation or deficiency of menſtruation receives a temporary alleviation from the debilitating plan of cure; but the diſcharge is not uſually brought back, on the contrary it is more kept off: But allowing an over-proportion of blood and an exceſs of ſtimulus to be the cauſe of the firſt deficiency of menſtruation, after it has been removed by bleeding and the reſt of the debilitating plan of cure, can it again be the cauſe of a diſeaſe, which reſiſts a degree of evacuant and debilitating plan of cure, that would cure ten peripneumonies? And ſince any ſtimulus, as well as that of an over-proportion of blood, may, from its exceſſive force go into indirect debility; why may not the ſame thing happen in a diſappointment in love, and firſt deficiency of menſtruation; and, in both caſes, atony, uſhering in manifeſt debility, and not exceſs of tone, be the cauſe? As peripneumony, where the over-proportion of blood and ſthenic diatheſis is by far the greateſt that ever happens, in conſequence of indirect debility paſſes into hydrothorax; why may not a ſimilar cauſe in this caſe produce a ſimilar effect?

DXLIV.

(o) I remember one inſtance in Dr. Whyte, and I think I have only heard of another.

DXLIV. The cauſe, then, of deficient menſtruation, whether partial or complete, is a languid excitement over the whole body, eſpecially in the uterus, from a deficiency of the ſtimulus of love (p), and of all thoſe ſtimuli that ſupport it (q), and from a penury, or under-proportion of blood.

DXLV. That that is the fact, is proved by the hurtful powers mentioned in the retardation of menſtruation, and other debilitating ones in every deficiency of that diſcharge, producing each diſeaſe; it is proved by the ſtimulant and filling plan of cure removing it, and alſo by the hurtful effect of the debilitating plan of cure (r).

DXLVI. The remedies for the cure of retarded menſtruation are, rich food, generous drink, geſtation, exerciſe accommodated to the ſtrength, pediluvium and ſemicupium, or the warm bath of the under-extremities, and gratification in love (s).

DXLVII. The ſame remedies are required for the ſuppreſſion, and the ſame, but inferior in their degree of force, for the diminution of menſtruation: When there is an unuſual force of the diſeaſe, either in degree or duration, we muſt have recourſe to the aſſiſtance of the diffuſible ſtimuli.

*Of Menorrhœa, or the exceſſive Diſcharge of Menſtruation.*

DXLVIII. Menorrhœa is an effuſion of blood from the uterus, or an over-copious menſtruation, or too long a continuance of it in a more moderate degree of the exceſs, accompanied by all the ſymptoms of aſthenia.

DXLIX. This diſeaſe is occaſioned not by an over-proportion of blood, not by a vigorous ſtate of body, but by an

(p) DXXIII. DXXVI. DXXIX.
(q) DXXVI. DXXVII. DXXXII. DXXXVII.
(r) DXXXV. (s) DXXVI.

an under-proportion of the former, and an exhauſtion of the latter. The hurtful powers, therefore, that produce it, are food not nouriſhing enough, or too ſmall a proportion of what is ſo, watery drink, or that over-proportion of pure ſtrong drink that produces indirect debility, exceſſive heat, or cold not prevented from its debilitating operation by any ſtimulus, and ſalacity.

DL. Its remedies are the reverſe of the hurtful powers; rich food, generous ſtrong drink, heat acting within its ſtimulant range, cold kept from direct debility by the ſtimulus of heat and other ſtimuli, and gratification in love.

DLI. The effect of the hurtful powers and remedies of which we have ſpoken, that of the former in producing, and that of the latter in removing, the diſeaſe, and the failure in ſucceſs of the debilitating plan of cure, all confirm the fact.

*Of Epiſtaxis, or bleeding from the Noſe.*

DLII. Epiſtaxis is an aſthenia; which, beſides the general ſymptoms of the latter, is diſtinguiſhed by bleeding from the noſe, without any force behind, an affection troubleſome at any age, but particularly to young perſons under a rapid growth, and to enfeebled old age.

*Of Hæmorrhois.*

DLIII. The characteriſtic of hæmorrhois, or the piles, added to other ſigns of aſthenia, is a flow of blood from the anus, or the parts around it.

DLIV. The ſame thing, nearly, that has been ſaid of menorrhœa, is to be ſaid of the hurtful powers and remedies of this diſeaſe.

DLV. The cauſe of the piles is manifeſt, from the hurtful powers producing it, the remedies removing it, and the unhappy effect of the common aſthenic plan of cure; that

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is to ſay, it is debility of the whole body, from the deficiency of other ſtimuli, and chiefly that of the blood (t): Which debility, while it relaxes all the veſſels, and impairs their tone, produces that effect, in a ſpecial manner, upon the labouring veſſels. The reaſon of which is, that, in conſequence of the inequality ſo often mentioned, the chief prevalence of the cauſe operates in the ſeat of the urgent ſymptom (u). Nor is it to be thought wonderful, that the blood ſhould flow through the veſſels of the uterus that are patulous, and in the habit of pouring out blood, through the pendulous hemorrhoidal veſſels, and thoſe of the noſe, which are delicate, and weakly ſupported, in preference to others. In this caſe plethora, which has no exiſtence (x). is equally unneceſſary to our reaſoning (y).

*Of Thirſt, Vomiting, and Indigeſtion, as well as the Kindred Diſeaſes of the Alimentary Canal.*

DLVI. There is a very frequently occurring affection, beginning with thirſt and proceeding to vomiting (z). It often proceeds no farther than thoſe ſymptoms; it oftener uſhers in the moſt ſevere affections, ſuch as ſometimes dyſpepſia, or indigeſtion, ſometimes colic, ſometimes the gout, ſometimes proper fevers, and many other aſthenic diſeaſes. Its moſt frequent ſource by far is weakneſs, being the attendant ſometimes of too long ſuckling, ſometimes in the diarrhœa incident to women, waſted with a long courſe both of that and repeated pregnancies.

DLVII. There are two cauſes of as many affections which have got only one name between them, that of thirſt: The one is ſthenic, the other aſthenic (a). The former ariſes from the ſtimulus of ſalt, of rich and plenti-

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(t) See par. DXLIX. (u) See XLIX. L. LI.
(x) See par. CXXXI. CXXXIV. (y) CCXXXII.
(z) CLIX. CLXXXV. CLXXXVI. and CLXXXVII. (a) Ibid.

ful meals, of heat and labour, and ſome others; never ending in vomiting till the ſthenic ſtate is over, which is ſeldom. Its cure, with which we have here no concern, is cold water and the ſeveral debilitating powers.

DLVIII. The aſthenic thirſt, which is our preſent ſubject, depends always on pure debility, ſometimes indirect, ſometimes direct (b). Its tendency is always to ſtomach ſickneſs, and, as that encreaſes, to vomiting (c); and when the vomiting becomes any way conſiderable, the conſequence is that moſt acute pain, which a cramp in the ſtomach produces (d), and the other affection formerly explained (e). This progreſs is ſpontaneous, direct, and for the moſt part rapid.

DLIX. The hurtful powers here are all debilitating. The indirectly debilitating hurtful powers are, debauch in eating and drinking (f), drunkenneſs, extreme fatigue, ultimately exceſſive heat (g), violent paſſions (h), exceſſive exerciſe of the intellectual faculty (i), debilitating food (k), an over-proportion of blood now converted into an under-proportion, together with the converſion of the ſthenic diatheſis that attended the former, into the aſthenic, the inſeparable attendant on the latter. The following powers act by a directly debilitating operation; cold corrected by no ſtimulus (l), cold drink, vegetable food (m), penury of blood (n), of other fluids (o), want of pure air (p), anxiety, grief, fear (q), and in fine, that weakneſs of the ſyſtem, which ariſes from all thoſe. The affection is often of a mixt origin, from a mixture of both theſe ſorts of hurtful powers: For, as direct debility always increaſes the indirect, ſo does the latter the former, both in this and all caſes (r).



(b) CLXXXV. (c) See CLXXXVII. CLXXXVIII.
(d) See par. CLXXXIX.
(e) CXC. to CXCV. and from that to CXCVIII.
(f) CXXVIII. CXXX. (g) CXV. (h) CLXI. (i) CXXXIX.
(k) CXXVIII. (l) CXXII. (m) CXXVIII. (n) CXXXIV.
(o) CXXXVII. (p) CXLVI. (q) CXLII. (r) XLVII. LXXI.

DLX. A corruption of the common maſs of fluids, whether it be called acrimony, or putrefaction, has no concern in the cauſe; becauſe, while life remains, and the action of the veſſels upon their reſpective fluids continues, ſuch a faulty ſtate of the fluids cannot make its havock over ſuch an extent of the ſyſtem, that being only the effect of a ceſſation of motion of the fluids under heat; nor can it happen, but in the extreme veſſels and excretory ducts, which, by their atony, do occaſion ſuch a ceſſation of motion, and likewiſe in the alimentary canal.

DLXI. The cauſe of this thirſt is the common one of every aſthenia, but predominant in the throat and ſtomach, upon account of the atony of the ſalivary, and other excretory ducts (s).

DLXII. The remedies are alſo the common ones of every aſthenia, to be accommodated to the degree of debility in the cauſe. In a ſlighter degree of thirſt a glaſs or two of brandy, or of any ſimilar ſpirit, or, which is a better rule, given till the complaint is removed, is ſufficient. It ſhould be either pure, or diluted with a very little hot water (t). That ſhould be followed by eating ſome animal food (u); and it ſhould afterwards be ſupported by other ſtimulants taken moderately, and in the degree that ſuits good health. After which the proper practice is, to proceed to the uſe of the permanent ſtimuli.

DLXIII. When the thirſt, not quenched by theſe means, proceeds directly to vomiting, and when, by and by, an excruciating pain ſupervenes upon the vomiting; which, excepting

(s) CLXXXVI. CLXXXVII.

(t) The addition of cold water counteracts, that of hot co-operates with, the effect, which has been aſcertained in a thouſand trials.

(u) When the thirſt was but juſt coming on, and not yet eſtabliſhed, I have found a hearty breakfaſt carry it off. But when it is come to a head, the mixture of ſtomach ſickneſs, that now begins to take place with it, renders eating impracticable.

excepting the pain, is an affection, that together with the ſymptoms that have been mentioned (x), ſhould receive the appellation.

*Of Dyſpepſanodyne, or Indigeſtion without Pain:*

And when, beſides the pain of the ſtomach, now induced, the affection going downward to the inteſtines, ſometimes produces a looſe, ſometimes a bound, belly; at other times only a looſe belly, and at others only a bound one; which is an affection, when unaccompanied by coſtiveneſs that is diſtinguiſhed by the title

*Of Diarrhœa.*

DLXIV. And, when accompanied with coſtiveneſs, is entitled to the denomination

*Of Colicanodyne, or Colic without Pain:*

DLXV. In all thoſe caſes recourſe muſt be had to a larger doſe of the drink: And, when that does not ſucceed to our wiſh, we muſt next fly to opium, and other more diffuſible ſtimuli, if they are to be found: When, by theſe, relief is procured, rich and pure ſoups, without greaſe, ſhould, from time to time, be poured in, and the canal carefully bathed all over with them. After which, the other ſtimulants ſhould be added; in the uſe of which, a ſtraight direction between direct and indirect debility ſhould be held, without the leaſt deviation towards either; And our efforts muſt always be continued till the diſeaſe is radically removed.

DLXVI. The neceſſity for this direction in the cure is ſo much the greater; that, by neglecting it, or depending upon the common purgative debilitating plan, the conſe-



(x) From DLVI. to DLXII.

quence is, that often a proper general diſeaſe degenerates into a local affection. To proceed to the conſideration

*Of the Kindred Diſeaſes of the Alimentary Canal.*

DLXVII. Among them, beſides thoſe that have been mentioned above (y), there are not wanting, others, which, when compared with them in the ſimilitude and nature of the cure, abſolutely claim this place in the ſcale.

*Of the Diſeaſes of Children.*

DLXVIII. The diſeaſes of children are, dryneſs of the ſkin, ſudden ſlaver, or ſalivation of ſhort continuance; a ſimilar rejection of milk, without effort (z); a green ſcouring; at other times coſtiveneſs; both commonly with gripes; the uſual mark of which is, a pulling up of their knees towards their ſtomach, with very ſevere crying; unequal heat. A little more ſevere than thoſe are the two following caſes, the one of which has the name

*Of Worms.*

DLXIX. Which are diſtinguiſhed by a thickening of the columna naſi (a); by a cuſtom of picking the noſtrils; by loſs of complexion; by paleneſs of the face and of the reſt of the ſkin; by a ſwelling of the belly; and, laſtly, by the diſcharge of worms by ſtool. The moſt diſtinct ſymptoms of the other affection, or

*Of Tabes, or the general Waſting of the Body,*

DLXX. Are meagerneſs all over the body, an unuſual bulk of the abdomen, almoſt conſtant watching, ſuch a weak,

(y) From DLVI. to DLXVI. (z) See CCCCIII.

(a) It is that longitudinal depreſſion which runs down from the partition of the noſtrils perpendicular to the upper-lip.

weak, diſtreſſed, aſſiduous, and hoarſe manner of crying, as excites tenderneſs and compaſſion.

DLXXI. The hurtful powers, producing all thoſe affections, are in common to them with every aſthenia; that is, they are every thing that has an effect of debilitating the whole ſyſtem, and eſpecially the alimentary canal: Such as, at this age, are, milk not nouriſhing enough, and at the ſame time aceſcent and flatulent; want of food, or made of watery matter and bread; cold, and moiſture, the latter encreaſing the effect of the former; habitual vomiting and purging; too little dandling; miſtiming ſleep, and meals, and every part of management; naſtineſs; impure air; a neglect of natural likings and diſlikings.

DLXXII. The remedies are the converſe of all thoſe, nouriſhing exciting milk; three or four meals a day, conſiſting chiefly of warm milk, pure animal ſoups, not weak, with a mixture of flower or bread of the ſame kind; heat without being carried ſo far as to produce ſweat, or too much redneſs, and free from moiſture; laying aſide every ſort of evacuation; a great deal of dandling and geſtation; a proper timing of ſleep, of food, and of every part of management of theſe delicate ſyſtems; cleanlineſs; tepid bathing in cold weather, and cold bathing in warm; and pure air, being out in the fields as often as poſſible in all but moiſt weather; ſuch a judicious attention to deſires and propenſities as not to neglect ſcratching any part that itches (b).

DLXXIII. Theſe directions ſuit the gentler caſes under conſideration. To remove the more violent, while they alſo are not by any means to be neglected; at the ſame time others to be ſubjoined. When the green ſcourings, great looſeneſs, and boundneſs of belly, are vexatious; recourſe muſt be had to pure wine, ſpirits, more or leſs diluted

(b) See above DXVIII.

diluted as the occaſion may require, or if there ſhould be need, not diluted at all: More of the ſoup that has been mentioned and of a richer kind.

DLXXIV. If thoſe ſhould not ſucceed to the phyſician's mind, which will ſeldom be the caſe; in the ſame affections and more certainly in worms, and ſtill more certainly in the tabes, or general conſumption, with the remedies that have been ſpoken of, the more diffuſible ſtimuli of opium and muſk ſhould be alternated. Both ſorts of remedies (c), ſhould be ſo accommodated to the violence of the ſymptoms, as not to be dropped till the whole morbid tumult is allayed, and the healthy ſtate replaced; which will, upon trial, be found more practicable, than has yet been imagined from the employment hitherto of the contrary plan of cure, to the great comfort of mankind in their ſufferings.

DLXXV. From what has been ſaid it will appear, that theſe affections of children, all flow from the ſame cauſe, are removed all upon the ſame indication of cure, as any other aſthenia, or diſeaſe of debility, that has either yet been, or is to be, mentioned in this work. The unhappy termination of them hitherto, is to be imputed not to their cauſe, but to the depravity of the common method employed for their cure (d): Nay, though they do degenerate into local affections, as in the inſtance of the tabes, or general conſumption, ending in an obſtruction of the meſentery;

(c) The durable and diffuſible.

(d) I cannot help repeating again, becauſe the importance of the ſubject calls upon me to do ſo; that the practice of the new plan of cure, in all the diſeaſes of children, as well as in the others lately ſpoken of, has ever ſucceeded in my hands, as well as in thoſe of my pupils, to a miracle. I cannot ſay that I ever met with an inſtance where it could be ſaid to have failed. Let then who will compare that account with the known mortality that is every day the reſult of any other practice yet thought of in the profeſſion.

meſentery; in that of cholic at every age, terminating in an inflammation, tumor, or complication of the inteſtines; and in thoſe of both cholic and long-neglected diarrhœa, running into a gangrene in the ſame part; that is a miſfortune that never happens, when a proper method of cure is early enough uſed to remove primary diſeaſe: And, on the contrary, it moſt commonly ariſes from the perverſity of that plan of cure, or the neglect of this, which is the proper one. To the ſame kindred diſeaſes of the alimentary canal (e), further belong the two following ones, under the title

*Of the gentle Dyſentery and Cholera.*

DLXXVI. To which, every thing that has been ſaid of thoſe kindred ones, will apply: Or, if there be occaſion for any particular obſervation upon them, it will be taken up, after we come to treat of them in their more ſevere and violent ſtate: Of a ſimilar nature to all theſe, but of a degree ſo much higher as to merit the next place in rank below them, and, at the ſame time, not unconnected with them, as having the ſeat of its predominant ſymptom in the ſame canal, is the diſeaſe to which I have given the name

*Of Angina.*

For the ſymptoms and method of cure of which turn back to number CCXXII. where it is introduced, in the explanation of aſthenic ſymptoms.

*Of Scurvy.*

DLXXVII. Scurvy is an evident aſthenia: The principal ſymptoms of which are, want of appetite, loathing of

(e) From DLXVI. to the preſent paragraph.

of food, laxity of the living ſolids conſidered as ſimple ſolids; an oozing of blood, both from other parts, and particularly from the gums; averſion to labour; low ſpirits, and a langour in all the functions.

DLXXVIII. The hurtful powers producing this diſeaſe, are the common aſthenic ones, appearing in the following form; It is cold in this caſe, but conjoined with moiſture in the northern ſeas, and, as we may well ſuppoſe, in the parts of the ſouthern ocean of the ſame temperature, that generally produces the peculiar form of the diſeaſe. But with it all the other debilitating powers contribute their ſhare: Such are, grief for the loſs of liberty, relations, kindred, and friends; a horrid diſlike to their preſent ſtate of life; a longing deſire for that which they have parted with; the awe which the ſeverity of diſcipline keeps them in; the effect of a calm, where there is nothing to do, producing direct debility on them; a ſtorm, where they have to labour above their powers, as certain a cauſe of indirect debility; there not having been allowed, till of late, freſh meat, which is the only nouriſhing and envigorating (f) form of it; their being kept upon ſalted and ſpoiled meat, and not even corrected by recent vegetable aliment, ſuch as that is (g); watery or ſmall drink; the terror which the expectation of a battle at ſea inſpires.

DLXXIX. All thoſe particulars prove, that ſcurvy is ſo far from being the effect of one or two hurtful powers, and from reſting upon ſo narrow a baſis of the cauſe producing it, as has hitherto been imagined; that it is rooted in a multiplicity of debilitating powers, and is a real aſthenia, or univerſal diſeaſe of debility.

DLXXX. And this fact is confirmed by both the true and falſe method employed for its cure: For, though nearly all the common powers concur in the production of ſcurvy; if, however, it be conſidered, how eaſily, upon the removal of the hurtful powers, and the patient getting aſhore, the

(f) SCXXIV. (g) See CXXV III.

the diſeaſe is got under, by freſh meat, either with or without greens, by wine, geſtation, and exerciſe, in fine, by the recovery of his uſual manner of living; it will be impoſſible to entertain a doubt of its being both an aſthenia, and by no means a violent one. The pretence of its cure being effected by greens, roots, ſour crout, and ſimilar things, ſo much boaſted of lately, which, without the remedies juſt now enumerated, could not fail, by their debilitating operation, to aggravate the diſeaſe, is derived from a noted blunder among phyſicians, by which they are led to overlook the moſt certain, ſimple, and evident facts, and take up in place of them, the greateſt falſehoods, or ſuch facts as have a very narrow foundation in truth.

*Of the gentle Hyſteria.*

DLXXXI. The gentle hyſteria is a form of aſthenia, of frequent occurrence among women, but very rarely happenning to men; in which a noiſe is heard in the belly, and the patient has a ſenſation of a ball rolling within the bowels, riſing up to the throat, and there threatening the patient with ſuffocation.

DLXXXII. The ſtriking ſymptom in this diſeaſe is a ſpaſm, not fixed in a part, but running the courſe juſt now deſcribed. The diſeaſe attacks in fits, for the moſt part leaving long intervals betwixt them, and often never recurring more than once or twice.

DLXXXIII. The fits are ſoon removed by ſmall doſes of opium, repeated at ſhort intervals: The intervals ſhould be ſecured from danger by full diet, and a moderate and naturally ſtimulant management.

*Of Rheumatalgia, or the Chronic Rheumatiſm.*

DLXXXIV. Rheumatalgia is an aſthenia, not ſo much a ſequel of rheumatiſm when left to proceed in its own ſpontaneous

ſpontaneous courſe, as of the profuſion of blood and of other fluids employed for the cure of it, and of too debilitating a cure; with a change of the ſthenic diatheſis and the inflammation, which is a part of that, into the aſthenic diatheſis and inflammation. Paleneſs of the ſkin takes the place of complexion: The appetite is diminiſhed, the involuntary motions are impaired, debility and torpor prevail over all. So far the diſeaſe is underſtood to be chronic. As in rhematiſm, the joints are pained and inflamed: As that, which has been aſſigned, is the moſt frequent cauſe of rheumatiſm, ſo it ſometimes ariſes not from a ſthenic origin, and an exceſs in the means of reducing that.

DLXXXV. The cauſe of the diſeaſe is the uſual one of any aſthenia, predominant in the moving fibres of the muſcles, ſituated below the ſkin over the whole ſurface of the body.

DLXXXVI. Its worſt morbific powers are, penury of blood, cold, eſpecially with the addition of moiſture, impure air, and beſides theſe, as many of the other powers that act by a debilitating operation as happen to be applied, contribute, in proportion to the degree in which they are applied to the morbid effect. Of theſe exceſſive indolence and the reverſe are particularly hurtful.

DLXXXVII. As all ſtimulants contribute to the reſtoration of the healthy ſtate; ſo the moſt powerful of them in this caſe is nouriſhing food, friction, geſtation, wine, taken in moderation, exerciſe, rather frequent than violent, and being as much as poſſible in the open air. If it is an acknowledged fact, that rheumatalgia is one of the reproaches of phyſicians, it is more ſo than has been hitherto underſtood; it being an aſthenic diſeaſe, while they at all times made uſe of the ſame kind of cure, as if it had been

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the moſt ſthenic, or even upon the whole more debilitating (h).

*Of the Aſthenic Cough.*

DLXXXVIII. The aſthenic cough is an aſthenia, which with the conſtant ſymptoms of the latter, depends upon a frequent expectoration, that the cough excites; affecting every age which has been under the influence of either direct, or indirect debility, and therefore old age, which is unavoidably the prey of indirect debility.

DLXXXIX. As conſiſting in direct debility, it is the effect of an exceſſive violence of all ſtimuli that have been applied either for a ſhort time, or for a great part of life, their operation coming to the ſame amount, that of the former from its degree, and that of the latter from its long continuance (i). In ſo far as its cauſe is direct debility, a deficiency of all the ſtimuli, leaving the excitability to be accumulated, allows this form of aſthenia to happen from the ſpontaneous tendency of nature, of which life is only a forced ſtate (k).

DXC. The cough, which depends upon indirect debility, is cured by reducing the ſtimulus which occaſioned it, gradually and cautiouſly to the proper and natural degree.

And

(h) If they ſhould pretend to ſay that their bleeding and other evacuations were more moderate than in rheumatiſm; the anſwer is, that they were not ſo profuſe at any given time: But, conſidering the length of time, that rheumatalgy draws out into, the frequent, and almoſt conſtant evacuations, conjoined with every ſpecies of inanition, made the debilitating practice upon the whole far exceed that uſed in the ſthenic caſe. No wonder, then, that much miſchief was done.

(i) See above XXIX. XXX. and CCCCI.

(k) So great is nature's tendency to that particular encreaſe of exertion, which forms the matter of expectoration in this diſeaſe, that every caſe of death from diſeaſe is an inſtance of it. Hence the dead rattle in the throat is univerſally the expiring ſymptom. See LXXII. and CCCXXVI.

And when it originates from indirect debility, the encreaſe of the ſtimulus, the want of which occaſioned the diſeaſe, till the degree of excitement, which conſtitutes health is replaced, effects the cure.

DXCI. Such is the nature of direct and indirect debility; that if the remedies of the former be puſhed beyond the boundary, the cough appears again; and the ſame is the event of the ſame exceſs in the uſe of the remedies of the latter (1).

DXCII. Frequent and violent cough with copious expectoration has been always held for a ſure mark of a vitiation or faulty ſtate in the lungs. That faulty ſtate was eſteemed to be of a ſthenic nature, and to give aſſurance of the preſence ſometimes of phthiſipneumony, or conſumption from an ulcer in the lungs, ſometimes baſtard peripneumony, ſometimes of a burning inflammation in the alimentary canal. In the former caſe an ulcer, or, in their way of ſpeaking, and what amounts to the ſame thing, tubercles were believed the cauſe of the diſeaſe; in the ſecond caſe inflammation either in the intercoſtal muſcles, or a different one from that, which in true peripneumony was, in their opinion, its primary cauſe, was conſidered as the cauſe; and in the laſt caſe, no one of them would have heſitated a moment to have aſcribed the ſtate of the bowels to the only inflammation they were acquainted with, that which requires bleeding and evacuation for its cure. And no other enquiry was made, but whether the matter that was ſpit up, was mucus or pus. To aſcertain that premiums were propoſed.

DXCIII. But, in fact, beſides that no phthiſipneumony, no baſtard peripneumony, as they call it, no inflammation in the alimentary canal, was ever cured by antiſthenic or

(1) See par. XXXIII. XXXIV. and XLIII. XXX. CXXXIV. and eſpecially CCXXXIII. to CCXXXVI.

or debilitating remedies; and that, in the ſeveral trials that have yet been made, the firſt of theſe caſes has been evidently aſſiſted, nay frequently completely removed, and the two latter, thoroughly cured in numberleſs inſtances, and in all in which it has been uſed by the ſthenic, or ſtimulant plan of cure; I ſay, beſides theſe large and comprehenſive facts, ſo little ſignification is there, either in the quantity or appearance of the expectoration, that in certain fevers, in other diſeaſes of debility, quite free of all local affection, and finally in this very cough of which we are ſpeaking, there is often a more violent cough, and a greater expectoration of matter putting on every form and every appearance, than uſually happens in a confirmed conſumption, and where every hour is expected to be the laſt. And yet the whole tumult, hitherto ſo alarming, could be ſtopt in a few hours, and quite cured in as many days.

DXCIV. And, who does not know, that there are many perſons, who have an immoderate cough, and proportional expectoration for a whole and long life time, whoſe lungs, however, are ſound, and free from any organic taint? How often in phthiſipneumony itſelf after finiſhing its courſe, and at laſt terminating in death, has the whole fabric of the lungs been found upon diſſection as ſound as ever happens in death from any cauſe (m)?

DXCV.

(m) There are ſeveral caſes upon record, of the lungs after death from a confirmed conſumption, having been found perfectly ſound. A moſt reſpectable pupil of mine went to Liſbon with a young gentlemen of conſiderable rank in Scotland, under a confirmed conſumption, whom he brought back perfectly freed from his diſeaſe. He alſo ſaved either two or three ladies, I am not juſt now ſure which; equally given up upon the common practice. He happened to aſſert before the phyſician of the factory, that a perſon juſt dead of the ſame diſeaſe had no local affection in the lungs, and upon diſſection it was found to be as he had ſaid. I have reſtored many phthiſipneumoniacs, but am obliged to own, that

DXCV. The cauſe of cough has hitherto been unknown. To paſs over the ſthenic cough, with which we have nothing to do in this part of our ſubject (n); the cauſe of the aſthenic, is the ſame as that of any aſthenia, but more vehement in the fountain of expectoration, to wit, the exhalant and mucus arteries, the ſecreted fluids of which, inſpiſſated by ſtagnation in the bronchia, compoſe the matter to be expectorated.

α. α. The moſt powerful of the aſthenic hurtful agents in exciting aſthenic cough, is cold, juſt as heat has been demonſtrated the moſt hurtful agent in catarrh (o). Nay, in the aſthenic cough, ſuch is the rage of cold, that the ſlighteſt breath of air reaching the body, excites a moſt prodigious tumult of coughing, and brings out the whole ſeries of ſubſequent ſymptoms; and heating the body in the bed, as ſoon allays the cough, prevents the threatening, and cures the urgent diſturbances.

DXCVI. In this as well as the ſthenic cough, it is the ſerous and mucous fluids that chiefly flow to the bronchia. Which bear their preſſure for a little, till, diſtended by the load, they can bear it no longer. The diſagreeableſs of the ſtimulus excites a commotion in the excitability of the labouring part, and, therefore, over its whole ſeat, and rouſes the excitement. A cough ariſes and throws off its cauſe, the collected humours.

DXCVII. This diſeaſe is always to be treated for its cure, firſt with ſtimulant remedies, and then with ſuch as alſo

that I have loſt three, to whom I was called too late. Their loſs, however mortified me, becauſe there were many reaſons for my ſetting my heart upon the cure. I alſo loſt in Edinburgh the moſt amiable young man of that kingdom, after curing a prodigious hemorrhagy from his lungs. This was he whom my pupil two years before brought home ſafe from Liſbon. But I was prematurely diſmiſſed in this, and counteracted, in the other caſes.

(n) See CLX. CCXXXIII. (o) See par. CCCCVII. to CCCCXII.

alſo fill the veſſels. If indirect debility has been the morbific power, ſtill we muſt ſtimulate, but at firſt with a force of ſtimulus little leſs than that, which occaſioned the diſeaſe, and then with ſtill leſs; and, after changing, from time to time, the form of the ſtimulus, with leſs ſtill; till we come down to the ſtimuli that are agreeable to nature, thoſe that ſuit the moſt perfect health (q). In that way is ebriety, in that way is every form of intemperance, to be treated. If direct debility has been the cauſe, the cure will be a good deal more eaſy: That is we muſt go on to ſtimulate more and more, till we get up to that point of excitement, to which we came down in the caſe of indirect debility. In this way is the firſt ſtage of phthiſipneumony, as well as its middle courſe, and alſo baſtard peripneumony, nay, moſt caſes of the debility affecting young people, and the diſeaſe to which the name

*Of Chincough*

DXCVIII. Is given, to be encountered in practice. Chincough is attended by a contagious matter; which varies in its degree, but in ſuch ſort, however, that a ſthenic plan of cure, adapted to the degree of the diſeaſe, for certain cures it. The change of climate or place is a tale, the practice of vomiting is death (r). And, ſince the diſeaſe is an

(q) See par. CIII.

(r) Still to the old tune "cantilenam eandem canunt" They confeſſed they knew nothing about this diſeaſe, yet they preſcribe change of air and place: If they knew nothing about the diſeaſe, how could they know what would be of ſervice?—Others told them ſo. But why do they preſcribe vomiting?—They heard that from their maſter's deſk at ſchool, and found, that the ſame authority, was the reaſon of others for doing the ſame thing. Why vomiting? For the ſame reaſon, and becauſe a relique of the doctrine of morbific matter has run through all their ſyſtems. Hence in bleeding diſeaſes, the univerſal rule has been to bleed; in vomiting to give emetics, in diarrhœa to give cathartics, in imitation,

an aſthenia, vomiting, which is ſo very debilitating an agent, cannot fail to be of the higheſt detriment (s).

*Of the Cyſterrhœa, or the mucous Diſcharge from the Bladder of Urine.*

DXCIX. Cyſterrhœa is that mode of aſthenia; in which, to the general ſymptoms of aſthenia, and the particular ones of aſthenic cough, there is an addition of mucus, rendering the urine turbid, without any previous pain or ſymptom of internal local affection.

DC. In ſo far as this is a general affection, the laxity proportioned to the atony muſt be removed equally in it, as in other caſes of encreaſed excretion; and particularly the ſtimuli of health muſt be accurately adminiſtered.

*Of the Gout of ſtronger Perſons.*

DCI. The gout of ſtronger perſons is a form of aſthenia; in which, after a long habit of luxury and indolence, and eſpecially, when to thoſe hurtful powers directly debilitating, ones have been recently ſuperadded, indigeſtion, or diarrhœa, or rather both conjoined, with manifeſt ſigns of a diminiſhed perſpiration, precede; then the lower extremities are affected with languor. Of the leſſer joints, almoſt always the one or other foot is ſeized with an inflammation, which, if not reſiſted by a piece of art quite new, will prove moſt ſevere, moſt painful, and of a ſhort duration, comparatively to its ſtate in that reſpect in the after part of the diſeaſe.



imitation, forſooth, of nature. The ſymptoms of diſeaſe have been miſtaken for efforts of the conſtitution to remove the diſeaſe. It is now, however, proved that there are no ſuch efforts. Every ſymptom, and particularly every morbid evacuation, is to be ſtopt. The contrary practice is as good ſenſe, as it would be to propoſe bringing on a dead rattle to cure the morbid one.

(s) See par. CXXXVII. and CCXCIV.

DCII. This diſeaſe may be called the indigeſtion or dyſpepſia of the luxurious, that is, depending upon indirect debility; while dyſpepſia may be denominated the ſame diſeaſe, that is the gout of perſons under direct debility, as having every ſymptom of the gout, except the inflammation (t). For, in diſeaſes, ſo little is there in names, that not only thoſe diſeaſes, of which we have been juſt now treating, but likewiſe aſthma, hyſteria, the cholic, and moſt of the diſeaſes, which have taken their appellations from any remarkable diſturbance of the alimentary canal, are equally prevented and cured by the ſame method of cure preciſely. Which is indeed the reaſon why the gout has been ranked in the number of the diſeaſes of the ſame canal.

DCIII. A taint tranſmitted from parents to their offſpring, and celebrated under the appellation of hereditary, is a tale, or there is nothing in the fundamental part of this doctrine. The ſons of the rich, who ſucceed to their fathers eſtate, ſucceed alſo to his gout: thoſe who are excluded from the former, are alſo from the latter, unleſs they bring it on by their own merit. Nay, if there be but only two diſeaſes in the ſtrict ſenſe of the word, they muſt be either all, or none of them, hereditary. The former ſuppoſition makes the hurtful powers ſuperfluous, which have

 been

(t) There are very few perſons, who at one time or another in their life have not experienced painful twiches in ſome part or other of one of their feet, eſpecially when they happened to be in a ſtate more languid and ſluggiſh than ordinary. Every which caſe may be conſidered as a gout in miniature. But when the whole phenomena, except the inflammation, happen to any perſon, call it dyſpepſia, or what you will; it is to all intents and purpoſes a gout. Indeed, from all that has been ſaid through this work, general morbid ſtate appears to be a very ſimple affair, being nothing but an encreaſe or diminution of the cauſe of the functions or powers of life, without any other difference, but that of the mere appearance of the ſymptoms to our ſenſes, an appearance by which, when we look no further for information, weare alſo conſtantly deceived,

been proved to be every thing reſpecting diſeaſe; and, as it is, therefore abſurd, ſo the truth of the latter muſt be admitted. The ſtamina, or bulk of our ſimple ſolids, are ſo given in our firſt confirmation, that ſome perſons are diſtinguiſhed by a groſs, others by a ſlender ſtate of the whole maſs. That variety of the ſtamina, if the exciting powers, upon which the whole phœnomena of the life depend, be properly directed, admits each its reſpective ſtate of health, ſuited to its reſpective nature, and ſufficiently commodious, if the excitement ſuited to each, from a proper direction of the ſtimuli producing it, be properly applied. Though Peter's father may have been affected with the gout, it does not follow that Peter muſt be affected; becauſe, by a proper way of life, that is by adapting his excitement to his ſtamina, he may have learned to evade his father's diſeaſe.

β. β. If the ſame perſon, who from his own fault and improper management has fallen into the diſeaſes; afterwards by a contrary management, and taking good care of himſelf, both prevents and removes the diſeaſe, as it has been lately diſcovered; what then is become of hereditary taint?

Laſtly, if the gout is the ſame diſeaſe as dyſpepſy, ariſes from the ſame hurtful powers, is removed by the ſame remedies; and the only ſymptom, in which it can poſſibly be thought to differ, the inflammation, is only a ſlight part of the diſeaſe, depending upon the ſame original cauſe, and ready to yield to the ſame remedies; what ſignify diſtinctions about either, that do not appply to both (x)? Nothing

(x) If I have kept off my gout for ſeven years paſt, after having been ſubjected to the moſt ſevere rage of the diſeaſe, might not I, much more eaſily, have prevented it before? But, it may be ſaid perhaps, that excruciating pain makes a great difference in the ſcale of compariſon of any two diſeaſes: The anſwer to that is, that ſince the pain is as eaſily removed as the other ſymptoms, the difference is removed, and the weights in the ſcale equalized.

thing by them further is ſet forth, than, that a certain texture of ſtamina is favourable to certain forms of diſeaſes, which (forms) are of no conſequence, in ſuch ſort, that, when the excitement is adapted to the ſtamina, even thoſe forms can be prevented or cured.

DCIV. The hurtful powers producing the gout are, firſt, indirectly debilitating, not effectual all of a ſudden, nor commonly before the meridian of life, that is, before the thirty-fifth year of one's age. Rich food, too much eaſe, have a very great effect, drink has leſs. To that all that have a tendency, to wear out life, to conſume the excitability, contribute. But the firſt fit ſcarce comes on till directly debilitating hurtful powers have been ſuperadded to the indirect (y). The following are particularly hurtful, abſtinence, vegetable food, the hurtful effect of which is in proportion to the imbecility of the matter that compoſes it. The farinaceous ſubſtances, which are by no means ſafe (z), and leſs hurtful than roots, and theſe leſs ſo than greens (a); but fruits are the moſt hurtful of all (b). Cold

 water,

(y) My gout came on at the thirty-ſixth year of my age, after five or ſix month's low living: It returned not again till betwixt five or ſix years after, becauſe all the intermediate time I had been well ſupported: And this ſecond fit was uſhered in with low living, immediately previous to it, for near the ſame length of time, as before the coming on of the firſt fit. Nay, no gout ever came on but in conſequence of direct debility; the indirect has not ſo quick an effect in that reſpect; at the ſame time it has a tendency to be hurtful, and therefore ſhould be avoided.

(z) A meſs of porridge, a diſh uſed in Scotland, with ſmall beer poured upon it, and taken over night, would bring on a fit of the gout next day.

(a) The juice of turnips, of cabbage, and even peaſe-pudding and peaſe-ſoup, which are commonly reckoned ſubſtantial diſhes, have the ſame effect: When thoſe ſubſtances, after being boiled, are uſed with a good ſolid meal of meat, I have always found them innocent. Green peaſe ate, with lamb or fowl, are both harmleſs and grateful.

(b) Apples and pears are ſuch: but the cold fruits, as melons, cucumbers, are almoſt inſtantaneous in their hurtful effect.

water, in the height of the diathesis, given to quench thirst, immediately produces nausea, vomiting, and other distressing symptoms of the stomach and of the rest of that canal, and hurries on a formal fit (c). The mixture of an acid with pure cold water encreases the hurtful effect. Of the strong drinks; those prepared from barley by fermentation, that is, the different ales and beers, all the white wines in common use, except Madeira and Canary; and among the red wines claret, indeed all the French wines, and punch with acid, all these are remarkably hurtful. And as indolence helps on with the first fit, so fatigue, especially that of walking, hurry on all future ones. Want of a sufficient quantity of blood is so hurtful at all times, that, though the theory of physicians led them to the notion that the diseases depended on plethora and vigour, yet no body ever thought of taking blood (d). Vomiting is bad, and indeed one of the natural symptoms of a very bad state of the disease; but purging the belly is worse (e). Every evacuation has a similar bad effect, with this distinction, that the artificial are much more hurtful than the spontaneous.

DCV. One is to be excepted, that is, exercise in venery, to which, though it be a spontaneous and natural, not an artificial, evacuation, gouty persons are so addicted, and so exceed others in power, that in the very middle of a very bad fit, they are not sparing of it. That effort at first is not perceived; but in the advance of age, and after many returns of the disease, it is felt at last with a vengeance (f).

Great

(c) See CLXXXIV. to CXC. to CCXXXVII.

(d) This is one of their many contradictions between theory and practice.

(e) At any time I can bring on a fit by a single dose of Glauber's salt, unless I happen to be very strong and quite free of all diathesis.

(f) At an advanced period of age, in persons who had been vigorous, an

Great heat, by its indirectly debilitating operation, does ſome hurt (g), but great cold, by its direct debility, much more (h). Impurity of air is inimical (i), as well as an interruption in the train of thinking (k); but hard thinking is more hurtful. A deficiency in the ſtimulus of paſſion is a pretty conſiderable hurtful power (l): but a high intenſity of it will convert this immoderate degree of the gout into that higheſt degree of it, that attacks the head; lays a ſnare to life, and brings on certain death (m).

DCVI. Long ſleep is bad (n), as producing direct debility, by deferring the re-application of the ſtimuli, which the watching ſtate afford; but ſhort ſleep is much more hurtful, leaving behind it a degree of fatigue ſtill remaining from the effect of the ſtimuli of the former day (o). Often after the upper parts of the body have been recruited with enough of ſleep, after getting up, the podagric feeling a ſtate of languor in his lower extremities, and a demand for more ſleep to them, is obliged to go to bed again, and give the unrecruited limbs their reſpective ſhare of ſleep. When a perſon is torpid from ſhort ſleep, how great is the luxury to cheriſh again by the heat of the bed-clothes all the parts that have been expoſed to cold, that is, the whole ſurface of the body and thighs, but eſpecially the legs and feet, which laſt, during the preſence of the fit, is the ſeat of the inflammation; and, how delightful in that way, to make up the neceſſary complement of the ſleep that is wanted.

DCVII.

an unnatural power of execution ſometimes, even an actual morbid ſtate, will take place, ſo as that the perſon will be able to outdo all his former doings in that way. But it is a falſe power, it is a ſymptom of diſeaſe: It is like unnatural appetite for food amidſt a weakneſs of the powers of digeſtion.

(g) CXV. (h) CXVII. (i) CXLVI.
(k) CXXXIX. (l) CXLI. (m) Ibid.
(n) CCXLV. (o) See Part II. Chap. VII. CCXXXVII.

DCVII. To prolong the intervals of health, and prevent a fit, the remedies are all the reverſe of the hurtful powers: They are, rich food taken in plenty (p), but remaining within its ſtimulant range, conſequently of the animal kind, with a rejection of all ſorts of vegetable matter, or a very ſparing uſe of it; ſtrong drink, not taken cold, unleſs when there is no danger of the diſeaſe (q) (at which time cold water is ſafe after a good meal), not mixed with acid not aceſcent, not under a turbid fermentation while it is taken (r); geſtation (s) exerciſe ſhort of bringing out ſweat, or giving fatigue (t), a ſmall quantity of blood, which is procured by food, and the motion juſt now mentioned (u), no evacuation (x), ſparing venery, if that be made good in ſuch perſons (y), a moderate temperature (z), kept equally between the extremes of direct and indirect debility, and inclining to neither; pure air (a), conſequently cleanlineſs, and being much in the open fields, a happy train of thinking (b); ſuch

(p) See par. CCLXVI.

(q) I know well when I may take cold drink and uſe ſome vegetable matter; it is, when, for ſome time paſt, I have been well ſupported, and feel ſtrong and vigorous. I alſo know, if I have, either in food or drink, taken any thing improper in kind, how to correct it; which is, by having recourſe to a proper ſtimulus. By eating an exotic fruit, which had a mixture of the qualities of the water melon the orange and lime, in a quarter of an hour I had an attack in my ſtomach, in the middle of my lecture laſt ſummer, at the Devil Tavern. By ſome of the diffuſible ſtimulus I repelled it, and went well on with my lecture. At other times I have prevented ſuch an effect, by anticipating the remedy. This doctrine puts much more in our power: But we ſhould not, therefore, play tricks with it. On the contrary, we have great reaſon to be thankful for the command it gives us over our health, and that alſo, by the uſe of means not inelegant, naufeous and clumſy, but quite the contrary. The old motto of Aſcleiades, tuto, celeriter, et jucunde, is verified and improved by the important addition of ſalubriter.

(r) CCLXVIII. (s) CCLXIX. (t) Ibid.
(u) CCXC. CCXCV. (x) CCXC. (y) DCXIX.
(z) CXII. (a) CCCIII. (b) DXIII. DXVIII.

ſuch a ſtate of excitement as to paſſion, as keeps between fiery exceſs and ſtupid apathy, with as great tranquillity of mind as poſſible (c); moderate ſleep, rather inclining to be long than ſhort, a rule which ſhould be ſo much the more obſerved, as the diſeaſe is of longer ſtanding and greater ſeverity: In fine, ſleep ſhould be allowed to continue till the moſt vigorous watching ſtate is procured (d).

DCVIII. From what has been ſaid it muſt appear certain, that the gout of ſtronger perſons is not alſo itſelf a diſeaſe of ſtrength, or a ſthenic one; and that it does not depend upon vigour of the conſtitution and plethora, as it has been commonly hitherto imagined; but that it is manifeſtly aſthenic, like all the reſt of the caſes belonging to aſthenia, and proved to be ſo by the ſtrongeſt evidence; and that it is not to be treated by an aſthenic, as it has hitherto been the notion, but by a ſthenic plan of cure; and that there is every encouragement for treating it in that point of view.

DCIII. What had hitherto deceived phyſicians, and paſſed for a cauſe of the gout, was the appearance of vigour and an over-proportion of blood, in moſt podagrics, from the bulk of ſimple ſolids in conſequence of their way of life, and often from great ſtrength. But, good men! they never recollected, that vigour and a great quantity of blood was not a property inherent in animals, but that it depended upon foreign circumſtances every day and every hour (e). If any one, according to that idea, who has happened to get a great bulk of ſimple ſolids, and who has had abundance of proper diet, and lived in that way to the thirty-fifth or fortieth year of his age, ſhould all at once be deprived of all the articles of diet; and if a dwarf two feet high, who has lived poorly, and is, therefore meagre, and ſlender ſhould equally ſuddenly be put upon a rich living; will there

(c) CXL. CCCIII. (d) DC. (e) X. XI. XII. XIII

there be the leaſt probability, that the former will, notwithſtanding his preſent abſolute want, continue plethoric and vigorous; and that the latter, from being now crammed with unuſual plenty, will continue empty, as he had been before? Is the fundamental propoſition of this doctrine, in which it has been demonſtrated, that we are nothing of ourſelves, and that we are altogether governed by foreign powers, to be forgot? Is a perſon liable to the gout, who has for twenty years undergone an exceſs of ſtimulant operation, about the fortieth years of his age, or even afterwards, to be reckoned fuller of blood and more vigorous, either than another perſon who has lived lower, or than himſelf twenty years before? Where, pray, was the neceſſity of comparing gouty perſons with others free from all bias to that diſeaſe, and not comparing them with themſelves (f)?

(f) Such is the effect of the powers operating upon us, that a certain degree of that operation produces an effect that would not ariſe under another. If the accuſtomary operation has been moderate, habit will render the excitement ariſing from it, in ſome meaſure, ſufficient for the demands of the ſyſtem: Hence, day-labourers, are ſupported upon leſs ſtimulus than gentlemen. Again, which is a circumſtance liable to happen to the latter, if the accuſtomary operation has been exceſſive, there will be a neceſſity for a continuation of ſome degree of the exceſs. A podagric may be ſtronger than a labourer, and yet fall into the gout. For, though compared with the other perſon, he is ſtrong; compared with himſelf at another time he is weak: And the reaſon is, that though he is ſtill better ſupported than the labourer, he is worſe ſupported, than the uſual ſtate of his ſyſtem requires. Further, the labourer, though he falls not into the gout, may, by carrying his moderation too far, fall into indigeſtion, or ſome other diſeaſe, in every eſſential reſpect the ſame as the gout. A double inference ariſes here; Which is, that, though both exceſs and deficiency can be borne to a certain degree, ſo as to require a continuance of them, or a gradual correction, yet they ſhould both be avoided as entailing that ſort of neceſſity for their continuance while their effect makes no ſort of compenſation, being, at beſt, not the beſt ſtate, that of perfect health, but a ſtate of prediſpoſition to diſeaſe; the one to ſthenic

and

*Of the gentle Aſthma.*

DCIV. Aſthma is an aſthenia; in which, to the ſymptoms in common to all aſtheniæ, there is ſuperadded a difficult reſpiration, returning at uncertain ſpaces of time, often unequal, without any unuſual expectoration accompanying the fits.

DCXI. The ſame are the hurtful and curative powers here, as in the gout: In the ſame manner are the fits both prevented and removed (g).

*Of Cramp.*

DCV. Cramp is alſo one of the caſes of aſthenia; in which, often from pain, often from drunkenneſs, and not ſeldom from ſweat, and diſagreeable ſoaking heat, ſometimes the wriſts, ſometimes one of the calves of the leg, in fine, any external part, are affected: Of the internal parts, it is ſometimes the ſtomach, ſometimes ſome part in the inteſtinal canal, ſometimes the bladder of urine, that ſuffers:

and at laſt indirect debility; the other to aſthenic, as depending on direct debility. The perfect rule for enſuring the healthy ſtate, is to keep within the extremes of exceſs and defect, and thereby produce the due degree of excitement; and to apply all the exciting powers equally, each in its due proportion. The due degree may be ſecured by one or a few, but the equality of it over the ſyſtem can only be ſecured by their equal application. This propoſition goes to the bottom of two extenſive doctrines, that of life, and that of morals; the laſt of which has as yet not attained to any thing like a fundamental principle. I intend to proſecute the idea upon ſome future occaſion. I know a book filled with valuable ethic facts, but have not yet had time to conſider, whether they all point to a general one, in which they all agree, and which reflects proof and confirmation upon them; without which it would fall ſhort of ſcientific exactneſs.

(c) This has been proved, both upon other occaſions, and particularly in the caſe of a young gentleman, who lived with me during my firſt management of my gout, See Preface to the Elements.

fers: The diſeaſe is not confined to indirectly debilitating powers, as producing it; it alſo ariſes from directly debilitating ones, ſuch as abſtinence, vomiting, looſe belly, and drinking water contrary to cuſtom.

DCXIV. To remove this diſeaſe; when it does not exceed the gentleneſs that is here underſtood, the whole body muſt be invigorated by moderate ſtimuli, every moſt urgent exciting power ſhould be taken out of the way, geſtation, and that exerciſe, which does not exceed the ſtrength, ſhould be put in practice. A more ſevere degree of the diſeaſe will by and by be treated under tetanus.

*Of Anaſarca.*

DCVI. Anaſarca is a form of aſthenia, diſtinguiſhed by water betwixt the fell and the fleſh, occaſioning an external ſwelling of the body, without the ſigns of any ſuffuſion of the ſame fluid into the interior parts.

DCIX. In the cure, the body muſt be invigorated, and in that part of it chiefly, where the greateſt laxity and atony prevails, that is the ſkin. This indication is anſwered by ſtimulating heat, by friction, by pure and dry air, by nouriſhing ſtimulant diet, and the Peruvian bark: No internal local affection gives occaſion to it, which may be known from the ſymptoms yielding to this plan of cure.

*Of Cholic with Pain.*

DCX. Cholic with pain is a form of aſthenia, and a higher degree of the cholic without pain; in which, to the ſigns of debility in common to all the aſthenic caſes, are ſuperadded a greater violence of the ſame ſymptoms, and twiſting pain about the navel, with pain in ſome part of the belly, often enormous, and ſometimes with a tumour, that can be felt externally (h).

*Of*

(h) Immediately above the brim of the pelvis, on the right-ſide, at the place of the blind-head of the colon,

*Of the Dyſpepſodynia, or Indigeſtion with Pain.*

DCXI. Indigeſtion with pain is an aſthenia, which adds to the ſymptoms of indigeſtion without pain, a pain and gnawing feeling in the region of the ſtomach, and is highly expreſſive of a very ſevere diſeaſe.

*Of the violent Hyſteria.*

DCXII. The violent hyſteria is a higher degree of the gentle hyſteria: in which, beſides the ſymptoms there deſcribed, mobility and changeability of mind, diſpoſition to ſleep, convulſive ſtate, and a great reſemblance to epilepſy, are conſpicuous. The temperament, that favours hypochondriaſis, is of an oppoſite nature to this, which is commonly called the ſanguine. Both the temperament and prediſpoſition in this caſe are produced by a moiſt, lax, ſet of ſimple ſolids.

*Of the Gout of weakened Perſons.*

DCXIII. The gout of weakened perſons, which is an encreaſed degree of the gout of ſtrong perſons, is that aſthenia, in which the inflammation runs out to greater length, and at laſt, does not form at all; and the general affection encreaſes in violence, in obſtinacy, and, at laſt, attains its higheſt degree; exhibiting, towards the end of the diſeaſe, almoſt all the ſymptoms of debility, every form of aſthenia, and ſometimes by a falſe reſemblance, counterfeiting ſynocha.

DCXIV. As the diſeaſes affecting the alimentary canal, formerly mentioned (i), have, in a great meaſure, a common nature; ſo, theſe alſo, that is, the colicodynia (k), the dyſpepſodynia (l), the violent hyſteria (m), and the gout (n), are

(i) From DLVI. to DLXXVI. (k) DCX.
(l) DCXI. (m) DCXII. (n) DCXIII.

are equally participant of the ſame, differing only from the former in their higher degree of violence. Their moſt diſtinguiſhed ſymptoms are either ſpaſm, which takes place in the cholic, and indigeſtion, both with pain, or a ſpaſmodic convulſive affection, diſtinguiſhing the reſt. But neither, in that reſpect, do theſe differ from each other in any thing eſſential; ſince they all, without diſtinction, depend not only on debility, but alſo nearly upon an equality in the degree of it, as the ſimilarity of their morbific powers and remedies proves. For a very full explanation of ſpaſm and convulſion go back to the following numbers, CLXXXVIII. to CXCV. and from the latter to CCI.

DCXV. For the cure of them all (o), abſtinence, fatigue, evacuations, acids, and aceſcents, cold, directly and indirectly debilitating paſſions, the debility ariſing from exertion of the intellectual function, and impurity of air, muſt be avoided. The cure of every one of them muſt be ſtimulant. When each of them is but ſlight, beef ſoup and ſimilar rich ones, which act partly by dilution, partly by a nouriſhing and ſtimulant operation, in the weak ſtate of the ſtomach, and by ſupporting the ſyſtem, and afterwards, when the ſtrength is ſo far recovered, ſolid animal food, and moderately diluted drink, which, at laſt, confirm the ſtrength, are ſufficient. In a higher degree of violence of any of them, while the ſoups ſhould ſtill be continued, at the ſame time pure ſtrong drink ſhould be adminiſtered. And when the violence of any caſe baffles this whole form of ſtimulus, recourſe muſt be had to muſk, volatile alkali, camphor, æther, and opium. Theſe muſt be adminiſtered in large doſes; and all acid and fermenting things, every thing cold, though accompanied with ſtimulus, muſt be guarded againſt.

DXXCII.

(o) Peruſe the whole of Chap. IX. Part II. from numb. CCLXXXI.

DCXVI. For the patient's management in the intervals, all debilitating powers muſt be avoided, ſuch as fatigue, abſtinence, cold, and exceſſive heat (p); and take it for a certain and demonſtrated fact, that the fits of recurrent diſeaſes, do not return from any inherent power of nature, but from human folly. Accept of that as a joyous piece of news, and ſuch as nobody ever expected. The recurrence of fits of the gout itſelf is not unavoidable (q); but, by guarding againſt the hurtful powers mentioned, may be repelled for any length of time; and, when it happens at any time to come on from the fault of the patient, it can often be removed in two hours, and almoſt always in as many days, and the ſtate of health ſecured in every reſpect. In all the ſame diſeaſes of ſimilar vehemence, whenever any ſtimulus, from a long continuation of its uſe, has begun to have leſs effect, we ſhould lay it aſide, and proceed to the uſe of another, from that ſtill to another, and in that way go over the whole circle (r).

*Of Hypochondriaſis.*

DCXVII. The hypochondriaſis is an aſthenia, in which, with the ſymptoms of dyſpepſy, there is a noiſe in the belly, flatulency, and uneaſineſs, and a rooted opinion in the patient, of the diſeaſe being always worſe than it is. The way is paved to the diſeaſe by a dry ſet of ſimple ſolids, and that temperament, in which there is a natural ſlowneſs to paſſion; which, however, once excited riſes to the higheſt violence, and continues long with obſtinacy. It is further diſtinguiſhed by a fixed attention of mind, whereby the patient is liable to dwell to exceſs upon any purſuit or ſtudy, and not to be eaſily diverted to another, as alſo by a dry

(p) See again the ſame Chapter, which compare with the preceding, the VIIIth of the IId Part.

(q) See par. DXCVII. (r) XLI.

a dry ſtate of the ſurface of the body, a rough ſkin, with black hair, and black eyes, and always a dark complexion and ſerious aſpect.

DCXVIII. From the definition given of it by hypochondriacs, it is beyond doubt an aſthenia, as being accompanied with a noiſe in the belly and flatulency; and the courſe of the diſeaſe diſtinguiſhed by ſlowneſs to paſſion, keenneſs in thinking, and that ſtate of the ſimple ſolids, which requires a high force of ſtimulant operation to procure, and keep up a ſufficient degree of excitement.

DCXIX. Since the ſtate of the ſimple ſolids is a ſtate given by nature, and not to be changed by art, and the only indication of cure left in the phyſicians power, is to fit a certain degree of excitement to that given ſtate, which is exactly the caſe in this diſeaſe; it follows, therefore, that the ſtimulus of food, drink, and others, ſhould be employed in the cure of hypochondriaſis. The patient ſhould be kept cheerful, by being placed in agreeable company, and gay entertainments, by entering upon a journey, and amuſing himſelf with the various ſcenes of nature and art through which he paſſes. He ſhould ride, that in guiding the horſe, his mind may be more occupied. His ſtudies and every ſubject of his ordinary contemplation ſhould be often changed and varied. He ſhould have generous wine given him to relieve the ſymptoms of his ſtomach and inteſtines, and to raiſe his animal ſpirits. And if theſe ſhould fail of ſucceſs, the diffuſible ſtimuli, as opiates, ſhould have their turn for a time, for the purpoſe of ſtriking a ſtroke at once. And their uſe again gradually laid aſide in proportion as the ſtrength can now be ſupported by the more natural and accuſtomary ſtimulants. Darkneſs and bad air ſhould be ſhunned; pure light, and all lively objects, ſhould be ſought after. No hypochodriac,

even

even in a fit of delirium, ſhould be provoked, but by every contrivance ſoothed (f).

*Of Dropſy.*

DCXX. Dropſy is an aſthenia, commonly in the form of an anaſarca, with a ſwelling in ſome viſcus, which, for the moſt part, at leaſt in the beginning, attacks ſome place in preferrence to others, and more than any other.

DCXXI. The cauſe of dropſy, in ſo far as it reſpects the collection of water, is eaſily explicable upon this doctrine, but altogether inexplicable upon any other. For the univerſal debility, that is laxity and atony, is chiefly predominant in the extreme red arteries, and the exhalants immediately continued from theſe, as well as in the commencements of the abſorbent veins; and, of the ſame kind of veſſels, it is often urgent in a particular part in preference to others.

DCXXII. As all the debilitating hurtful powers concur in producing this, as well as any other aſthenia; ſo thoſe powers have the greateſt influence in this caſe, that preſs moſt urgently upon the vaſcular ſyſtem. Hence, as we ſee in the converſion of peripneumony into the dropſy of the cheſt, profuſe bleeding, and a large draught of cold water,

(f) I have heard of an hypochondriac ſo provoked at his phyſicians, who maintained that nothing ailed him, that he, on the contrary, to carry his opinion of his diſeaſe to the utmoſt; at laſt took it into his head, that it had attained its utmoſt height, by depriving him of his life. He continued obſtinately in the notion of his being dead, till a more ſenſible practitioner was called in to ſee him. This gentleman agreed that he was dead, but as he could not diſcern the particular cauſe of his death; he, therefore, propoſed to open the body: In ſetting about which, he made ſuch a claſhing with a great apparatus of inſtruments, provided for the purpoſe he intended, that the patient was rouſed from his obſtinate ſullenneſs, and allowed, that this gentleman had come nearer to his caſe than any of the reſt; but acknowledged, that he now found he had ſome remains of life.

water, when the body is fatigued, over-heated, and burned up with thirſt, are the moſt powerful agents in bringing on this diſeaſe. The hurtful effect of the latter of which, in every caſe of debility, when its operation is followed by no ſtimulus, has been more than ſufficiently explained above (t). Beſides, in this caſe, when all the veſſels are open, the water flowing to their moſt weak terminations, paſſing out by theſe, and being not at all tranſmitted from the exhalants into the abſorbents, is collected into every neighbouring cavity (u). And hence the commencement of the urgent ſymptom in this diſeaſe.

DCXXIII. To this aſthenia belong all the watery effuſions, which do not ariſe from a local affection, but depend on pure debility. And, therefore, if at any time any other form of aſthenia, whether from wrong treatment, or other hurtful powers, in its progreſs terminates in this effuſion; every ſuch caſe ſhould be held as a proper dropſy (x); and it ſhould be ever preſent to our recollection, that there are only two general diſeaſes, and that the diſtinctions hitherto received, are devoid of all ſolid foundation. Accordingly, both from other improprieties, and particularly from bleeding, epilepſy, palſy, the gout, terminate in real dropſy. Nay, the ſame is the termination of peripneumony itſelf, when it is either converted into indirect debility, from the debilitating plan of cure having been puſhed to exceſs, or into direct debility, from having been left to itſelf, and the body not ſufficiently debilitated. The affections, confined to parts, which are conſidered as the remote cauſes of dropſy, will be treated among the local diſeaſes, to which they belong.

DCXXIV. After this explanation of the nature of dropſy, the cure of it, provided that it be a proper one, and early

2 enough

(t) See par. CXVII. to CXXIV.
(u) LIX. LX. LXI.
(x) See LXXXI.

enough ſet about, ought by no means to be ſo much deſpaired of, as it ſhould be when local affection, with a ſimilar effuſion, and the general diſeaſe are blended together without diſtinction, and conſidered as one and the ſame (y). If long before the effuſion there was no internal complaint, if the diſeaſe rather came on ſuddenly, and in conſequence of evident hurtful powers, and yields to the firſt part of the curative means, there is reaſon to doubt of a cure.

DCXXV. Beſides the general indication of cure for aſthenia, that ſuited to this caſe muſt be particularly directed to the whole vaſcular ſyſtem, and eſpecially about their terminations, and the commencements of the abſorbent veins. The remedies are alſo the uſual ones; that is diet, as nouriſhing and ſtimulant as poſſible; firſt in a fluid form, when the ſolid cannot be admitted upon account of the debility of the ſtomach; then, alſo in a ſolid; and together with both, ſtrong drink, ſuch as the beſt wine that can be got, fermented ſpirit, ſometimes pure, ſometimes diluted. If the diſeaſe does not yield to theſe, after their uſe has been continued for a proper length of time; recourſe muſt be had to the diffuſible forms: By this means, when the effuſion has not yet attained to that high degree that conſtitutes a local affection, not to be altered by any ſtate of the excitement, this aſthenia can be as eaſily cured as any other.

DCXXVI. But, when a great quantity of water has now got into ſome large cavity, it ſhould immediately be removed by the catheter; when that has been done, and the emptied cavity ſecured with as much care as poſſible, and the ſtrength ſupported by wine, ſtrong drink, and any ſtimulus more diffuſible, we muſt return to the manage-



(y) Sometimes the predominant ſymptom riſes to the degree of being above the power of the excitement, as in the tumor of ſchirrus, and the effuſion here.

ment mentioned a little above. And if it ſhould likewiſe fail now, our judgment muſt be, that either the general diſeaſe, has degenerated into a local, or that the affection has been local from the beginning.

### *Of Epilepſy.*

DCXXVII. Epilepſy is an aſthenia; the diſtinguiſhing ſymptoms of which are, ſome heavineſs of intellect, dulneſs in the exerciſe of the ſenſes; and then a very impaired ſtate, or temporary extinction of the latter, accompanied with various convulſions over the body: Fits, conſiſting of ſuch a concourſe of ſymptoms uſually return afterwards at uncertain ſpaces of time, and each of them terminates in a foaming at the mouth.

DCXXVIII. As all the debilitating hurtful agents are productive of this diſeaſe; ſo the loſs of the blood and other fluids, exceſs in venery, paſſions, ſuch as fear, terror, aſſiduous and intenſe thinking in great geniuſes; a deficiency of that kind of ſtimulus in ſtupid perſons, are particularly ſo (z). Theſe powers that produce the firſt fit, more eaſily bring on after ones: And beſides them, certain unuſual impreſſions upon the ſenſes, ſome of them diſagreeable, ſome highly agreeable; ſuch as the flavour of ſome foods, the ſmell of a roſe, have the ſame tendency; and certain poiſons (a) are ſaid to have the ſame effect.

DCXXIX. But the appearance of ſymptoms is a thing full of fallacy, and unleſs the nature of the hurtful powers producing them, and of the remedies removing them, be thoroughly underſtood, it is incomprehenſible. To ſolve the preſent difficulty about poiſons, and to ſettle the queſtion, whether the ſymptoms belong to univerſal, or local diſeaſe; we muſt conſider, whether the latter one produced

2 by

(z) See above par. CXXXIV, CXXXVII. CXLII and CXXXIX.
(a) See XX.

by a vitiated ſtate of a part, ſuppoſe that part either the ſtomach or brain, ſuch a vitiated ſtate, as in ſome point of the lower extremities proves the cauſe of the aura epileptica; and whether this vitiated ſtate reſiſts the virtue of the remedies, that perform their cure by changing the excitement; or whether all the ſymptoms are either relieved or removed by the change of excitement. If the former is the cauſe, the affection muſt be conſidered as local (b); if the latter be the truth, the diſeaſe muſt be held for a general one, and a true, but a great aſthenia. Nor muſt we forget, that a great many ſymptoms of general diſeaſes from the ſame origin, are diſſimilar; and many from different, nay, oppoſite cauſes are ſimilar; that many local ſymptoms have a great reſemblance to thoſe of general diſeaſes, and that they ſometimes, by a moſt falſe appearance, counterfeit epilepſy, ſometimes apoplexy, ſometimes certain other general diſeaſes beſides.

DCXXX. For the purpoſe of preventing this diſeaſe, we muſt both avoid other debilitating powers, and thoſe that have the greateſt power in producing it. The veſſels ſhould be filled, by giving food as nouriſhing, and as effectual in producing blood as poſſible; the indulgence in venery muſt be moderated, chearfulneſs and tranquillity of mind muſt be favoured, an agreeable train of thinking muſt be found, and all the objects of the ſenſes, which give them diſturbance, guarded againſt; the ſtrength muſt be fortified by recruiting exerciſe, by the Peruvian bark, if the approach of the fits can be perceived, and by wine and the more diffuſible ſtimuli. A length of ſleep, that is a medium betwixt too long and too ſhort a continuance of it, ſhould be kept up. Stimulant heat ſhould be applied; and all exceſs of it as well as cold avoided (c). The



(b) See above CCXXIV.

(c) See CXXIV. CXXVI. CCXXVIII. CCLXXVII. CXXXVII. CXXX. CCXXXVIII. CCXXXIX. CCLX.

pureſt air, ſuch as that in the fields, which is free from moiſture ſhould be ſought after. The ſurface of the body ſhould be excited by friction, and cleanlineſs, for the purpoſe of cheriſhing the organs of voluntary motion, that are moſt cloſely connected with the animal power in the brain.

DCXXXI. The ſame remedies, which radically cure the gout, alſo cure epilepſy, and preciſely in the ſame manner (d).

*Of Palſy.*

DCXXXI. Palſy is an aſthenia, in which, with the other proofs of the uſual debility, often with ſome degree of apoplectic fit, commonly all on a ſudden, the motion of ſome part of the body, and ſometimes the ſenſe of feeling is impaired. When the fit is ſlight, and of ſhort continuance it terminates in health; but the conſequence of a higher degree and greater duration of it is death.

DCXXXIII. The hurtful powers, that uſually produce epilepſy and apoplexy, alſo tend to produce palſy. And

(d) This paragraph is the anſwer to the queſtion propoſed in that which ſtands in the Elementa, anſwering to the ſame number. That paragraph therefore is eraſed, and this put in its place. I had heard from ſome of my pupils, that they had been able by their diffuſible ſtimuli, to remove epileptic fits. But in caſe of any miſtake I would not venture to mark the fact for certain, which I have now done from my own perfect conviction. A young man lately married had the moſt alarming fit of epilepſy that ever was: His caſe was thought beyond remedy: as an extreme one, however, he got from ſome perſon the full of a tea-cup of tinctura thebaica up to a blue ring a little below the brim. He got out of his fit ſome how or other. But was perfectly ſtupid and ſenſeleſs for a fortnight. Upon his falling into another I was ſent for, and brought him about in twenty minutes, as I am told, (for I did not wait), ſo completely, that he got out of bed, and ate a hearty meal of beef ſtakes. Many weeks after, by miſmanaging himſelf, and neglecting directions given him, he fell into a ſlighter one, and was cured in the ſame way.

And beſides theſe, all the common debilitating powers that produce any aſthenia directly or indirectly; great commotion of the nervous ſyſtem by means of too diffuſible ſtimuli; more affecting the circumference of the body, where the organs of voluntary motion are chiefly ſeated, and the internal parts and the brain leſs; as is evident in ebriety, gluttony, and every ſort of intemperance; likewiſe an indolent way of life, which is commonly connected with theſe hurtful powers, have all the ſame tendency.

DCXXXIV. When the diſeaſe has once taken place, as it is kept up equally by directly or indirectly debilitating powers; ſo

DCXXXV. For the indication of cure, which is preciſely the ſame as in epilepſy as the energy of the cauſe operates more immediately upon the ſurface of the body, conſequently according to what was ſaid upon the ſubject of epilepſy, the principal remedies are thoſe, that have the greateſt power in invigorating the ſurface of the body: Such are friction, geſtation, that degree of exerciſe which the ſtrength can bear, for the purpoſe of rouſing by their powerful operation, the languid excitement in the fibres of the muſcles; likewiſe a proper degree of heat of pure air, and therefore, as much as poſſible, the open air; laſtly, as none of the powers endued with ſtimulant virtue, by any means ſhould be omitted, in order that the excitement, which is of great conſequence in every cure, be more equal and vigorous all over; ſo in that extreme debility which produces ſuch an impotency of voluntary motion, as it is of the greateſt conſequence to make an impreſſion upon the principal ſymptom; we ſhould, therefore, employ a great deal of an opiate, (CXXX. and CCXXX.) the influence of which, upon the ſurface, is the moſt conſiderable of all other powers, and preſs the cure, till ſome commencement of returning motion be procured; and then, without neglecting the aſſiſtance of any of the other ſtimuli,

muli, but uſing them all in concourſe or ſucceſſion, for the ſake of rendering their common effect more powerful and more equal, to eradicate the diſeaſe.

DCXXXVI. Debilitating and evacuant powers are to be avoided for this reaſon, that it is not vigour, it is not an over-proportion of blood, but a ſcantineſs of the latter, and a deficiency of the former, that is the cauſe.

*Of Apoplexy.*

DCXXXVII. Apoplexy is an aſthenia, reſembling the two juſt now mentioned, in its cauſe and cure, differing in the appearance of the ſymptoms, which makes no difference in the truth (e): In which, beſides the ſymptoms in common to it with them and the other aſtheniæ, all of a ſudden, ſenſe, intellectual energy, and the voluntary motions, are impaired, the reſpiration remains, but with ſnoring, the pulſe is weak, and the whole fit is finiſhed with appearance of a profound ſleep (f).

DCXXXVIII. The heads of the patients are large and not well formed, their necks ſhort and thick: The diſeaſe ariſes from both direct and indirect debility, but chiefly from the latter. Of the indirect debilitating powers, the moſt powerful is the luxury of food, drink, and ſloth, which, after its courſe of ſtimulating and filling the veſſels is run, is truly debilitating and productive of a penury of fluids: And, as each ſort of debility is encreaſed by the other, and conſequently the indirect by the direct, ſo that is remarkably the caſe in this diſeaſe. Hence the effect of the debilitating plan of cure is ſo pernicious in apoplexy, that it is received as a rule, that the third fit is not often, the fourth never, got the better of.

DCXXXIX. The cauſe of epilepſy, palſy, and apoplexy, is the ſame with that of every aſthenia; affecting the

(e) LXXXI. DXXIX. (f) CLIII. CC.

the head leſs in palſy, excepting in the beginning and end, but greatly in the two others; and in all the three producing a diſturbance in the organs of voluntary motion. This diſturbance, whether the motion be deſtroyed or diminiſhed, in convulſion ſeemingly increaſed, amounts to the ſame thing, and as was formerly explained, depends upon debility (g).

DCXL. The ſame here too is the indication of cure; with that, which runs through this whole form of diſeaſes, and the force of the remedies is eſpecially, and as much as poſſible, to be directed to the parts moſt affected. To prevent, therefore, the fits, in every reſpect alarming and full of danger, we ought to recollect, how far indirect debility has a ſhare in producing this diſeaſe, and how far the direct concurs with it; and alſo conſider the operation of a greatly advanced age. All exceſſive ſtimulus, therefore, muſt be avoided in ſuch a manner, that the body may be invigorated and direct debility guarded againſt, the ſtimulant plan of cure ſhould be ſet on foot with moderation and accuracy; and in the place of the forms of ſtimuli, that have, either from long or exceſſive uſe, loſt their ſtimulant operation, according to the rule of nature, others, which the excitability, yet not worn out with reſpect to them, can receive, ſhould be ſubſtituted, that is, the kinds of food, of drink, and of diffuſible ſtimuli, ſhould be changed all round, and upon the failure of each lately uſed one, to return to thoſe that have been long ago laid aſide (h).

DCXLI. The three diſeaſes we are treating of, are commonly ſuppoſed to ariſe from a plethora, attacking the head, and proving hurtful by compreſſion upon the brain. But, beſides that, plethora has no exiſtence in any caſe where it has been ſuppoſed (i), at that extreme age at which

(g) LVIII. CCXXX. (h) CCCI.
(i) CXXXI. CXXXIV. DXLIX. DLV.

which thoſe diſeaſes happen ; or ſometimes in epilepſy, when it affects weak and ſtarved children, how can the blood be in over proportion ? Can penury of food, which alone is the matter that forms blood in the latter, and in the former a vigour long gone, create an over-proportion of blood, and not, on the contrary, a penury of it ?

DCXLII. As plethora has then no ſhare in inducing thoſe diſeaſes, ſo neither is an effuſion of blood or of ſerum (k) upon the brain, to be accuſed of it. Nay, a ſimilar effuſion happens in every caſe of the veſſels, from great debility as well as in this caſe.

*Of the Lock-Jaw.*

DCXLIII. The lock-jaw is a leſs degree of tetanus, its ſpaſm being confined to the lower jaw and the neighbouring parts. This is a rare affection, without others equally conſpicuous ; as being a formidable ſymptom of fevers and wounds. When the former of theſe happens, it will be treated of in fevers ; when the latter, it will give occaſion to an enquiry, whether it belongs to local or general diſeaſe.

DCXLIV. Since it never ariſes immediately after a wound is inflicted, but uſually happens, either when the latter is healed up, or after a conſiderable interval of time ; the inference from that is, that it either ariſes from the violence and duration of the pain, which is always a cauſe of very much debility, or from that debility, which the uſual antiſthenic plan of cure produces, or from an unknown taint in the ſubſtance of the nervous ſyſtem.

DCXLV. That it depends upon debility we have reaſon to believe, from every ſort of ſpaſm always depending on debility (l) ; from tetanus, which is preciſely the ſame affection,

(k) CXXXVIII. and the addition. (l) CLXXXIX. CXI.

affection, only differing in degree (m), having no other origin; and, in fine, from the ſucceſs of the ſtimulant plan of cure in this as well as all other ſpaſms; and the want of ſucceſs of the antiſthenic, or debilitating evacuant one. All the other particulars regarding this ſubject will be taken notice of under the next head of diſeaſe, tetanus.

*Of Tetanus.*

DCXLVI. Tetanus is an aſthenia, and, therefore, always affecting perſons under debility, whether direct or indirect; in which, ſometimes with concioufneſs, ſometimes not, ſometimes with difficulty, ſometimes with freedom of reſpiration, the whole body, or the neck and its neighbourhood only, are bent ſometimes forward, ſometimes backward, and held faſt by a rigid ſpaſm.

DCXLVII. Tetanus is the offspring of cold countries, as the northern parts of Europe, but rarely; more frequently of the warm ſouthern regions of that diviſion of the world; but moſt frequently of the torrid zone. The rare caſe, ſuch as that among us, is the ſequel of a debility ſcarce uſual in other general diſeaſes: On the contrary, it almoſt always ariſes from that unuſual debility, which is occaſioned by a lacerating wound, through which fractured bones are daſhed, increaſing the ſum of that debility that exiſted before, or that happened to be induced in the courſe of the cure. To produce the more frequent caſe, or that moſt frequent one of all, which is quite common in the torrid zone. The moſt powerful of the debilitating powers, and a very great many, if not all of them, concur. The moſt powerful of theſe is, that degree of heat, which is intolerable, to perſons engaged in exerciſe or labour (n), to whom almoſt only, and therefore to the ſlaves, it is hoſtile. Hence, even under the ſlighteſt corporeal motion

(m) CCXXVIII. (n) CXXVII. and the addition

tion, fatigue, and ſweat, are produced (o), and from the ſweat a ſcantineſs of blood and other fluids. From all thoſe ariſes a languor over the whole body, and, therefore, in the ſtomach (p): From the languor of the ſtomach there is a puny appetite, and food, which is another cauſe of penury of the fluids, is either not taken in, or thrown up again. All theſe affections, as well as that indolence both in mind and body, which is inſeparable from ſuch a ſtate of circumſtances, are followed by the higheſt degree of debility over the whole body: And, as the moſt noxious power, the intenſe heat diſtreſſes the head more than any other part, as well as the organs of voluntary motion, whether in the neighbourhood of the head, or more diſtant from it; that is the cauſe of the urgent ſymptom, the ſpaſm, occupying the parts that have been mentioned.

DCXLVIII. As tetanus is occaſioned by all the debilitating powers, according to the different degrees in which they poſſeſs that effect, and, conſequently, like every other aſthenia, depends upon debility as its cauſe; and, as all the aſtheniæ, are removed by remedies, exciting the whole ſyſtem in ſuch a manner, as to exert the greateſt influence poſſible upon the labouring part; the ſame, accordingly, is the nature of tetanus, however little that diſeaſe has been underſtood, the ſame ſimplicity of nature is found in it: And if there is occaſion in it for the very higheſt remedies, that circumſtance ſhows, that the whole diſeaſe does not depend upon the ſpaſm, and that the labouring muſcles are not its whole ſeat, but that there is vaſt debility in every part, only greater in the muſcles, than in any other equal part, according to the law we have mentioned (q).

DCXLIX. From what has been ſaid, after tetanus has taken place, and upon account of the teeth being ſhut by the

(o) CXV. CXXVII. and the addition. (p) CLXXXVI. CXCIV. to CXCVIII. (q) XLIX.

the lock-jaw, there is neither acceſs to the weaker and leſs powerful ſtimuli of food, drink, and ſuch like, which are often ſufficient for the cure of diſeaſes of leſſer debility, nor any ſenſe in uſing them; we muſt, therefore, immediately have recourſe to the moſt powerful and moſt diffuſible ſtimuli poſſible, and continue their uſe without regard to quantity, not even that of opium itſelf, till the whole tumult of the diſeaſe is allayed (r).

*Of Intermittent Fevers.*

DCL. Paroxyſms, conſiſting of a cold, hot, and ſweating fit, are a ſort of phænomena that occur in every intermittent; and, in a certain proportion, in every remittent fever. They often come on in conſequence of a certain taint received from neighbouring moraſſes, or from a ſimilar ſtate of a neighbouring ſoil; but they alſo happen and often too, after an application of cold only (s); at other times after that of heat only (t), when the common aſthenic hurtful power accompanies either: And they return with a remarkable

(r) CCXCV. to CCCII.

(s) as in the vernal intermittents in Scotland. In the Mers, or county of Berwick, where I laboured three months under a tertian, that is, from the beginning of March to the beginning of June, and in the Carſe of Gowrie, and ſome other places in that country, nothing is more common than the tertian ague happening at the time at which I was affected; and nothing is more certain, than that the cold and moiſture are the chief powers inducing it. It is ſomewhat ſtrange, that a man born in that country, if he would patch up a ſyſtem of fevers, ſhould have overlooked a form of them, that occurred to his eye-ſight every day, and borrowed his hypothetical courſe from a marſh miaſma, ſuppoſed to be the produce of great heat and moiſture, though he had only heard or read of the intermittents of warm countries.

(t) In the warm countries agues often occur, when it is eaſy to diſcern heat to be an hurtful power; but when moiſture is much leſs prevalent, for that very reaſon that the heat is prevalent, than at other ſeaſons when the diſeaſe does not occur.

remarkable exacerbation, after a temporary ſolution of the diſeaſe, or an abatement of it; in the cold fit, exhibiting manifeſt debility; in the hot, counterfeiting a deceitful appearance of vigour; and ſcarce ever obſerving any ſtrict exactneſs in the time of their return (x); but returning ſooner in a higher, and later in a lower degree of the diſeaſe; and not unfrequently, beſides the remittent, alſo gradually aſſuming a continued form; and, on the contrary, ſometimes without interference, oftener in conſequence of an improper method of cure, before the diſeaſe is ended, changing into quintans (y), ſeptans (z), nonans (a) or into ſextans, octons, and decans (b).

DCLI. The fever of this kind, which returns every fourth day, and is therefore called a quartan, is milder that that which receives the name of tertian, from its recurrence being on the third day, and the latter is milder than that which, from its return every day, is denominated quotidian. The diſeaſe, that degenerates into a remittent or continued form, is of a worſe nature than that which is regular in its returns, or that which puts off fits, and protracts the intervals betwixt them: And, the form and type of each caſe being given, the whole ſet is both of more frequent recurrence, and of a more ſevere kind in hot, than cold, climates.

DCLII. That this ſort of fever depends upon debility throughout the cold fit, is proved by the ſymptoms, by the exciting hurtful powers, and by the method of cure, whether ſucceſsful, or the contrary.

DCLIII.

(x) Dr. Sydenham was content to count the periods by the day, which was even too particular, but Noſology has refined the matter into the wonder of exactneſs to an hour.

(y) Where the fit does not return till the fifth.

(z) Where its return is not till the ſeventh day.

(a) Where the intermiſſion continues till the ninth day.

(b) That is, prolonged their intermiſſion till the ſixth, eighth, or tenth day.

DCLIII. The whole diſeaſe, as well as every paroxyſm, begins with a ſenſe of cold, the greateſt deſire for a warm ſituation (c), with trembling, and that ſhaking motion in which the whole body is lifted up from the bed (d), with paleneſs, dryneſs, and ſhrivelling of the ſkin, with the diminution of tumors and drying up of ulcers, that the patient may happen to have had before the arrival of the diſeaſe, with an impaired ſtate of the intellectual faculty, a want of ſteadineſs in its exertions, and ſometimes delirium, with a dulneſs of ſenſation, languor of ſpirits, torpor of the voluntary motions, a liſtleſneſs of mind and body in all the functions, in fine, a manifeſt debility.

DCLIV. If terror, horror, cucumbers, cold melons, famine, debauch in eating and drinking, food of difficult digeſtion, have been found for certain, to have a great effect in bringing back paroxyſms, after a long intermiſſion of them; if in cold ſituations, where cold is the principal hurtful power, it is the poor people, who are ill clothed, ſtarved in their diet, and enfeebled by labour, who in general are only affected with diſeaſe; if in warm regions of the globe, thoſe who have been moſt expoſed to debilitating hurtful powers of all kinds, who, in preference to others are ſeized with it (f); if in moſt places, thoſe who live well in their diet, and cheer themſelves with their bottle, eſcape the diſeaſe (g), and water drinkers and perſons in a ſtate

(c) I remember yet, that it was the higheſt luxury for me, when the cold fit came on, to be put in bed, and covered under ſuch a load of blankets (for the cold of ſheets was intolerable) as would, at any other time, have oppreſſed me. I was then about eleven years of age.

(d) By authors and lecturers in Latin abſurdly called rigor.

(f) See DCXLVII.

(g) as in Holland; where the Dutch ſtudents who live not near ſo well as the Engliſh, are very liable to the diſeaſe, while the jolly living Engliſh, who do not like the weak Rheniſh wines, and the weak ill managed

ſtate of inanition from low living peculiarly experience it; all theſe facts ſhew, how far this diſeaſe is from depending upon heat and moiſture alone; and prove, that it alſo ariſes from cold, and not from either alone, but alſo from all the uſual hurtful powers, like every other aſthenia.

DCLV. Further, if every kind of evacuation, as often as it has been tried, is found without the poſſibility of a doubt, to be hurtful; if no perſon in his ſenſes has ſcarcely ever attempted bleeding (h); if, before the Peruvian and ſome other barks of ſimilar operation were found out to act as remedies, a variety of ſtrong drinks (i) were uſed with ſufficient ſucceſs; and if it now alſo is found and demonſtrated in fact, that the diffuble ſtimuli are by far more effectual than any bark; nay, that the bark often fails, while they are perfectly effectual in the re-eſtabliſhment of health; from

naged vin de Bourdeaux, which is a cheap dirty claret, almoſt never fall into the diſeaſe at Leyden, while the Dutch are perpetual victims to it as often as it is epidemic.

(h) They have talked of taking a little blood in the ſpring intermittents, but that was a theory of Dr. Sydenham's, who divided the diſeaſes of the whole year, into inflammatory and putrid, and I do not find, that that idea has ever been followed in practice. For though they follow him moſt ſervilely in moſt reſpects, eſpecially where he is wrong, their vanity, that they may now and then ſeem to ſtrike out ſomething from themſelves, diſpoſes them to differ from him in others, eſpecially where he is right, as in the objection of purging in ſome ſthenic diſeaſes (CXXXVII).

(i) as ale, wort, wine, ſpirits, ſtrong punch. Riverius followed this plan; and I remember it was cuſtomary among the common people to cure themſelves by getting tipſy. But I was allowed neither the one method of cure, nor the other. The authority of Dr. Stahl and Boerhaave, had thrown the bark into diſrepute in Britain. And my mother, "who truſted in God, and not in phyſicians," left me to the courſe of deſires and averſions, which were chiefly to avoid cold, and anxiouſly ſeek for heat. She kept me upon a vegetable diet in the intermiſſions, which I even then did not much like. It was the kindly warmth of ſummer, which then ſet in early, that had the chiefeſt effect in gradually finiſhing that cure.

from this ſort of argument and certainty in point of fact, we derive the moſt ſolid conviction, that there is nothing in this diſeaſe different from other aſtheniæ, but that it perfectly agrees with them in the exciting hurtful powers, in the cauſe, and in the cure. And, if it differs in the appearance of the ſymptoms, that ſhows no difference of nature, and not even any thing unuſual; as all the aſtheniæ that have been mentioned, however much they have been proved to be the ſame (k), differ notwithſtanding, in a ſimilar manner, from each other, and ſymptoms lead not to truth, give no real information. For, though preciſely the ſame ſound functions flow from the ſame ſtate of perfect health; yet when the latter is ſo changed, as that the excitement is either encreaſed or diminiſhed, the functions are changed from the ſtandard into every ſort of appearance, in ſuch ſort, however, that they point out no difference in the cauſe as has been commonly believed, and not always even a difference of degree (l).

DCLVI. Accordingly, the following demonſtrated facts of ſpaſm, convulſion, tremor, inflammation from weakneſs, deficiency of menſtruation (m), bleeding diſcharges (n), loſs of appetite, thirſt, nauſea, vomiting, diarrhaea with pain, diarrhaea without pain, and all the other aſthenic affections (o), ariſing from one and the ſame cauſe, and being removed by one and the ſame operation of the remedies (p), and not even in their morbid ſtate, expreſſing degrees of debility in ſuch a manner, as that it can be thought proper to take any order of arrangement from that mark; all theſe ſerve to confirm the obſervation juſt now made, and by their analogy, to demonſtrate, that the fevers alſo are

(k) See par. LXXI. and the addition. LXXXI. DCXXIX.
(l) DIV. DVII. (m) DXLV. and the following paragraph.
(n) DXLVIII. (o) CLXXVI. to CXCV. and to CXCVII.
(p) CXXII. DLVI. DLXI DLXXI. DLXXII. DLXXIV. to DCXCV. and from that to DCXCVIII. Look alſo carefully over the whole IVth Chapter of the ſecond part.

are diſtinguiſhed by intervals of freedom from febrile ſtate, ſometimes greater, ſometimes ſcarcely perceived in common with what happens to many other diſeaſes, not from any peculiarity in the cauſe, but from a variation in its force. If fevers ſometimes intermit their febrile impulſe, ſometimes exert it more remiſsly, and ſometimes, by performing the latter imperceptibly, go on almoſt in a continual career (q); do they, in that reſpect, differ from the gout (r), which never goes on with an equal force, but abates from time to time; and even, when it has interpoſed an interval of health returns with more ſeverity than ever? Or do they differ from aſthma, as well as many other diſeaſes, in all which the ſame thing preciſely happens? And what is more uſual, in indigeſtion, and often violent vomiting (s), accompanied

(q) DCL.

(r) When the gout in the old way, is left to patience and flannel and low diet and watery drink, it ſhews both remiſſions and conſiderable intermiſſions. I have been often mortified, at finding, in conſequence of walking a little too freely, when I thought the fit was gone, a more violent return than the firſt part had been; when I had not yet attained to the full knowledge of the nature and management of that diſeaſe. Which is a circumſtance, that every podagric, who is ſtill treated in the old way, can bear witneſs to. Dr Sydenham fell a victim to his ignorace of its nature.

(s) A gentleman in Scotland, came to dine with his brother, who lived with me and my family, in a houſe in the neighbourhood of Edinburgh. He ate and drank ſo ſparingly, that I predicted, from a knowledge I had of his manner of living, which was an exceſs of temperance and abſtemiouſneſs to a faulty degree, that if he did not indulge a little more in theſe reſpects, he would ſoon fall into a diſeaſe of debility. The prediction was verified in a few days; when his brother having occaſion to go to town, found him, in the intervals of a violence of vomiting, making his teſtament. By a good doſe of the diffuſible ſtimulus, he removed the whole diſeaſe at once, and enabled him, with the additional help of ſome good ſound port and genuine Madeira, in a few minutes to eat heartily of beef ſteaks. Before his brother's arrival he had been treated in the uſual evacuant, and, as they call it, the antiphlogiſtic way. Upon the return of his medical friends a gliſter was preſcribed, which threw him back

companied with a rage of other ſymptoms, than the intervention of the intervals of the greateſt relief? The ſame is the nature of the chin-cough (t) the ſame as that of the aſthenic cough (v). In fine, where is there one of all the ſthenic, or all the aſthenic diſeaſes, the morbid career of which continues the ſame from beginning to end? There is none (u). For, as life in all its ſtates (x) is always in proportion to the action of the exciting powers, upon the excitability, and both prediſpoſition to diſeaſes, and diſeaſes themſelves ſupervene in proportion to its being greater or leſs than the proper degree; ſo the courſe of diſeaſes follows the ſame rule; and, according to

A a the

back into his diſeaſe, from which, with the ſame eaſe and in the ſame ſhort ſpace of time, he was extricated upon his brother's return to his poſt. This young gentleman from that beginning, like many other of my pupils, is now a moſt reſpectable man in his profeſſion. Some time after that, he performed the greateſt cure, that ever happened ſince the firſt annals of medicine. In a very dirty ſhip, the Dutton, which was going to the Eaſt Indies, he ſtemmed, in the latitude of Rio Janeiro, a fever that was carrying off numbers every day, loſing not one; as can be atteſted by the ſhip's books, for no leſs than five weeks—his name is Dr Campbell.

(t) See 579. (v) And from DLXXXVII. to DXCVII.

(u) All this confirms, and not only the point at preſent meant to be ſettled, which is that the diſtinctions, that phyſicians have made about the differences of fevers, are without all foundation, and that they are all the ſame with no other difference but in degree, and that, unleſs in that reſpect, they do not differ from other diſeaſes of the ſame form; but it likewiſe adds additional weight to our fundamental propoſition, that we are nothing in ourſelves, but according to the powers acting on us. Many circumſtances in the courſe of diſeaſes, that eſcape the obſervation both of patients and phyſicians, are of hourly and momentary occurrence, and ſufficient, when their importance is weighed according to the principles of this doctrine, to account for the variations in the progreſs of diſeaſes. We ſhall, by and by, ſee that the circumſtance of heat, from the gratification of indulging in which the patient is not to be turned aſide, by any advice, is with its conſequences upon the whole ſyſtem, ſufficient to account for the gradual converſion of the cold into the hot, and the hot, into the ſweating, ſtages. (x) See par. IX.

the variation of the degree of that action, is one while encreaſed, another while diminiſhed, another while exhibits a temporary eruption; juſt like what happens in this ſort of fevers.

DCLVII. The cauſe of them is the common one of all aſtheniæ, whether febrile or not; but under ſuch direction and application to the ſyſtem, that, after an interval of ſome hours, all their morbid energy departs entirely, or in ſome degree. And the reaſon of that is, that the exciting hurtful powers in the ſame proportion are either removed, or more gentle in their operation; in one word, the excitement is encreaſed for the time. The variation of types is not owing to a matter, ſubject to the ſame variation: For, if that were the caſe, how could the ſame caſe run through all the forms, ſometimes of intermiſſion, ſometimes of remiſſion, and at other times of nearly going on with a continued movement and the contrary? Is the matter, which is ſuppoſed to produce each form, in order to produce another form, changed into that matter, which is ſuppoſed neceſſary to the latter (y)? Is the vapour, or, as they call it, the effluvium, proceeding from animals, which is ſuppoſed to produce any typhus, or continued fever, and, therefore, the Ægyptian one, when this is changed into an intermittent, or remittent nature, alſo, together with the change of type, changed into a marſh miaſma, or defilement ariſing from moraſſes, which is ſuppoſed to produce that form of fever? Or rather does the matter, which at firſt produced each type, ſtill continue the ſame, and become the cauſe of another form? If any perſon ſhould fix upon the latter as being the truth, how ſhould the ſame

(y) The ancients ſuppoſed, that every type aroſe from a matter ſuited to produce it. Now, ſuppoſe a quotidian type to depend upon any given matter, and a tertian upon any other, different from that; when either type is changed into the other, are we to ſuppoſe that the matter is alſo changed, and ſo forth of the reſt?

ſame cauſe produce different effects? But, if he inclines to adopt the former ſuppoſition, what proof is there, that can be admitted upon any principle of reaſoning, that, as often as the form of the fever changes, ſo often its cauſe, the matter, is alſo changed? It has been already proved, that marſh miaſmata, or defilements, are not the cauſe (z). And it ſhall be by and by evinced, that the animal effluvium, or vapour, ariſing from the body, when affected with a continued fever, is not: Nay, it has been proved by the moſt ſolid argument, that neither is any other matter taken into the body, either in this or any caſe, that which produces the diſeaſe, and that the change of excitement alone is the univerſal ſource of all general diſeaſes (a).

DCLXI. To enquire into the return of fits; it is not peculiar to this form of fevers, to have a return of the general affection after its temporary ſolution; the ſame thing happens to the gout, as often as a return of the diſeaſe again ſucceeds to a return of health (b), and for the ſame reaſon (c): For, as thoſe diſeaſes are repelled by invigorating means, ſo they are brought back by the debilitating powers, which were their firſt cauſe. Accordingly, when the diſeaſe is left to itſelf, when it is treated by a debilitating plan of cure, it perſeveres in returning; when it is treated with Peruvian bark, and ſtill more certainly by the forms of wine and diffuſible ſtimuli, and when that mode of cure is perſiſted in, till the ſtrength is quite confirmed, it never returns.

DCLX. The tertian vernal fevers of Scotland go off without medicines, in proceſs of time, firſt in conſequence of the heat of the bed, and then, as the ſummer ſets in, by baſking in the rays of the ſun, and by a moderate uſe of food



(z) DCLIII. DCLIV. DCLV.

(a) See the paragraphs XXII. XXIII. LXII. LXIX. LXX. LXXII. LXXIII. and LXXXVIII.

(b) DCLVI. (c) DCLVII.

and ſtrong drink, their duration commonly not exceeding the ſpace of three months. In all the ſouthern regions, and even in England, the Peruvian bark, when the whole cure is entruſted to it, often fails, and they are not removed but by very diffuſible ſtimuli (d).

DCLXI. The debility during the cold ſtage is the greateſt, that of the hot leſs, and that of the ſweating ſtage, which ends in health for the time, is the leaſt of all. Hence, in a gentle degree of the diſeaſe, as cold is the moſt hurtful power, the conſequence is, that its effect is gradually taken off by the agreeable heat of the bed or of the ſun, and the ſtrength,

(d) Dr. Wainman, as it was ſaid before, found that to be the caſe in the fens of Lincolnſhire. From which we may learn how little dependence is to be had on the facts in medicine, as they are delivered from deſks or in books; from both which we have always been taught to believe, that the Peruvian bark was a catholicon in intermittent fevers. But, if it fails in the cure of the mild ſtate of that diſeaſe in this country, what muſt we think of its efficacy in the malignant intermittents and remittents of the warm countries? And, if that medicine, with its univerſal high character, ſhall turn out next to an impoſition, what are we to think of teſtimonies in favour of any thing? One of the ways of adminiſtering the bark is in ſtrong wine or ſpirit, and it can hardly be doubted, but in that compound form it may have been of ſervice. But where ſhall we find a panegyriſt on the bark, who will make any allowance for the powerful medicine conjoined with it? They talk of it as a vehicle, without allowing it any other credit. In the ſame manner, at all times, have many powers of great operation been overlooked in the accounts given us of remedies, and the merit of the cure imputed to the moſt inert. I have moſt generally found an analogy betwixt the remedies, that are, in reality, powerful, and our ordinary ſupports of health. The wines and ſtrong drinks are certainly a part of diet with moſt people, and ſo is opium among the Turks. But what analogy can be found betwixt the ſame ordinary ſupports of life, the ſame durable and natural ſtimuli, and the bark of a tree, whether brought from South America, or growing among ourſelves? I will not pretend to ſay, that the bark is devoid of all virtue; but I muſt have greater proofs of its power over diſeaſe than I have yet met with, before I can retract much of what I have ſaid.

ſtrength, thereby gradually drawn forth. The heart and arteries, gradually excited by the ſame heat, acquire vigour, and at laſt, excited in their perſpiratory terminations by the ſame ſtimulus the moſt hurtful ſymptom being thereby removed, they reſtore the hot fit, and afterwards carry on the ſame proceſs to the breaking out of ſweat.

DCLXII. When the force of the diſeaſe is greater, theſe powers are ineffectual; and, unleſs the moſt powerful remedies are applied, the diſeaſe, inſtead of producing intermiſſions, ruſhes head-long into the remittent ſtate only, or even into thoſe very obſcure remiſſions, which give the appearance of a continued diſeaſe.

DCLXIII. And, ſince in every caſe of diſeaſe of any energy, the diſeaſe returns, for this reaſon, that either the leſſer force, by which it is kept up, is not ſtopt by a leſſer force of remedies, or the greater force of the former by a greater force of the latter (e); the remedies, therefore, ſhould be given both before the cold fit, and during it, as alſo through the whole courſe of the intermiſſion to the next paroxyſm, and they ſhould be continued even through this, and after it is over. Laſtly, like the practice in every other cure of aſthenic diſeaſes, we ſhould gradually recede from the uſe of the higheſt ſtimuli, in proportion as the body can now be ſupported by the leſſer and more natural (f).

*Of the ſevere Dyſentery.*

DCLXIV. The ſevere dyſentery, or bloody flux, is an aſthenia; in which, beſides the ſymptoms in common to that whole form of diſeaſes, ſo often now repeated, there are pains in the inteſtines, gripes, innumerable dejections, chiefly

(e) For the curative force muſt always be accommodated to the morbific, or cauſe of the diſeaſe. See above XCII. CIX.

(f) CV. and CVII.

chiefly mucous, ſometimes bloody, for the moſt part without the natural matter that paſſes that way, all which happen often after contagion has been applied.

*Of the ſevere Cholera.*

DCLXV. The ſevere cholera adds to the common ſymptoms of every aſthenia, thoſe of vomiting and purging, alternating with great violence, and for the moſt part conſiſting of bilious matter.

*Of Synochus.*

DCLXVI. Synochus is a very mild typhus, and ſuch as chiefly happens in cold countries and cold ſeaſons; in the beginning deceiving phyſicians by a certain reſemblance to ſynocha, but a counterfeit one.

*Of the ſimple Typhus, or Nervous Fever.*

DCLXVII. The ſimple typhus, or nervous fever, is ſuch a ſynochus, as appears in warm countries or ſeaſons, but ſomewhat more ſevere, and yet ſufficiently ſimple.

*Of the Cynanche Gangrenoſa.*

DCLXVIII. The gangrenous cynanche is a typhus, a little more ſevere than the ſimple typhus, or nervous fever, with an eruption upon the ſkin, and a red tumid inflammation of the throat, and with mucous cruſts of a whitiſh colour, and concealing ulcers below them. The end of the angina, formerly mentioned (g), equals or exceeds the violence of this diſeaſe.

*Of the confluent Small-pox.*

DCLXIX. The confluent ſmall-pox is a typhus chiefly depending upon indirect debility. It is preceded by a great

(g) CCXXII. CCXXIV.

a great eruption of the diſtinct kind, and an univerſal cruſt of local inflammation over the whole body; which, by their local and violent ſtimulus, convert the ſthenic into the aſthenic diatheſis, and the inflammatory affection into a gangrenous one. Its cure is to be conducted upon the ſtimulant or antiſthenic plan, but in ſuch a way, however, as is ſuitable to indirect debility.

*Of the peſtilential Typhus, the jail, putrid, or the petechial Fever, and the Plague.*

DCLXX. The peſtilential typhus, or the jail, putrid, and petechial Fever, is an aſthenic diſeaſe of the higheſt debility, ſcarce excepting the plague itſelf; in which the ſurface of the body is firſt dry, pale, hot, ſhrivelled; then, chiefly towards the end, moiſt, drivelled with ſpots, and colliquative ſweats, diverſified with vibices, or long ſtrokes like thoſe laid on by a whip, and waſted with colliquative diarrhœa; in which the ſtomach is affected with the want of appetite, loathing of food, nauſea, often with vomiting; in which the belly is firſt boundiſh, and then, as it has been ſaid ſubject to colliquative evacuation; in which the intellectual function is firſt impaired, then becomes incoherent, afterwards delirious, and that often in the higheſt degree; in which the ſpirits are dejected and waſted with ſadneſs and melancholy; in which the voluntary motions are early impaired, and then ſo deſtroyed, that the patient cannot be ſupported in his poſture in bed by his own muſcles, or prevented from ſlipping down, from time to time, from the upper to the lower part, and the ſenſes are either blunted or preternaturally acute. In fine, the urine, the fœces, the breath, and all the excrementitious diſcharges, have a ſingular fœtid ſmell.

DCLXXI. The plague begins, holds on in its courſe, and ends with ſimilar ſymptoms: To which, however,

carbuncles,

carbuncles, buboes, and anthraces, or fiery ſores, are added. Theſe are moſt frequent in the plague, but not ſo confined to it, as to be excluded from the peſtilential fever (g).

DCLXXII. Contagious matter ſometimes accompanies typhus, always the plague: The former is of a common nature, or ſuch as is liable to happen in any part of the globe; the latter is thought peculiar to the eaſtern part of Europe, and the weſtern of Aſia, poſſeſſed by the Turks, called the Levant.

DCLXXIII. With reſpect to the contagious matter of typhus; the corruption of the fluids is by no means to be imputed to it (h), nor is heat ſo much to be blamed; for cold has an equal power in producing that effect as heat (i), as has alſo every thing, as well as heat, that either directly, like cold, or indirectly like it, debilitates (k). Nay, the emptineſs of the veſſels, from want of food, or from the incapability of the digeſtive organs to take it in and aſſimilate it, as alſo that debility which is induced by melancholy and grief, though, in theſe caſes, no matter at all is preſent, admit of the ſame application. By means of that debility in the extreme veſſels, internally, as well as externally, and, therefore, eſpecially in thoſe of the alimentary canal and in the perſpiratory veſſels, the fluids ſtagnate; and by ſtagnating under the heat of the body, degenerate into that foreign quality, which, in a more extenſive ſenſe, is called corruption, but in a more uncertain one, putrefaction (m).

DCLXXIV.

(g) CCXIX. (h) See above CXV. CXXII. CCXXXVI.
(i) Ibid. and CCLXI. (k) See again CCXXXVI.
(m) There are three ſtates or qualities produced in fluids by as many different fermentations, the ſaccharine, acid, or putrefactive. To one or other of thoſe we are apt to refer every ſtate of corruption in our fluids; but they are liable to degeneracies, which do not exactly correſpond to any of thoſe: And, as we are not yet acquainted with any of thoſe deviations

DCLXXIV. As the cauſe of all theſe diſeaſes is the ſame with that of the diſeaſes not febrile, to wit, debility; differing only in this, that it is the greateſt debility compatible with life, and not long compatible with it; ſo,

DCLXXV. The indication alſo of cure is the ſame as that of the other aſtheniæ, but muſt be conducted with a good deal of more attention than is neceſſary in them, upon account of their much greater mildneſs (n). It is, then, debility alone, that is to be regarded in the cure; and ſtimulant or antiſthenic remedies alone, that are to be adminiſtered. Nor is there occaſion for any diſtinction in the method of cure, but what direct or indirect debility requires (o).

DCLXXVI. The indirectly debilitating powers, are the violent and local ſtimulus of the eruption in the confluent ſmall-pox (p), ſo often inducing proſtration of ſtrength, and drunkenneſs (q), heat (r), or long continued luxury

viations from the natural ſtate, it is ſafer to uſe the general term corruption. Even the word acrimony is too general as we can by no means pretend to ſay, that perfect blandneſs is the natural and healthy ſtate of our fluids: Nay the different uſes and ſubſerviency to the functions ſeem to require a conſiderable deviation from blandneſs; the urine, the perſpirable fluid, the bile, and others, being intended, by a certain poignancy, to anſwer certain purpoſes. Theſe, compared to certain blander fluids, may be ſaid to be acrid; while compared to their ſtate in morbid degeneracy, they, may be called bland, and the latter acrid.

(n) Fevers will require many more viſits from the phyſician than are commonly either beſtowed or required, and often a good deal of watching. While this is more generally the caſe in fevers, at leaſt in the high degree in which theſe fevers exiſt, at the ſame time they are not the only ones that require ſuch ſtrict attention; as every diſeaſe, when it has attained to the ſame degree of debility, endangering life, will claim the ſame circumſpection and vigilance from the judicious and conſcientious phyſician.

(o) See par. CIII. CVII.

(p) See CLXXV. CCXV. CCXVI. CCXVII. CCXVIII.

(q) CXXX. (r) See CXV.

luxury (s). To theſe hurtful powers, thus indirectly debilitating, all the others may more or leſs be added (t).

DCLXXVII. And as it never happens, that either direct or indirect debility alone proves hurtful, hence we have a third caſe given, where we have to combat both ſorts of debility (u).

DCLXXVIII.

(s) See above par. CXXVII. (t) Look for them in Part. I. Chap. I.

(u) Suppoſe any direct debility has occaſioned a diſeaſe, when that is eſtabliſhed, the excitability is ſo morbidly accumulated, that the ſlighteſt exertion of any exciting power becomes too much for it; which immediately conſtitutes an admixture of indirect debility. The ſtimulus of corporeal motion, which is a great and rough indirectly debilitating power, is often too long continued, after a typhus fever has begun its inſidious attack upon the habit; and hence the after-part of the diſeaſe becomes more ſevere and dangerous. It is alſo to the ſame cauſe that we owe the propriety of excluding light and ſound, when they prove cauſes of irritation, their ſtimulus, though ſlight, being too ſtrong for their accumulated excitability. The guarding againſt guſts of paſſion and emotion, as well as mental exertion, is all upon the ſame principle. When a perſon falls into a fever from exceſſive labour and low diet at the ſame time, that is an inſtance of a mixture of debility from the beginning. Again, when any diſeaſe, chiefly of indirect debility, is treated by bleeding, other evacuations and ſtarving, that is an inſtance of a ſuperinducement of direct upon indirect debility. A judicious practitioner, and who preſcribes according to the rules that ariſe from a near acquaintance with the operations of the inanimate part of matter upon living ſyſtems, will find plenty of ſcope for the exerciſe of his judgment in theſe and many other niceties: And he will find that the Brunonian doctrine, as it is now nicknamed by thoſe who know it not, is not a doctrine to be practiſed without knowledge, without judgement, and without ſenſe; but that it requires every part of knowledge requiſite to throw light upon ſo extenſive a ſubject, as that of the ſcience of life over all nature, and all the judgement and good ſenſe of the ſoundeſt underſtanding to carry it into application upon many occaſions of nicety and difficulty. The traſh that has hitherto too often paſſed for knowledge, is to be acknowledged not only uſeleſs, but hurtful. But the true knowledge of nature muſt be always elegant, always ſatisfactory, always uſeful. It is to be hoped the day is not far diſtant, when this doctrine will change its preſent appellation, into that

of

DCLXXVIII. The directly debilitating powers are known, to wit, cold (x), low diet, (y), bleeding, and other evacuations (z), reſt of body and mind, and want of paſſion and emotion (a), and impure air (b).

DCLXXIX. As both thoſe ſets of powers act by debilitating; be, at the ſame time, on your guard from believing, that ſome of them are ſeptic, and prove hurtful by fermentation, and are to be cured by antiſeptics, or powers that reſiſt putrefaction; and that, among the former, heat is to be reckoned; among the latter, cold, wine, the Peruvian bark, and acids (c).

DCLXXX. In the gentle caſes, as in the agues of cold places, and eſpecially the vernal agues (d), and likewiſe in ſynochus, in the ſimple typhus, and in the plague itſelf, when mild; ſcarce any ſtronger ſtimulus than wine is required; and the reſt of the cure is to be conducted according to the directions ſo often now laid down in the mild aſthenic diſeaſes.

DCLXXXI. In the moſt ſevere fevers, ſuch as the remittent (e), in the warmer regions of the earth, and in the torrid zone, and in the ſevere typhus, when it is peſtilential, in the very violent dyſentery and cholera of the ſame places, and in the moſt violent plague itſelf (e), the cauſe of all which affections, is in general direct debility; or in gentler caſes of the ſame diſeaſe at firſt, and that have now acquired a great deal of virulence in their progreſs from

of the doctrine of Nature, over the living part of her productions; comprehending not only the morbid but healthy phœnomena, and the diſtinctions between the living and the dead ſtate.

(x) See par. CXVII. (y) CXXVIII. (z) CXXXIV. CXXXVII.

(a) CXXXVII. and CXXXIX. and CXLII.

(b) CXLVI. Compare the whole with Part II. Chap. X. all from CCXC. to CCCXII. and from that to par. CCCXV.

(c) See par. DCLXXIII. (d) See DCL. DCLIV. DCLX.

(e) DCL. DCLX, DCLXIV, DCLXV.

from the neglect of the proper, or the use of an improper plan of cure; we ought immediately to begin with the highest diffusible stimuli, such as opium, volatile alkali, musk, and æther, in small doses but often repeated (f); and afterwards, when the strength is restored, and the force of the stomach confirmed by their use, to proceed to the use of food, drink, gestation, pure air, cheerfulness, and, last of all, to the usual offices and occupations of life.

DCLXXXII. When indirect debility has had more concern in the cure, as in agues, or more continued fevers, occasioned by drunkenness, and in the confluent small-pox; the same remedies are to be employed, but in an inverted proportion of dose. We should, consequently, set out here in the cure with the largest doses, and which, are next in quantity to that degree of stimulus, which produced the disease (g); then recourse should be had to lesser stimuli,

(f) XLI. XLIII. CXIII. DCLX. to DCLXIV.

(g) This may be exemplified by the treatment of a person the next and second day after he has been hurt by drinking. His excitability has been worn out by an unusually strong stimulus, the effect of the first night's sleep is to allow it to accumulate again: In this state much exercise fatigues, for want of excitement to enable it to be born: Fluid nourishment is commonly used, but it is not strong enough to waste the redundance of excitability, and bring the patient back to his healthy excitement. The dram drinkers know the remedy, but they know not its bounds. They have recourse to a glass of strong spirit, and they would be right if they stopt at one, two, or a very few, according to the quantity, that their former habit may render necessary, and take no more than what gave them an appetite for solid nourishing animal food; which, whatever the quantity that is required to produce it be, is the best general rule: But they go on, and every day till that of their death, which soon arrives, renew the disease. The rule is to take a little of what proved hurtful, till a return of appetite comes on: After eating a little, a walk or a ride will add more stimulus: The air, in which the exercise or gestation is performed, will furnish another. In that way, more strength will be acquired in proportion as a greater number of stimuli

ſtimuli, and a greater number of them, till, as was ſaid juſt now (h), the ſtrength can be ſupported by the accuſtomary and natural ſtimuli (i).

DCLXXXIII. To give ſome eſtimate of the doſe in both caſes (k); in direct debility, where the redundancy of excitability does not, for the time, admit of much ſtimulus (l), ten or twelve drops of laudanum given every quarter

muli have waſted more excitability, and with more equality. A ſecond day's management by applying the ſtimuli in ſtill a leſſer degree, will commonly remove all the complaints. When a habit of hard drinking has brought on, as it always will ſooner or later, a very bad and confirmed diſeaſe; if the excitability is nearly worn out, and what remains is very unequal, as having been produced chiefly by an alteration betwixt one ſtimulus acting with partial exceſs and ſleep, either imperfectly removing the exceſs, or by its length ſuperadding direct to the indirect debility, which the drink occaſions; the patient ſhould have ſomewhat a leſſer quantity, than that which at any time hurts him; then the next day ſtill leſs; and ſo on, till very little will ſerve him, and he ſhould add all the other ſtimuli in proportion as he diminiſhes the morbid one.

(h) DCLXXXI. (i) CCCVIII. to CCCXII.

(k) DCLXXXI. and DCLXXXIII.

(l) The abundant excitability of an infant cannot be reduced at once to that waſted degree, in which the ſtrength of an adult conſiſts; it muſt be by the gradual application, of what it can bear always for the preſent time that that can be brought about; and, therefore, not ſooner than a ſpace of time equal to half the individual's given period of exiſtence. In a ſimilar manner, an excitability that has been accumulated from deficiency of ſtimuli for a number of weeks or months, will require a ſpace of time, ſomewhat proportioned to that, to wear it out in the manner moſt ſuitable to reſtore the loſt vigour. Some health will be ſooner brought about, but the effectuating of perfect health muſt be a work of time. Again, the direct debility of a few days will be eaſily removed in a few days. In fevers, and every caſe of high debility, the accumulation of excitability for want of ſtimulant power to produce excitement, muſt be eſtimated by the number of ſtimuli that have been with-held, as well as the degree of force of each of them. In a fever, then, the ſtimulus of exerciſe, of the open air, of converſation, of diverſion of every kind, of

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ter of an hour, till the patient, if, as is uſually the caſe, in ſuch a high degree of debility, he has wanted ſleep long

an agreeable flow of ſpirits, of a pleaſant train of thinking, of light and ſound in a great meaſure, as well as of the exerciſe of all the other ſenſes, and particularly the ſtimulus of a due quantity of blood, and other fluids, and moſt eſpecially that of nouriſhing food, and, at leaſt upon the common plan of practice, that of wine and exhilarating drink, all theſe, are with-held, and, therefore, for want of them, the diminution of excitement muſt both be great and unequal. What then is required as to the idea of the cure? Since moſt of thoſe, which are the ordinary ſtimuli, by which the ordinary health is ſupported, cannot be applied; the proper idea is to look out for a power in nature, that can, as nearly as poſſible, ſupply, both the degree and equality of ſtimulant operation that is wanted. Such a power we find in the few diffuſible ſtimuli, and particularly in opium (See par. CXXX.) Any of thoſe act powerfully on the ſtomach, and diffuſe proportional excitement over the ſyſtem. So ſoon and effectually do they pervade it, and act with the moſt powerful effect upon the ſurface, that it is often an object of attention in the practice to think of means to prevent it from going too far. By the bleſſed uſe of theſe remedies, the excitement of the ſtomach is reſtored, ſo that with a return of appetite, food can be taken in, and digeſted, in ſo far as the powers of that organ go; which are confined chiefly to the firſt part of digeſtion, or what is called the firſt concoction. Next the excitement is reſtored in the other digeſtive organs, in the duodenum, in the biliary veſſels, the pancreatic duct, in the lacteal veſſels, through their whole courſe from the inteſtines to their common receptacle, as all the veſſels that return lymph from every part of the body, in the veins betwixt the thoracic duct and the heart, in all the cavities of the latter, in all the red arteries, in the colourleſs terminations of all theſe, whether exhalant or glandular, and whether only ſimply ſeparating, or alſo changing the property of the fluid they ſecrete, in all the internal cavities of the body, in the commencing extremities of the abſorbent veſſels, and in their progreſs through their lymphatic trunks to the receptacle in common to them with the lacteals, which are a part of their number, in the thoracic duct again; as alſo from that to the heart, and from the heart to the extremities of the arteries: Laſtly the influence of excitement is extended to theſe terminations of the arterial ſyſtem, whether exhalant or glandular, which perform the ſeveral functions of excrementitious ſecretion and excretion, by which every portion of fluids, now become

long (m) falls into it: After ſleep, when now ſome vigour is acquired both by that and the medicine, and now ſome of the exceſſive excitability is worn off, a double quantity of the diffuſible ſtimulus ſhould be added, and, in that way, gradually encreaſed, till the healthy ſtate can now be ſupported by ſtimuli leſſer in degree, greater in number, and more natural (n).

DCLXXXIV. In indirect debility an hundred and fifty drops ſhould forthwith be thrown in; and then the ſuperaddition to be made, ſhould be leſs and leſs, till we arrive at the boundary juſt now mentioned (o). Both the meaſures recommended (p), are in general applicable to adults; but leſs will ſuffice at an early or late age. Nay, the rule further varies according to the habit, the way of life, the nature of the place, and the peculiarities of the patient (q).

DCLXXXV.

come uſeleſs, or, if they were retained, hurtful to the ſyſtem, are thrown out by their ſeveral emunctories. When, by the uſe of the diffuſible ſtimuli, the ſtomach, and all the organs can perform their reſpective functions, the natural ſtimuli begin to be reſtored; the ſtomach the inteſtines, the lacteals and blood veſſels, and all the other veſſels, are gradually filled with their reſpective fluids; the muſcles on the ſurface, and the muſcular fibres recover their tone and denſity; the brain recovers its vigour; heat and air can be now reſtored to the ſurface; exerciſe can now add its uſeful ſtimulus; and all the functions return to their uſual capability of being acted upon by the uſual and ordinary exciting powers.

(m) Want of ſleep is an indirectly debilitating power; and, in this weakened ſtate of the ſyſtem, in this redundancy of excitability, where every exciting power is liable to be too much for the excitability, the want of ſleep, by not allowing this partial waſte of excitability to be repaired, is the occaſion of ſo much more indirect debility being added to the direct; and hence the ſum total of debility is encreaſed. The effect of ſleep in removing this partial indirect debility becomes ſo far an invigorating power.

(n) See above par. CIII. and CVII. (o) DCLXXXIII.

(p) in par. DCLXXXII. and this.

(q) When the habit is delicate, the patient's way of life moderate as to the uſe of the ſtimuli, the place cold, or both cold and moiſt, and the

DCLXXXV. And ſince the uſe of the diffuſible ſtimuli only ſucceeds, when life cannot be preſerved by the uſual and more congruous to nature, and a due quantity of blood and other ſtimuli ſoon become ſufficient to finiſh the healthy ſtate; we ſhould on that account, even from the beginning immediately give animal food, if not in a ſolid form in which it can neither be taken nor digeſted, at leaſt in a fluid form, in that of ſoups; which ſhould be alternated with all the doſes of the diffuſible ſtimulus: Then, in a gradual way, proportioned to the return of vigour, firſt a very little of ſomething ſolid, and afterwards more and more ſhould be thrown in, and the other ſtimuli, each at its proper time, brought into play; till the whole cure terminate in the management commonly obſerved in good health, where there is leſs occaſion for medical injunctions.

DCLXXXVI. When the affection is more a mixture of both ſorts of debility, theſe proportions of the doſes muſt be blended together.

DCLXXXVII. Contagion, which either adds nothing to the effect of the uſual hurtful powers, or proves hurtful by the ſame operation by which they are ſo, is not otherwiſe

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the patient eaſily affected with ſtimuli of all kinds; in all theſe caſes the rule, which common ſenſe preſcribes, is to diminiſh the doſe of the diffuſible. A lady in Edinburgh, who had born and nurſed many children, had lived exceedingly moderately, had been and ſtill was very aſſiduous in the management of her family affairs, and uſually ſtimulated with little air out of her own houſe, fell into a cholic, and, by the evacuant and ſtarving plan, had been kept in it for a full month, till the urgent ſymptom of vomiting required further aſſiſtance: When I came, I firſt retarded the vomiting by a glaſs of whiſky: And, by two more, with no other help but that of a mixture containing 30 drops of the Thebaic tincture, which the ſurgeon had been adminiſtering in miſerable ſmall portions, in three hours removed the whole diſeaſe. As I have ſaid ſomewhere before, the diſeaſe, from her neglect in fulfilling directions had very nigh returned next day; but another glaſs repelled it.

to be regarded, than that time be allowed for its paſſing out by the pores, together with the perſpiratory fluid, and, therefore, the perſpiration be properly ſupported; which, as it is effected by ſtimulating, is no addition to the general indication (r).

DCLXXXVIII. Laſtly, the corruption of the fluids in the extreme veſſels muſt be obviated (s), not by means, that by a direct operation remove it, but by the powers that act upon the excitement of the ſolids, and that encreaſe excitement over the whole body, and therefore, among other parts upon the labouring veſſels.

DCLXXIX. Having now run over the whole ſcale of decreaſing exciting power from peripneumony to the plague, and from death by indirect, to death by direct debility; and having ſo executed the work, as to preſent the public with a new ſcience, if not finiſhed off in an elaborate, elegant, and highly poliſhed manner, at leaſt marked in outlines, and, like a rough ſtatue, to be poliſhed afterwards, in ſome meaſure faſhioned in all its limbs, and embracing an entire plan of a work, connected in all its parts; we muſt next paſs over to the conſideration of local diſeaſes.

(r) See LXXXVIII. XCVIII.
(s) CCXXXVI. and CCLXXIV.

# THE FIFTH AND LAST PART.

## LOCAL DISEASES.

## CHAP. I.

### *Of Local Diſeaſes.*

DCXC. LOCAL diſeaſes (a) are divided, according to an order of nature, into five parts; the firſt of which conſiſts of organic affections, where no diſeaſe over the whole ſyſtem ariſes, none but in the hurt part. This is a ſort of affection, that happens in parts leſs ſenſible, according to common language, or more devoid of excitability.

DCXCI. The ſecond part, likewiſe made up of organic affections, occurs in parts of the ſyſtem, whether internal, or external, that are very ſenſible, endued with a great deal of excitability (b); where the effect of the local affection

(a) V. VI. VII.

(b) The excitability is here not talked of in its comparative ſtates of abundance or deficiency, but in the degree in which any part poſſeſſes it in preference to other parts. It is uſed in the ſenſe of the greater or leſſer vitality of parts: Accordingly we can ſay, that ſome parts poſſeſs an exquiſite ſenſibility, as the ſtomach, the brain, and inteſtines, and, I believe, moſt of the interior, ſoft, fleſhy parts, and the ſhut cavities; and externally, the parts immediately under the nails; that others poſſeſs leſs, as the bones, ligaments, and cartilages and ligaments; and externally, the cuticle, or ſcarf-ſkin. It is, with reſpect to the difference of

on is propagated over the whole body, over the whole nervous ſyſtem, and where a very great many ſymptoms ariſe, ſimilar to thoſe which are peculiar to univerſal diſeaſes.

DCXCII. The third part of local diſeaſes, takes place when a ſymptom of general diſeaſe, that at firſt aroſe from encreaſed or diminiſhed excitement (c), arrives at that height of degree, at which, being no longer, under the influence of excitement, it cannot be affected by remedies that correct the excitement.

DCXCIII. The fourth part, or diviſion of local diſeaſes, conſiſts of thoſe, in which a contagion, externally applied to the body, is diffuſed over all, without affecting the excitement (d).

DCXCIV. The fifth part of local diſeaſes, ariſes from poiſons that have been applied to the body, and flow through all the veſſels in ſuch a manner, that they are underſtood not immediately, nor at firſt, to have any tendency either to encreaſe or diminiſh the excitement, but falling upon parts, ſome on one, ſome on another, hurt the texture of theſe in different manners; and, after occaſioning that local hurt, by means of it produce diſturbance over the reſt of the body.

of ſenſibility, or excitability, or capability, to be acted upon by exciting powers, that we uſe the expreſſion of more or leſs excitability. See above par. XLIX. and the addition, and LIII. and addition,

(c) like all the other ſymptoms, of which it was one,

(d) If it affected the excitement its effect would be general diſeaſe, which ſometimes happens, as in the ſmall-pox, meaſles, contagious typhus, and the plague.

## CHAP II.

*The firſt Part of Organic Local Diſeaſes, where no Effect, but in the hurt Part, ariſes.*

DCXCV. WITH regard to the firſt part of local, organic diſeaſes; the hurting powers, that produce them, are ſuch as produce a ſolution of the continuity of a part, by wounding, eroding, or poiſoning; or that derange a part by contuſion, compreſſion, or ſpraining.

DCXCVI. The hurting powers, producing ſolution of continuity, are all cutting, pricking, or miſſive, weapons: Acrid bodies and poiſons produce ſolution of continuity in another manner.

DCXCVII. When any of theſe hurting powers ſlightly divide the ſurface, and ſcarcely, or not at all, get to the bottom of the ſkin; for the cure of ſo trifling an affection, there is occaſion for nothing but ſhutting out the air, and cold, and exceſſive heat, and avoiding every irritating ſubſtance. For the only uſe of the cuticle is, by means of its inſenſibility (a), (it being a ſimple (b) ſolid, and devoid of all excitability), to keep off the air, and all exceſs of temperature, and every rough or rude matter, which are all inimical to living ſolids (c), whether external or internal.

DCXCVIII. When the ſurface, therefore, is hurt in its texture, either by being cut, or bit, or ſtung by venemous animals

(a) See DCXCI. and the note. (b) not a living,

(c) So hurtful is the air and temperature to parts below the cuticle, that nothing is a more certain cauſe of gangrene than their expoſure, even for a very ſhort ſpace of time: Nor is there any other way of accounting for the fatal effect of ſlight, ſuperficial, but extenſive burning. Death has been the conſequence of a burn, that extended no farther than the fore-part of the thorax, or the breaſt, and was not of longer continuance, than the time taken to tear off the burning clothes that occaſioned it.

animals, or by being burned, or by a very high degree of cold; in that caſe a thin, mild, oily plaſter is ſufficient for the cure.

DCXCIX. The diviſion, therefore, of phlegmaſiæ, into phlegmone, or erythema, is without foundation, and miſleading, both as to the cauſe, and as to the cure, from the knowledge of the truth (d): For, however much they differ in their remote cauſe, as they call it, and in their ſeat, and in their appearance; ſince the excluſion of the air and of other ſtimuli is their effectual cure; it, conſequently, follows, that their cauſe is the ſame, that is, that the nature of all theſe affections is the ſame.

DCC. In the cure of contuſion, compreſſion, and ſprains (e), the ſame, in general are the remedies; and beſides them, there is occaſion for reſt of body, and bland tepid fomentation.

DCCI. Through this whole diviſion of local affections, there is a certain energy of nature, that tends to the reſtoration of the healthy ſtate; but it is not the celebrated vis medicatrix naturæ of phyſicians: For in this caſe nothing elſe happens, but what equally happens in the cure of general diſeaſes. If proper remedies are applied, the ſound ſtate in both ſorts of diſeaſes follows: If the remedies be neglected, the ſolution of continuity degenerates into a worſe and worſe nature, and then into gangrene, or the death of the part (f). It is the excitability, or that property

(d) See the ſeventh Genus in Genera Morborum Culleni, where you will find Linnæus's prototype of inflammation, that is, of inflammatory diſeaſes, or what is in this work called phlegmaſiæ, or ſthenic diſeaſes with inflammation or an approach to it alſo adopted by this author. It is nothing elſe but a collection of local affections, or, in a few caſes, ſymptoms of diſeaſe, and that they almoſt all come under this head of local diſeaſes, and every one of them under one of theſe heads.

(e) See par. DCXCV.

(f) Of this we are preſented with examples in every day's experience;

property of life, by which the functions are produced (g), that, wherever life, whether in a part, or over the whole body, is hurt, procures the return of the healthy ſtate by means of the external powers acting upon it. It is, then, the excitability, affected by the action of thoſe powers, that is to ſay, the excitement, that governs the ſtate of the ſolids, both in parts, and over the whole body (g).

## CHAP. III.

### *The ſecond Diviſion of Local Diſeaſes.*

DCCII. THE local organic diſeaſes of the ſecond diviſion are the inflammation of the ſtomach (a), and that in the inteſtines (b); as alſo bleeding diſcharge, with an inflammation ſubſequent to it; and in fine, an inflammation in any very ſenſible part in conſequence of a wound, producing commotion over the whole body.

*Of*

ence; where we find the ſlighteſt ſores, from the neglect of the ſimple rule of cure laid down here, degenerate into very troubleſome affections.

(g) See above par. X. to XIV. If I cure a peripneumony by bleeding, other evacuations, and other debilitating powers, that are not evacuant, it is by diminiſhing the force of exciting powers; if I cure a fever by opiates and other ſtimulant powers, whether ſtimulating by filling the veſſels, or without that, it is by encreaſing the ſame force; and if I cure a ſore on the ſurface, by the method juſt now mentioned, I thereby prevent the force of exciting power from riſing too high, from an exceſs of ſtimuli, or from running either into direct or indirect debility, from too little ſtimulus, or an ultimate exceſs. If either theſe general or local cures are neglected, or miſmanaged, the cure will not be ſupplied by any effort of the ſyſtem; and if the cure is made out by regulating the excitement, ſuch effort is ſuperfluous. The vis medicatrix then is as little real in local as general diſeaſes. See above par. LXII. and the addition.

(a) or gaſtritis. (b) or enteritis,

*Of the Inflammation in the Stomach.*

DCCIII. The principal ſymptoms in gaſtritis are, pain in the region of the ſtomach, a burning heat, deep ſeated, encreaſed by every thing that is either ate or drank, or in any ſhape taken into the ſtomach; hiccup, an inclination to vomiting, and the ſudden throwing up what is taken in; and the pulſe ſoon getting into a ſtate of debility, quickneſs, ſwiftneſs, and hardiſhneſs.

DCCIV. The exciting hurtful powers, and which produce the ſolution of continuity in this caſe, are ſuch as act by cutting, pricking or eroſion. Such are the ſmall bones of fiſhes, ground glaſs, or Cayenne pepper and ſuch like things.

DCCX. Inflammation is a conſequence of the wound or eroſion, that are the effect of the operation of thoſe exciting powers: The effect of which, in the very ſenſible organ of the ſtomach, is to diffuſe the diſturbance beforementioned (c) over the whole ſyſtem. The burning heat and pain, inſeparable from every inflammation, and the anxiety (d), are the offspring of the inflammation (e): And, of them, the anxiety is more peculiar to the ſtomach, the latter being its accuſtomary ſeat (f), and the pulſe becomes ſuch as has been related, becauſe it is peculiar to every rude, fixed, and permanent local ſtimulus (g); to weaken and to be ſo much the more liable to that effect, the greater the excitability of the part is. Hence, in the external parts of the body, that are leſs endued with excitability, a pretty conſiderable inflammation by no means affects the pulſe or the body any way generally; though even there, when a part is ſenſible, as in the caſe of a burn ſpread to any extent, or of a thorn having been thurſt below the nails, an equal

(c) DCXCVI. (d) CLXXI. CCCXLV. (e) CLXXI.
(f) CCCXLV. (g) XVII.

equal diſturbance ariſes over the whole body (h), which confirms a former propoſition, in which it is aſſerted, that the more abundant the excitability is (i), the leſs ſtimulus can be born.

DCCVI. The diſeaſe is eaſily known, both from the ſymptoms above deſcribed, and, with not a little more certainty, from the known taking in of the hurtful powers; and over and above, by this particular ſign, that, as it has been ſaid before, without ſuch marks, inflammation ſcarce ſeizes upon an internal and ſhut part (l).

DCCVII. As this is a local diſeaſe, and does not, like the general ones, depend upon the encreaſe or diminution of excitement; conſequently, the indication ſuited to the latter, to wit, to diminiſh encreaſed, or encreaſe diminiſhed, excitement, over all, will not apply. On the contrary unleſs a general diſeaſe happen to be combined with it, nothing elſe is to be done, but, by throwing in bland, demulcent liquors, to defend the tender part from the rude contact of the ſtomach's contents, and give the inflammation time to finiſh its courſe; and, if the phyſician is called ſoon enough, to waſh off the hurtful matter with a diluent drink.

*Of the Inflammation in the Inteſtines,*

DCCVIII. The inflammation in the inteſtines is a local affection; in which there is an acute pain in the belly, and

(h) CCCXLIV. CCCXLV. (i) XXXVI.

(l) CXIII. and CLXVIII. The ſtomach is ſometimes inflamed from a ſchirrous tumor occupying the pylorus; and that caſe alſo is taken in by the ſyſtematic and noſological writers, as belonging to their gaſtritis: But the conſideration of it does not belong to this head of local diſeaſes, but to the third diviſion of them. At the ſame time, both it and the preſent caſe are local diſeaſes, and not phlegmaſiæ, differing from the phlegmaſiæ, ſo fully treated of in the third part of this work. It, as well as enteritis, of which we are next to ſpeak, have every mark of difference from the general diſeaſes mentioned in the VIth paragraph. See alſo Chap. I. of the fifth Part.

and diſtention, and ſometimes a ſort of twiſting of the pain around the navel, with vomiting, and an obſtinate coſtiveneſs, and ſuch a pulſe as in the inflammation of the inteſtines.

DCCIX. The hurtful powers, exciting this diſeaſe, are preciſely the ſame, as thoſe that have been ſaid to excite the inflammation of the ſtomach, that is:

DCCX. The inflammation ariſes in a ſimilar manner, as in the inflammation of the ſtomach, and the more readily, that the inteſtines are more ſenſible than the ſtomach (m). And hence alſo, in a ſimilar manner, is a ſtate of diſturbance diffuſed over the whole body.

DCCXI. The acute pain of the belly depends upon the inflammation: Its diſtenſion and the coſtiveneſs is the offspring of the detained fæces. The ſame is the cauſe of vomiting; for the periſtaltic motion being prevented, upon account of the obſtruction, to proceed downward in its uſual way, from its reſtleſs nature recoils in the direction upward; as affecting neither direction, unleſs in ſo far as the ſtimulus, by the impulſe of which it is regulated, either commences from above, as health requires, or from below, as happens in other diſeaſes, and in this in particular (n). The pain twiſting about the navel, is produced by the inflammation, for this reaſon that the principal, and by far the greateſt part of the inteſtines, is thrown in a convoluted ſtate about the navel.

DCCXII. The diagnoſis is the ſame as in the gaſtritis; excepting, that the ſeeds of fruits, hairs, and ſimilar foreign bodies, ſometimes upon account of the torpor of the periſtaltic motion, adhering to the ſides of the inteſtinal canal, gradually, by their irritation, kindle up an inflammation

(m) Baron de Haller, from ſome experiments that he made, found the inteſtines more ſenſible than moſt parts of the body, more than the ſtomach, and equal in ſenſibility to the brain.

(n) See par. CLXXXVIII. CLXXXIX.

tion: Which is a fact, that if examined attentively, and once rightly considered will not disturb our diagnosis.

DCCXIII. The cure is precisely the same as in the inflammation of the stomach.

DCCXIV. All the rest of the pretended phlegmasiæ, distinguished by the appellation of "itides," as the splenitis (o), hepatitis (p), the true nephritis (q), the cystitis (r), without a stone, or the hysteritis, not arising from schirrus (s), and the peritonitis (t), do not belong to this place; as, besides the doubt of their ever being inflamed, not arising from stimulants and acids, neither of which have access to the shut viscera (for these substances are not carried in the vessels, or can be carried), but from the relics of other diseases, of which we are to speak afterwards, with the following exception:

DCCXV. The exception is, that if any one falls from a height, if he is run through any part of his bowels with a sword, if a poisoned arrow, thrown by any savage, has pierced any of his inward parts, he will in

DCCXVI. The case of the inflammation affecting the liver, be affected with a pain in his right hypochondrium, with vomiting and hiccup: If

DCCXVII. The inflammation affect his spleen, the pain will be in his left hypochondrium; in

DCCXVIII. The case of the true nephritis, or inflammation of one of the kidnies, he will be pained in the region of the kidney, and seized with vomiting, and a stupor of his leg; in

DCCXIX.

(o) or inflammation of the spleen
(p) or the inflammation of the liver
(q) or inflammation of the kidnies.
(r) or inflammation of the bladder of urine.
(s) or inflammation of the womb.
(t) or inflammation of the peritonæum.

DCCXIX. The caſe of the inflammation happening in his bladder, he will have a tumour and pain in the under belly.

DCCXX. Bleeding diſcharge, followed by inflammation (u), ſuch as happens in the inflammation of the womb, or of any neighbouring part, and in abortion, and in the wound of any internal part, is eaſily diſtinguiſhed by the pain of the affected part; and by the preceding accident.

DCCXXI. In the inflammation of the womb, or any neighbouring part, the lower belly is affected with heat, tenſion, tumor, pain, and theſe ſymptoms accompanied with vomiting (x).

DCCXXII. The hurtful powers, that excite the hyſteritis, or inflammation of the womb and parts in its neighbourhood, all amount to violence done to the womb. Thus uſing violence during the labour, hurrying the birth, often produce a ſolution of continuity, and wound the womb with a tearing rudeneſs.

DCCXXIII. And, ſince a great deal of blood is often loſt in that way, and the local affection followed by debility of the whole ſyſtem (y); for that reaſon bleeding, according to the common practice, any mode of evacuation, are not to be practiſed, nor is the patient to be forbid to eat; but, in the firſt place, regard is to be had to the affected part, the body muſt be laid in an horizontal poſture, ſhe muſt be kept from motion, and be allowed rich ſoups and wine: By and by more ſolid animal food ſhould be uſed morſel by morſel frequently repeated, and ſhe ſhould have

(u) DCCII.

(x) The inflammation is frequently not in the womb, but in a neighbouring portion of the inteſtines, or meſocolon, or in the peritoneum itſelf, as diſſection has frequently ſhown. This is a diſeaſe, than which none has been more enquired into, and none yet leſs underſtood.

(y) Pain and loſs of blood are in one degree or another inevitable cauſes of debility.

have her belly bathed: And, if the debility ſhould get a-head, recourſe muſt be had to more wine, drink ſtill ſtronger, and opiates: The uſe of which laſt ſhould not be neglected, even at firſt.

*Of Abortion.*

DCCXXIV. In abortion, the back, the loins, the belly, are pained, like what happens in child-labour; and there is either an unuſual flow of the menſes, or an extraordinary diſcharge from the vagina.

DCCXXV. The hurtful powers, that force abortion, are falling from a height, ſlipping a foot, a raſh ſtep, intenſe walking, running, going up and down hill. This diſeaſe ſeldom, however, happens but to perſons previouſly weak; and the moſt powerful agent in bringing it on, is ſome taint left ſince a former abortion, which encreaſes in proportion to the number of abortions. When the diſeaſe happens in conſequence of the local hurting powers juſt now mentioned, in that caſe it is perfectly local: But when debility is blended with the effect of thoſe powers it is a caſe of combination of general with local affection.

DCCXXVI. The indication for preventing the diſeaſe is, to guard againſt all the hurting powers that induce the diſeaſe; to ride out, when the patient has any degree of ſtrength; but, in caſe of any apprehenſion of danger from weakneſs, to go in a carriage, which will be more ſafe; to be upon guard from the third month of pregnancy till the ſeventh is paſſed; to invigorate the ſyſtem, and keep up the patient's ſpirits, and intellectual amuſements.

DCCXXVII. The indication of cure is, to keep the body in a horizontal poſition, with the buttocks higher than the head; to be ſtudious to keep the patient eaſy in body and mind; to repair the loſs of blood with ſoups, to ſecure the veſſels, for the purpoſe of contracting their enlarged

enlarged diameters, with wine and opiates, and, in that way, take off, at the ſame time, the atony and laxity, which are the principal cauſe of the diſcharge.

*Of Difficult Child-Labour.*

DCCXXVIII. In difficult child-labour, the moſt common cauſe of which by far is weakneſs, and which always produces weakneſs when it proves lingering; the lying-in woman ſhould be ſupported with wine, and when the labour proves more difficult, and is now like to be tedious, opium ſhould be adminiſtered.

DCCXXIX. When now ſome part of the uterus is hurt by the hurting powers that have been mentioned (a), and the child and placenta are now both delivered, the woman ſhould be kept in an horizontal poſture, as was recommended in abortion; ſhe ſhould be invigorated by ſoups, chicken, wine and the ſtill higher ſtimuli; every thing contrary ſhould be avoided; and the healing up of the wound waited for.

*Of deep-ſeated Wounds.*

DCCXXX. In deep ſeated, or gun-ſhot, wounds when the ball, if a ball occaſioned the wound, is now extracted, or though it ſtill remains in the body, in a place not neceſſary to life; firſt of all the whole ſyſtem is very much irritated, heated, pained, chafed, and diſtreſſed with reſtleſſneſs and toſſing, the pulſe is ſtrong, full and more frequent than in health. The cauſe of all thoſe ſymptoms is the commotion, which, as we have ſaid, the local ſtimulus, either of the ball or of the inflammation ſupervening upon the wound, by its conſtant irritation of a ſenſible part, gives to the whole ſyſtem.

DCCXXXI.

(a) See par. DCCXXV.

DCCXXXI. Becauſe, in this caſe aſthenic diatheſis is commonly ſuppoſed to ariſe over the whole body, upon account of the irritation from the wound; the antiſthenic plan of cure is, therefore, always employed through the whole courſe of the diſeaſe; and the uſe of opium, which, in this caſe is conjoined with the antiſthenic, or ſtimulant remedies, is admitted only for the purpoſe of acting as a ſedative and duller of pain, is admitted: Conſequently, upon account of the fear of a fever being to ſupervene, though often a great quantity of blood is loſt by the wound; ſtill large bleeding is practiſed, the belly is purged, nouriſhment is with-held, abſtinence enjoined: The moſt frequent conſequence of which treatment is death, and never a recovery that is not owing to accident.

DCCXXXII. But all this is a method of cure conducted upon an erroneous theory, which is proved by all the principles of this doctrine, and by the very unfortunate iſſue of that practice. In a perſon, who has loſt a great deal of blood, an over-proportion of blood, can never be the cauſe of ſthenic diatheſis: Neither can any tolerable reaſon be aſſigned for the profuſe evacuation of the ſerous fluid, or for not rather ſupplying new fluids by the uſe of food. It is in vain to accuſe frequency of the pulſe, as a ſign of an exceſs in the quantity of blood, and of too much vigour, or of any irritation that wants an antiſthenic plan of cure: For, beſides its hardneſs, if the pulſe is not, at the ſame time, ſtrong and full; it has been now often above demonſtrated, that all its celerity depends upon debility and penury of blood (c). Finally, as the aſthenic diatheſis depends upon the general ſthenic hurtful powers, as the energy of pain, from local affection, and particularly inflammation, has no tendency to induce that diatheſis, but the contrary one of debilitating (d); that is another reaſon for the ſuppoſition of the habit, either remaining

(c) See par. CLXXIX. to CLXXXI.

(a) DCCV

remaining ſuch as it was before the wound was received (e), or, which is more probable, of degenerating into the aſthenic diatheſis. Laſtly, the true explanation of the diſtinction betwixt irritation and ſthenic diatheſis is in confirmation of the ſame concluſion; the ſthenic diatheſis being that ſtate of the ſyſtem, which is produced by all the powers, the operation in common to which is ſtimulant, over the whole ſyſtem, and, by fullneſs in the veſſels producing the ſame effect, and to be removed by debilitating powers weakens alſo the whole ſyſtem, and by evacuant remedies acting by the ſame general operation; whereas, on the contrary, it is irritation or that ſtate, in which the whole body is often, without any ſtimulus, debilitated (f); and often a local ſtimulus, ſuch as diſtention exciting ſpaſm, or a concentrated acid, inducing convulſion, or the pain of a wound that producing the general commotion here (g), and effect enormous motions

(e) Which can hardly happen if blood has been loſt, which muſt diminiſh the excitement, and in proportion to its degree.

(f) When the body is debilitated. the ordinary ſtimuli, that in its healthy ſtate invigorate it, and even a much leſs degree of ſtimulus, will produce the irregular motions, which are ſuppoſed owing to irritation; not that any thing irritating is applied, but that the exceſſive abundance, or defect of excitability, admits not, without ſuch effects, the degree of ſtimulus, which, applied to it in its healthy half-waſted ſtate, would produce healthy vigorous motions. (See XXV. and XXVI.) The tremors that are occaſioned by the turning of a door upon its hinge, the ſweat occaſioned by ſlight exertions in walking, are ſo many inſtances of that, and the irregularities of the pulſe are owing to the ſame cauſe. As the weakneſs upon which fevers depend encreaſes, ſo alſo do the ſuppoſed ſymptoms of irritation, ſuch as colliquative ſweats, colliquative diarrhœa, ſubſultus tendinum, &c. But they are all the effect of the general weakened ſtate being ſlutterred by every ſlight ſtimuli. At other times irritating powers, in the ſame weakened ſtate, do occur; ſuch as thoſe mentioned in the text.

(g) But even in that caſe, the real ſtate is debility. and the indication of cure is to remove it, as well as the irritating powers: Which, while they encreaſe it, are at the ſame time its offspring, and require ſtimulants to enable the ſyſtem to reſiſt its effect. (DCLXXXVIII.)

ons in a weakened ſyſtem. But, whether the debility be without ſtimulus, or excited by it, there is never occaſion for debilitating evacuant remedies, but always for moderately ſtimulant ones: And we have only to take care, that the ſthenic diatheſis be not produced by the method employed for the cure, and thereby a general diſeaſe, at leaſt, a prediſpoſition to general diſeaſe be ſuperadded to the local, which could not fail to aggravate the latter.

DCCXXXIII. As, therefore, the antiſthenic plan of cure is not to be practiſed, from an apprehenſion of a fever being about to come on, with a view to allay the diſturbance ariſing from it; which has the contrary tendency, that of inducing the fever, and of exciting the diſturbance apprehended; ſo, neither is the ſtimulant plan to be attempted, till the wound is healed, or the diſeaſe has arrived at an advanced ſtage, and a great deal of debility is now induced by the continuance of the pain, leſt, if that method ſhould be ſooner employed, the blood ſhould be carried with more rapidity than the caſe would admit of, and with an encreaſed momentum, into the ſtill open terminations of the veſſels: For it is underſtood, that neither diatheſis takes place in this caſe, and that the only affection preſent is a commotion over the ſyſtem, depending upon local affection; and that, conſequently, there is no occaſion for the remedies of either; excepting this ſingle conſideration, that, as the loſs of blood, in proportion to its degree has a tendency to produce more or leſs of aſthenic diatheſis; there will, therefore, in that proportion, be occaſion for ſome ſthenic remedies.

DCCXXXIV. During the firſt days of the diſeaſe, becauſe the patient, all at once, does not any longer engage in geſtation, exerciſe, and the other functions both of body and mind, and of paſſion or emotion, according to cuſtom, and of courſe, leſs nouriſhment and recruit is now required; therefore, there ſhould be ſuch an abatement in his

allowance of the uſual ſtimuli, as to accommodate what is uſed to the preſent condition of the ſyſtem and the ſtate of the wound juſt now deſcribed (h). Therefore, to prevent too great an impetus in the veſſels, ſilence ſhould be kept around the patient, he ſhould not ſpeak himſelf, he ſhould lie quiet and without motion, his poſture ſhould not be changed, but to avoid the diſagreeable feeling of too long continuance of it, and even then it ſhould be done as warily as poſſible. He ſhould make his water lying, and in an urinal; he ſhould rather uſe ſoups, than ſolid meat; his wound ſhould be examined every day, for the ſake of keeping it clean; its progreſs ſhould be obſerved; it ſhould be dreſſed with freſh, ſoft, and bland matter; and if even at this early period, any faintiſhneſs appears, a glaſs of wine ſhould not be with-held.

DCCXXXV. After ſome days, which may be more, or fewer, according to the ſtrength of the patient, when now the habit is ruſhing into debility, upon account of the greatneſs or long continuance of the pain; in that caſe, beſides the ſoups formerly allowed, meat as rich and delicate as poſſible ſhould be given; wine ſhould be adminiſtered ſparingly at a time, but often, and upon the whole in large quantity; and then at laſt, recourſe ſhould be had to opium, which, in the common practice, is uſually given from the beginning of the diſeaſe, and to the other diffuſible ſtimuli; and the diſeaſe ſhould be treated preciſely in the ſame way as a typhus.

DCCXXXVI. When very tender external parts are violated by any rude matter, ſuch as happens in that caſe, where a thorn is puſhed below any of the nails, and an inflammation ſpreads from the affected part to a conſiderable extent, and then, upon account of the great ſenſibility of the part, the whole body is drawn into conſent; the injured



(h) See laſt paragraph.

part ſhould be fomented with warm water, and dreſſed with lint, and ſoft and bland ointment: And as long as the diſturbance of the ſyſtem remains, the patient ſhould be kept quiet, and free from motion, and nothing more attempted.

## CHAP. IV.

*Of a Part of a General Diſeaſe, degenerating into a Local.*

DCCXXXVII. To ſet about the treatment of that diviſion of local, organic, diſeaſes; in which a part, or ſymptom, of general diſeaſe degenerates into a local one; we next proceed to

*Suppuration.*

DCCXXXVIII. Suppuration, with which we begin, is for the moſt part a conſequence of any general inflammation, whether ſthenic, or aſthenic, or that inflammation, which is a ſymptom of general diſeaſes, or it is a conſequence of local inflammation, whether ſthenic, or aſthenic, as a ſymptom of local affection. In it the pulſe is ſofter, fuller, and a little ſlower, than in ſthenic diſeaſe when that precedes it; but a great deal ſlower, than in aſthenic diſeaſe, if it happen to ſupervene upon it, and it is accompanied with an undulatory, and as it were, a pulſatory, motion of the labouring part; theſe ſymptoms are commonly preceded by a ſhivering: If the affection is internal, the patient ſhould be kept quiet, and free from motion, and be ſtimulated; if it be external, the affected part ſhould, over and above, be fomented, dreſſed, and covered, and the pus, when ripe, let out.

*Of Puſtule.*

DCCXXXIX. A puſtle is a purulent veſicle, turgid, and at laſt of its own accord opening in conſequence of having become tender, and full of pus.

DCCXL.

DCCXL. It follows the ſmall-pox, ariſing from the contagion peculiar to that diſeaſe: In the ſmall-pox the number of the puſtules is greater or leſs in proportion, as more or leſs ſthenic diatheſis, occaſioned by improper treatment, or a neglect of the proper, has preceded (a).

CCCXLI. The indication of cure for them is, firſt to remove ſthenic diatheſis, and then, if that has paſſed into the aſthenic, to remove it, each by its reſpective remedies; and to beſprinkle the puſtules with a ſtrong ſpirit, or with laudanum, and in the former caſe to guard againſt cold, in the latter againſt heat, and to open the puſtules and foment them.

*Of Anthrax.*

DCCXLII. Anthrax is a glandular tumor under the ſkin, gangrenous in the top, and inflamed in its edges all round.

*Of Bubo.*

DCCXLIII. Bubo is a glandular tumour, eſpecially affecting the one or the other groin, and of a tendency to ſuppuration.

DCCXLIV. Theſe two affections the anthrax and bubo as well as carbuncle, are almoſt always combined with a general diſeaſe, to wit, ſometimes with typhus, much oftener with the plague. They depend upon a contagious matter, and in ſo far as they do not ſufficiently yield to the general remedies, they muſt be treated with a very ſtrong ſpirit poured upon them, and with laudanum, and opening them.



(a) XXI. LXXVI. XCVI. XCVII. XCVIII.

*Of Gangrene.*

DCCXLV. Gangrene is an imperfect inflammation of a part, not terminating in ſuppuration, diſcoloured, ſcarce painful, conſiſting of puſtules of a bad matter, and at laſt inducing the death of the part.

DCCXLVI. The hurtful power, that precedes gangrene, is always inflammation, often ultimately violent in a ſenſible part, oftener languid and occupying a part leſs ſenſible, leſs ſupported by the powers of life (b); it is ſometimes a ſymptom of the phlegmaſiæ, ſometimes of fevers, ſometimes of local phlegmone (c).

DCCXLVII. The method of cure, when the gangrene is ſeated in the alimentary canal, is to pour in ſpirit and laudanum; when the ſhut viſcera are affected, to place ſome hope in the ſame and other ſtimuli, but much leſs. And, as the ſame remedies alſo ſuit gangrene, when it is external, conſequently liquid opium ſhould be rubbed in upon the dying part, ſpirit ſhould be poured upon it, the parts already dead ſhould be cut out, the edge of the living part all round ſhould be ſtimulated, and an inflammation made in it.

*Of Sphacelus.*

DCCXLVIII. Sphacelus is a more perfect and more extended gangrene, with an extinction of ſenſe, motion, and heat; in which the part becomes ſoft, blackiſh, completely black, putrid, and at laſt thoroughly putrid to the very

(b) The inflammation, out of which gangrene ariſes, is always unſupported, and the gangrene always a ſtate of either direct or indirect debility: the high excitement in the phlegmaſiæ, and the low in fevers, cauſing that.

(c) CCCXLVII. DCL. to DCLXXIX.

very bones, thoroughly cadaverous, and ſhifts rapidly to the neighbouring parts, and quickly extinguiſhes life.

DCCXLIX. The remedies are in general the ſame as in gangrene, but they ſhould be ſtronger, and adminiſtered in greater quantity, and with greater nicety, and in leſs expectation of a cure. When any limb is greatly affected, it ſhould be immediately cut off, to prevent the ſound parts from being infected.

*Of Scrofulus Tumor and Ulcer.*

DCCL. When a ſcrofulous tumor and ulcer has been of long ſtanding, has disfigured the parotid gland and neighbouring parts, and all the remedies, that have any effect in removing ſcrofula, have been employed; after that no more is to be done, but to keep the ailing part clean, bathe it often, and defend it from the injury of the air; unleſs that, as local debility alſo takes place here, ſpirit and laudanum, applied to the part, may be of ſervice.

*Of Schirrous Tumor.*

DCCLI. When the tumor, which while it was moderate, was a part or ſymptom of the general diſeaſe, called ſchirrhus, has now attained a certain bulk; if it be external, or ſituated in the exterior or convex part of the liver, it ſhould be cut off, and the ſyſtem invigorated: If it be internal, nothing can be attempted, but to prevent its encreaſe by ſtimulant remedies, and in that way keep the patient as long alive as poſſible, and in as good health as the preſent circumſtances will admit of.

DCCLII. The two heads of diviſion that remain (c), are of ſo obſcure and abſtract a nature, that if ever they are

(c) DCXCIII. and DCXCXIV.

are to be attempted, they muſt be paſſed over at preſent. The third head f) is here only imperfectly ſketched and ſcarce begun: But becauſe it both admits of a complete execution, and when ſo executed, will make an important addition to the work; ſhall be prepared for the public peruſal, as ſoon as I ſhall be happy enough to find as much leiſure and ſcope for thinking as are requiſite to reſcue the ſubject from its preſent intricacy, diſorder and obſcurity.

(f) DCXCII. DCCXXXVII. to DCCLII.

FINIS.

# INDEX.


A.

ABORTION, page 380.
Abſtinence, not leſs immoral and irreligious than exceſs, 64.
Abſtract reaſoning, cautions againſt, 136.
Acid in the alimentary canal ſymptom, not cauſe of diſeaſe, 104.
Acrimony, in what ſenſe may be admitted, 361.
Agents, external, what, 2.
Agriculture, hints reſpecting, 204.
what ſhould be ſo termed, 1.
Air, atmoſpheric, if too pure would be perhaps injurious, 77.
impure, produces aſthenic diatheſis, ibid.
inimical to living ſolids. 372.
Air, ſtimulus of, neceſſary to convaleſcents, 198.
Aitiolgy, abſurdity of, 37.
Anaſarca, 330.
Angina, putrid, deſcribed, 124.
Anthrax, 387.
Antiſeptics, notion of, to be guarded againſt, 363.
Apoplexy, 342.
not owing to plethora, 117.
Appetite, cauſe of, 100.
Apyrexiæ, ſthenic, 248.
Aſthenia, meaning of, 30.
Aſthenic diatheſis, cauſe of, 78.
cure of, 170.
may be converted into ſthenic, 33.
ſymptoms of, 96.
prediſpoſition to, 95.
diſeaſes, 288.
cure of 363.
Aſthenic plan of cure, different parts of, compared, 4.
Aſthma, advantages of a full diet in, IV.
gentle, 329.
Author's inducements to tranſlate his own work, XI.

B.

Bark, Peruvian, not to be depended on in intermittents, 355.
Bathing, cold, remarks on, 14.
Bladder, inflammation of. See cyſtitis.
Bleeding, cautions againſt, 98, 279, 379.
remarks on, 259, 268.
ſhould always be followed by other evacuations, 269.
ſingular inſtance of benefit from, in typhus, 120.
when neceſſary, 176, 177, 183.
Bliſters, in what caſes uſeful, 274.
Blood, great extent of the ſtimulus of, 177.
irritates by its quantity, not quality, 66.
ſlight diſcharges of from indirect debility approaching, 142.
veſſels, uſually more numerous in moſt ſenſible organs, 227.
Breathing, difficulty of, to what owing, 223.
Bubo, 387.

C.

Calcutta, death in the black-hole at, occaſioned by typhus, 77.
Canal, alimentary, aſthenic diſeaſes of, 304.
Carditis, 220, 225.
Catarrh deſcribed, 244.
method of cure of, 275.

produced by heat, and removed by cold, VIII. 172.
Cauſes, inquiry into, to be avoided, 5.
Changes to be brought about gradually, 18.
Children, diſeaſes of, 38.
generally owing to debility, V. 241.
ſigns of aſthenic diatheſis in, 242.
ſthenic ditto, ib.
Chincough, 319.
Cholera, gentle, 311.
ſevere, 358.
Circulation, how carried on, 60.
Cold, effects of, 14, 58, 60, 170.
how diminution of bulk in animals produced by, 60.
remarks on, as a remedy, 184, 264.
ſucceeding to heat, bad ſymptom, 131.
Colic, obſervations on, 109.
with pain, 330.
cure of, 332.
Colicanodyne, 307.
Colliquative ſweets, &c. cauſe of, 57.
Coma, cauſes of, 158.
remarks on, 167.
Conſtitutions of individuals not fundamentally different, 165.
Contagions act by ſtimulus, 6.
produce a fermentation, 229, 231.
remarks on, 35, 77, 127, 182, 267, 368.
Contraction and its effects conſidered, 27.
Contuſions, cure of, 373.
Convaleſcent ſtate, remarks on, 199.
Convulſions, obſervations on, 105.
Corruption of the fluids, 57. 58, 360.
Cough, aſthenic, 151, 315.
in peripneumony, how occaſioned, 223.
ſthenic, 82, 148, 244.
Cramp. 329
Croup, remarks on, 240.
Cupping-glaſſes when may be ſerviceable. 275.
Cure, general indications of 43.
means of, cautions repecting, 45, 50, 267.
Cuticle, not a living ſubſtance 373.
Cynanche, gangrenoſa, 124, 358.
ſthenic, 238.
cure of, 275.
Cyſtirrhæa 320.
Cyſtitis, remarks on, 282, 378

D.

Darkneſs debilitates, 203.
Day, alternation of, with night, end of, ib.
Death, how brought about, III. 3, 11, 17.
effected by the powers which produce life, 207.
Debilitating powers, in what caſes to be uſed, 52.
Debility, direct. 15.
cure of, 53.
leſſening ſtimulus in caſes of, carefully to be avoided, 20.
who ſubjects of, 50,
indirect, III. 13.
cure of 51.
how progreſs to be retarded, 13.
who ſubject to, 50.
Debility, one kind of, never to be cured by the other, 50, 52.
Delirium produced by deficient ſtimulus, 98. 118.
ſuperabundant ſtimulus, 172.
Diabetes, gentle, 292.
Diagnoſis, general, 41.
Diarrhœa, 307.
Diet. See food.
Diſeaſes, aſthenic enumeration of, 288.
Diſeaſes, aſthenic, general remarks on, 30, 288.

method of curing 363.
cauſe of, III. 30, 78,
general and local, mark of diſtinction between, 1, 39.
how to diſtinguiſh, 42.
how produced, 40.
general principles and method of cure of, VIII. 9. 29, 43.
local, 370
cauſes of, 40.
in what way cured, 373.
ſthenic, enumeration of, 220.
method of cure of, 229.
remarks on, 30, 208, 254.
Drink, abſtinence from, recommended, 52.
cautions reſpecting, 51. 65. 364.
may be given freely in ſthenic diſeaſes, 84.
Dropſy, 335.
Dyſentery, gentle, 311.
ſevere, 357.
Dyſpepſanodyne, 307.
Dyſpepſia, effect of debility, V.
Dyſpepſodynia, 331.
cure of, 332.
E.
Earth, freſh, cap of uſeful in phrenitis, 275.
Enteritis, cure of, 378.
deſcription of, 376.
remarks, on, 281.
Epilepſy, caſe of, converted into dropſy by bleeding, 136.
deſcription of, 338.
owing to debility, 117,
Epiſtaxis, 303.
Eryſipelas, mild, deſcribed, 237
method of curing, 275.
violent, 234.
cure of, 254,
Eruptions, cauſe of, in diſeaſes, 127.
ſcabby, 291.
Exanthemata, ſthenic diſeaſes, 210.
explained, 227.
Excitability; 3.
boundaries of, 10.
effects of the exhauſtion of, 11.
general, not partial, 22, 144.
how increaſed or diminiſhed, 9.
ſeat of, 22.
ſuperabundant, to be taken off gradually, 18.
what or how affected, unknown, 4.
when waſted by one ſtimulus may be acted upon by another, 11, 197.
Excitement defined, 4.
effects of, 29.
higheſt degree of, how produced, 9.
loſs of, from over action, how to be repaired, 12.
Excitement, loſs of, may become irreparable, 18.
proportioned to degree of ſtimulus, 8.
Exciting powers act more on ſome parts than others, 23, 25, 370.
univerſally 23,
effects of, 4.
what implied by, 3.
Excretions, cauſe of temporary retention of, 213.
Exerciſe, obſervations on, 73, 179, 192, 198.
Expectoration, natural tendency to, great, 315.
of pus, not always owing to organic leſion 316.
F.
Fermentations, effects of, 229. 231.

remarks on, 360.
Fever, intermittent, 347.
jail, putrid, or petechial, 359.
nervous, 358.
requires more attention from phyſicians than uſually beſtowed, 361.
yellow, purging neceſſary in, 72.
Fiſh, not a nouriſhing food, IV.
Fluids how produced, 29.
Food, remarks on, III. IV. 61, 62.
as a remedy, 184, 186, 191, 282.
ſhould be ſtimulant to a certain degree, 246.
vegetable, debilitating, ibid.
Force, what, 27.
Foſſils, perhaps, not without life, 207.
Functions acting on the living animal, 2.
may be impaired by ſthenic diatheſis, 132.
increaſed by aſthenia, ibid.

G.

Gangrene deſcribed, 388.
to prevent, 148, 185,
Gaſtritis, 348.
cure of, 40, 376.
remarks on, 40, 219, 281.
Gentoos, imbecility of, owing to diet, 63.
Globe, great change of, 207.
Gout brought on by low living, II.
cured by ſtimuli, III. VI 125.
not hereditary, 321.
of ſtronger perſons, 120,
of weak perſons, 331.

H.

Habits, effects of, to be conſidered, 328.
Hæmorrhages always owing to debility, 68, 142.
blood deficient in caſes of, VII. 142.
ſtimuli ſalutary in, VI. 142.
Hæmorrhois, 303.
Health and diſeaſe not different ſtates, 30.
good and bad, defined, 1, 29.
Heart, inflammation of. See carditis.
Heat, a remedy of aſthenic diatheſis, 187.
acts more externally than internally, 253.
exceſſive, cautions againſt application of, 188.
unuſual, cauſe of, 214.
ſymptom of diſeaſe or prediſpoſition, 130.
Hepatitis, remarks on, 281, 378.
Hereditary diſeaſes do not exiſt, 321.
Hypochondriaſis, 333.
curious caſe of, 335.
Hyſteria, gentle, 313.
violent, 331.
cure of, 332.
Hyſteritis, remarks on, 282, 379.

I.

Identity of effect proceeds from identity of cauſe, 5.
Imbecility, mental and corporeal, induced by food inſufficiently ſtimulating, 63.
Inflammation, aſthenic, cauſes of, 119, 123.
cure of 123.
attacking the brain at the end of typhus doubted, IV.
in phrentis, not probable, 92.
Boerhaave's opinion

of the tranſlation of, from one viſcus to another, erroneous, 222.
changes its ſeat ſometimes, ib.
diſtinction of, into parenchymatoſe and membranous in phlegmaſiæ, exploded, 221.
eriſypelatorus, ſeat of, 88.
four kinds of, 121.
in general diſeaſes always external, 82, 89.
local, 91, 123.
not the cauſe, but effect of diſeaſe, VIII. 90. 215.
produced by debility in various diſeaſes, V.
rheumatic, ſeat of 88.
ſthenic, cauſes of, 122.
cure of, 123.
Influenza, a ſthenic diſeaſe, 149.
Intellectual functions, failure of, owing to debility, 119.
Intermiſſions, not peculiar to fever, 355.
Inteſtines, inflammation of. See Enteritis.
Irritation, not owing to extraneous matter, 161.

J.

Joints ſmaller, affected in gout, greater in rheumatiſm, and why, 237.

K.

Kidney, inflammation of. See Nephritis.

L.

Labour, difficult, 381.
Laſſitude, cauſe of, 213.
Leanneſs, 290.
Leaches, in what caſes may be applied, 275.
Life, defined, 2.
different periods of, different excitability in, requiring different degrees of ſtimuli, 9.
not a natural but a forced ſtate, 34.
powers ſupporting, differ not from thoſe which bring death, 207.
have not various qualities, 302.
Light, a ſtimulus, 203.
Liver, inflammation of. See Hepatitis.
Lock-jaw, 344.
Lungs, not always affected in confirmed conſumption, 155, 317.
Lungs, tubercles in, ſymptoms not cauſe of diſeaſe, 155.

M.

Mania, 249.
cure of, 283.
ſometimes ariſes from fault of the ſubſtance of the brain, 249.
Mathematicians, pedantry of, 200.
Matter morbific, remarks on, 46.
Meaſles, antiphlogiſtic plan uſeful in, VIII. 148.
mild, deſcribed, 248.
no danger of ſtriking in by cold, 264.
violent, 231.
cure of, 259.
Medicine, ſcience of, what, 1.
Menorrhæa, 302.
Menſtruation, cauſe of 294.
impaired, 293.
retarded, ib.
ſuppreſſed, ib.
Mind, exerciſe of, to a certain degree, neceſſary to health, 75.
Moiſture increaſes hurtful effect of temperature, 61.
Mortality, cauſes of, 32.
Motion, inability to perform, may not proceed from debility, 32. 138.
Motions, involuntary, 80.
voluntary, 79.

N.

Nature, healing powers of, non-exiſtent, 46, 374.

Nephritis, remarks on, 281. 378.
Night, alternation of with day, how useful, 203.
Nitre, not so refrigerant as commonly supposed, 275.
Nosologists, common, errors of, 229.
Nourishment, solids not always necessary to, 176.
See food.

O.

Oaks perhaps might be planted in parts of Scotland with advantage, 204.
Obesity, 253.
cure of, 284.
Opium, an excellent stimulus, VI. 62.
cold to be avoided during the operation of, 59.
in what doses to be given in different cases, 365.
large dose of given in epilepsy, 340.
prevents mortification, 147.
sedative quality attributed to, false notion, 141. 148 167.
under what circumstances sleep produced by, 17. 76.

P.

Pain, causes of, 108. 104.
occasioned by emptiness as well as fullness, 98.
Palsy, 340.
Part most affected, in general disease, not acted on before the rest, 26. 214.
Passions, cautions on exciting, 19. 75. 181. 192.
or emotions, strongly influence our activity, 72.
sometimes necessary to be excited, 180. 182. 198.
termed opposite, differ not in nature but degree, 8, 75.
violent, produce disease and death, 75.
Peripneumony, 220.
cure of, 40, 259.
difference in symptoms of, not owing to seat of the disease but degree, 94.
not a merely local disease, 24.
spurious, cure of, 110.
Peritonitus, remarks on, 378.
Perspiration, diminished, cause of, 28, 565.
more difficultly brought on in sthenia than the other excretions, 213.
produced by cold, 173.
by extreme heat 57.
to be kept up in diseases, and by what means 48.
Phlegmasiæ, local, cure of, 373.
symtoms of, 227.
Phrenitis, 226.
cure of, 256.
inflammation of brain, in, not probable, 92.
Physician does not bestow sufficient attention to patients in fever, 361.
province of, 2.
Plague, 359
Plethora, error of the schools respecting, 67.
Pleurisy, the same with peripneumony, 220.
Poison produce local disease, 37, 77.
remarks on, 5, 77.
Poor, diseases of, owing to want of stimulating food. 63.
Predisposition, a criterion betwixt local and general disease, 39.
differs from disease only in degree, 37.
knowledge of, important, 38.
necessarily precedes general disease, 35.

Predisposition to disease defined 2, 35.
Prognosis, general, 42.
Pulse, celerity of, owing to debility, 97, 382.
Observations on, 211.
Purging remedies considered, 184, 262, 269.
Pustules produced by contagion, 94.
remarks on, 386.
Pyrexia, 31. 210.
scarlet, 246.
cure of, 275.
symptomatic, 220, 280.
R.
Remedies, a single one never to be trusted to in violent diseases, 46.
general and local, what, ibid.
remarks on the variation of, 242.
several in a moderate degree to be preferred to few in excess, 173, 175, 184.
uniform in their action, 200.
Rest necessary in sthenic diathesis, 184.
Rheumatalgia, 363.
Rheumatic-inflammation cannot be transferred to stomach, 92.
seat of, 88.
Rheumatism described, 235.
method of curing, 276.
Rickets, 292.
S.
Scarlet fever. See Pyrexia, scarlet.
Schirrous tumor, 389.
Scrofulous tumor and ulcer, 389.
Scurvy, 311.
not cured by vegetables, 313.
Sedative powers are but lesser degrees of stimuli, 8.
do not, as such, exist in nature, 139.
Sensation, not different in different parts of its seat, 22.
Senses, exercise of, remarks on the, 75.
Shivering and sense of cold, cause of, 213.
Skin, dryness of, how occasioned, 213.
Sleep considered, 155, 240.
morbid, how produced, 158.
of convalescents to be attended to, 312.
owing to a stimulant, not sedative power, 163.
remarks on, producing, 166.
Small-pox, 358.
confluent, a disease of debility, 126.
distinct, sthenic disease, 35, 127.
mild, 247.
cure of, 275, 280.
rare case of, 312. 241.
remarks on the debilitating plan in, 129.
violent, 230.
cure of, 259.
Solids, formation and preservation of, 29.
Spasmodic diseases, cautions against evacuants in, VI. 290.
owing to debility. VI. 210. 289.
Specifics, idea of, an error, 165.
Sphacelus, 388.
Splenitis, remarks on, 373.
Sprains, cure of, 377.
Stenia, meaning of, 215.
Stenic diathesis, cause of, 78.
cure of, 170.
may be converted into asthenic, 32.
symptomatic, 230.
symptoms of, 80. 209.
of predisposition to, 79.
plan of cure, different parts of compared. 183.

Stimuli, cautions on the application of, 18, 51, 186.
deficiencies of some may be supplied by others, 17.
diffusible, cautions on the use of, 62, 179.
properties of, 62.
scale of, 62, 190.
durable, 197, 201.
effects of may be lessened by mixture, 7.
general, affect most the part to which applied, 23.
hurtful effect of, how to cure, 52.
indirect, 62.
local and universal defined, 4.
proper in a state of health, 61.
sum of the action of, composed of power multiplied by continuance, 11.
what degree of, necessary in various cases, 161. 365.
Stomach, most affected by internal remedies, 23. 85.
inflammation of. See gastritis.
Studies, the author's, progress of, I.
Suppuration, 386.
Sweating, utility of, as a remedy, 178. 268. 278.
Symptoms, apparently very different, arise from the same disease, and vice versa, 150.
deceitful, 34.
Synocha, simple, 245.
cure of, 295.
Synochus, 358.
System, no power inherent in, productive of disease, 77.
Systems, old, exploded, and a new one established, 78.

T.

Tabes, 308.
Temperaments of every individual the same, 160.
Temperature, due return of, best sign of returning health, 130.
Tetanus, description of, 133, 344.
Thinking has great influence on our activity, 74.
straining in, may prove hurtful, 74.
Thirst, asthenic 304.
causes of, 81, 99, 214.
not always to be allayed by the same means, 53.
Typhus, occasioned by impure air, remarkable instance of, 77.
pestilential, 334.
simple, 358.

U.

Urine, redness of, how produced, 213.

V.

Vegetables subject to the same laws as animals, 2, 202, 204.
Vessels, contracted in state of strength, enlarged in state of weakness, 29.
Vigour, abatement of, not always owing to debility, 138.
Vomiting, cause of, 84, 101.
considered as a remedy, 184. 262. 269.

W.

Watching causes of, 158,
morbid, 159, 250.
cure of, 283.
owing to over-fatigue, instance of, 160.
restless, or asthenic, 291.
Womb inflammation of. See Hysteritis.
Worms, 308.
Wounds, deep-seated, or gunshot, 381.
irritating susceptible parts, 385.
necessity of keeping air from, 372.

Med. Hist.
WZ
270
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