and in no instance does it appear of itself to be the seat of acute pain, or any sort of animal sensibility. The constitutional effects are evidently very trifling, if we make allowance for the gradual and general occupation of important organs, which the deposite accomplishes before the fatal event. According to the observations of Dr Cullen and Mr Carsewell, the constitutional irritation is almost imperceptible, even when important organs, as the heart and lungs, are affected. And though Mr Fawdington states that the symptoms of his case were as distinctly hectic as in pulmonary consumption, even this effect may be expected to follow the occupation of so many organs, with a new substance, without ascribing to it direct irritating properties.

It is time, however, to draw these observations to a conclusion. We must not close the short pages of Mr Fawdington without saying a few words on the beauty of the delineations of the diseased organs, with which they are accompanied. Mr Fawdington has succeeded in obtaining eight coloured delineations of the following objects;—the eye of his patient before and after extirpation; the melanose tubercles of the subcutaneous cellular tissue as seen through the skin; the tumours on the liver, and of its interior displayed by sections; the interior of the kidney in the same manner; a portion of the ileum; and the melanotic bodies in the heart and in the lungs. These delineations are done from stone; and we may be allowed to say, without exaggeration, that they are not only the best we have seen in this country, but equal, if not superior, to any thing that has yet reached us from the continent. Not only are they particularly happy for accuracy and delicacy of outline; but for shading, colouring, and general neatness, we have seen nothing to equal them in the lithographic way. The sixth engraving, representing several turns of ileum, affected with melanotic deposites, is a most finished specimen of art in this respect. In short, these plates make a nearer approach to coloured engravings on copper than any we have yet been fortunate enough to see. To productions of such merit, it is due to say, that they were executed by Mr James, an ingenious artist of Manchester, and coloured under the superintendence of Mr Fawdington. The author may congratulate himself on obtaining delineations done with so much taste and beauty.

ART. XI.—*A Treatise on Diet: with a view to establish, on practical grounds, a system of Rules for the Prevention and Cure of the Diseases incident to a disordered state of the Digestive Functions.* By J. A. PARIS, M. D. F. R. S. Fel-

low of the Royal College of Physicians, &c. London, Underwoods, 1826, pp. 307, 8vo.

THE physician—the valetudinarian—and the man of sedentary occupations—cannot fail to receive a great deal of pleasure and instruction from the perusal of this little work. It would not be difficult, indeed, to find objections to its details. One would have expected, for example, in his physiological views of the theory of digestion, a fairer and more complete account of the labours of foreign as well as British authors; and it is difficult therefore to perceive, why he has passed without notice the labours of Chevreul on the bile—of Prévost and Dumas on the function of the kidneys—of Breschet, Vavas seur and Edwards on the nature of the nervous energy that superintends the functions of the stomach—of Chossat on the relation between digestion and secretion of urine—of Edwards on cutaneous transpiration and absorption—not to mention the more recent and elaborate researches of Gmelin and Tiedemann—and of Leuret and Lassaigne on the alimentary functions. In the lesser details, too, physiological, as well as practical, he has often laid down the fact with a decision which the state of our knowledge does by no means justify; while in several other particulars it would not be difficult to prove that his statements and opinions are actually erroneous. And farther, to mention only one other fault, it would be an easy matter for the austere critic to convict him of frequent carelessness of style.

But it must be confessed, that these defects, with the exception of the last, are such as no reasonable man could expect to be wholly wanting in a work which was intended to be succinct in its narrative, popular in its form, and authoritative in its precepts. On the other hand, while it displays a sufficient degree of scientific research to rivet the attention of the scientific physician, it bears throughout that stamp of plain common sense, and that freedom from mysticism, which are necessary to make it acceptable and intelligible to the routine practitioner, and, above all, to his patient. In particular, it appears admirably well calculated to correct the rigour and ultraism on the subject of diet, which are assumed by the generality of practitioners at present as a cloak to their ignorance, and still more to remove the unnecessary fears which dyspeptic patients entertain of the discipline which they are led to think they must submit to, when their complaints are treated, as they can alone be skilfully treated, by the dietetic method of cure.

As Dr Paris's book, then, is one which should never be out of the practitioner's sight, and as it is already condensed even

perhaps too much, it would be absurd to attempt transferring the substance of it to these pages. All that can be looked for is a short enumeration of its contents, with some illustrations from the more original parts of it, and a few comments on the statements, as to which, it is conceived, he has allowed himself to fall into error.

The object of the work is to point out the relative digestibility and nutritibility of various aliments in relation to those who are either actually dyspeptic, or by idiosyncrasy or profession are predisposed to become so.

After a short introduction on the contradictory opinions held by practitioners on the subject of diet—on the discredit and uncertainty which have in consequence been thrown over the dietetic mode of treating diseases of the stomach—and on the absurdity of the ascetic precepts inculcated by many physicians and writers on diet, Dr Paris proceeds to give a preliminary view of the anatomical structure of the digestive organs, and of the physiology of digestion.

In the first department of this topic, which is discussed with great clearness and precision, he describes shortly the alimentary canal itself—the glands subservient to the secretion of the digestive fluids—the vessels for conveying the digested food into the circulation—and the organs which are subservient to the subsequent sanguification of the nutriment, by removing useless, noxious, or over-abundant materials,—namely, the lungs, kidneys, and skin. The relation which the last organs bear to those of digestion is very neatly unfolded both in the anatomical, and subsequently in the physiological part of the inquiry.

In the second or physiological department, he treats first of nutrition generally, then of the operations preliminary to the passage of the food into the stomach, next of chymification, next of chylicification, and, lastly, of sanguification and its collateral functions. This part of the work is of course by nature the most open to error, and consequently is in fact the most liable to objection. Our knowledge with regard to the phenomena and nature of the foregoing processes, after all that has been done of late years, is still incomplete. And therefore it certainly appears that Dr Paris often lays down the law rather too positively, nay on some occasions adopts opinions not only wrong, but (which is also of some consequence in a popular work) contrary to the general sentiments of physiologists. For example, we are sure, that neither the general opinion of men of science, nor actual facts will bear him out in the opinion he has expressed regarding the properties of the gastric juice, the nature of the nervous energy, or the question as to the absorbing power of the skin. Whatever Montégre's countrymen, led away by nationality,

may think of the experiments he made to disprove the solvent power of the gastric juice, it is impossible to permit Dr Paris to follow them in the adoption of a negative fact in face of the positive results obtained by Spallanzani, Gosse, Steevens, Gmelin and Tiedemann, and other lesser experimentalists. It is impossible to admit so important a doctrine as that of Wilson Philip regarding the identity of electricity and nervous energy, in face of the simple explanation which the experiments he founds on have received from the later conjunct researches of Breschet, Vavasseur and Edwards. It is incorrect to deny the possibility of cutaneous absorption, in obedience to the opinion of Seguin, when it has been rendered so highly probable by the admirable inquiries of Dr Edwards, and the later observations of Dr Dill.

While stating these objections, however, it is right to mention also those details which do him credit by their originality or the neatness with which he has unfolded them. Thus, tracing the experimental researches of Brodie, Prout, and Magendie, he gives a very distinct exposition of the chief purposes of the bile, proving that it is not only a stimulus to the intestines, but an essential ingredient for the formation of chyle. He corrects satisfactorily the erroneous notions of some, that chyle is similar to milk, and does not vary with the food. He shows very clearly that while the food is digested slowly and is taken up as nutriment only in the intestines, mere drink, if not capable of yielding aliment, as also foreign substances of the same description, are absorbed at once from the stomach,—that under peculiar circumstances, however, some fluids, which are usually absorbed in the stomach, undergo complete or partial digestion,—and that this is the cause of the different effects of wine and spirits in different circumstances. And he expounds very elegantly the present doctrines on the relation of the functions of the lungs, kidneys, and skin to the process of sanguification,—stating, that, while the lungs remove the superfluity of carbon, the kidneys remove the superfluity of azote, foreign substances either useless or noxious, and likewise the excess of an over-abundant sanguification. In his account however of the effect of differences of food on the operations carried on in the lungs, he is not altogether successful: there are several obvious contradictions in the details. But the subject is one of great difficulty, and hitherto very little known. Our author puts too much reliance on what has already been done in this field; the result of which is, in our opinion, positively nothing. It may be questioned too whether his notions are correct as to the relation subsisting between the objects of the political economist, and of the writer on diet: It is hardly possible to concur

with him in his declaration that the object of the latter is to preserve the feeble only ; for the same rules which tend to preserve the feeble, will obviously confirm the health, strength, and longevity of the strong.

Next follows an appendix on the connexion between the digestive functions and our sensations. Here he gives an account of the theory of hunger, inferring from the whole discussion, that it arises from the want of nutritious fluids in the body, not of food in the stomach. He then infers from the various facts regarding the sensations we experience during digestion, that of its three stages, chymification, chylification, and sanguification, no two can be carried on at the same time without disturbing one another, and consequently that one of the first dietetic rules should be, *never to disturb nature in her operations by commencing a new meal, till the previous meal has gone through the last stage, that of sanguification.* This we are satisfied is a most excellent rule both for the sick and the healthy, but at the same time one which both the sick and the healthy are in the daily practice of violating. He is certainly incorrect in a statement with which he concludes this appendix, namely, that the cessation of appetite is owing to the quality and not to the quantity of food. Indeed it is not easy to understand what he intends by this assertion ; which is contradicted by various facts dispersed throughout his own book.

This concludes the first part of the work, and introduces the practical department of it, which is discussed in two divisions. In the one he treats of the digestibility and nutritibility of the different kinds of aliments ; in the other he treats of indigestion, its causes, symptoms, and mode of cure.

In the first division the arrangement is faulty. He first discusses the subject of the digestion of solid aliment, of the influence of condiments, and of the digestion of drinks ; and having done this, returns to solid aliments and discusses *seriatim* their digestibility and nutritibility.

He commences with an account of the relative effects of vegetable and animal food, by stating the result of confinement to a diet purely animal and purely vegetable. It certainly does not appear, on an examination of all the facts, that our present knowledge is very satisfactory on these heads. We are not sure that Dr Paris is correct in attributing scurvy to a pure animal diet ; more influence must be allowed to collateral circumstances than he has done. He very properly objects to Magendie's experiments, on the impossibility of nourishing carnivorous animals on pure unazotized vegetable food, that the physiologist gave the food in too concentrated a state, thereby

overlooking the important influence of *bulk* upon digestion: concentration of the food he shows to be injurious, by taking away that degree of distension which is requisite for the stomach carrying on its mechanical operations,—a very important suggestion in its practical bearings. For our own parts, we have been from the beginning satisfied, on other grounds, (which it would be out of place to discuss here), that Magendie's experiments are quite inconclusive.

Dr Paris next, after a brief notice of the classification of aliments, proceeds to notice the relation subsisting between the digestibility and nutritiveness of the several kinds, shows that many substances are liable to be unnutritive, because they are indigestible, and thereby illustrates the double importance of attending to their digestibility and the extraneous means of improving it. He then enumerates the circumstances that affect their digestibility, such as the age of the animal or plant—the sex of the animal—the mode of killing—the mode of cooking; on all of which topics he gives judicious practical instructions. From that subject he passes to the consideration of Condiments,—recommending slight bitters and salt, as pointed out by the suggestions of nature,—showing the bad effects of unsalted food, and the occasional cure of dyspepsia by simply increasing the quantity of salt,—advising the use of vinegar, as salutary in the case of rich soups and raw vegetables,—counselling the use of oil in small quantities with sallads, as tending to prevent their fermentation in the stomach,—and condemning unequivocally all aromatic condiments, at least in cold climates.

On the subject of drinks, he observes that we must not reason from peculiar idiosyncrasy, and infer that restricting the drink even generally aids digestion or promotes bodily strength; mentions the advantage of warm drinks to some dyspeptics, the reason of this, and the harmlessness of it in regard to the teeth; shows how a medium quantity of drink is best for digestion, because either too much or too little impedes the mechanical motions, or *churning* of the food; and recommends the use of drink neither before nor after, but during each repast,—remark- ing, at the same time, that it is important to drink three or four hours after the chief repast, for the purpose of accelerating sanguification, by aiding the kidneys and skin in carrying off the excrementitial and superfluous matter. As to those who maintain, that man is a water-drinker by nature, and can never depart from the rule pointed out to him, without injury to his health, Dr Paris very properly observes, that he is a lucky man who can retain his health under this rule of nature, that the great bulk of mankind have already modified the constitu-

tion of their stomachs beyond the power of return to the rule, and that nature clearly admits of a certain degree of such modification without harm. He subsequently proceeds to describe the different kinds of water, the mode of purifying them, and the best way of adding to them as nutritive drinks, by converting them into gruels, tea, chocolate, and coffee. On the important subject of tea he has made some very correct remarks. In the first place, he is a decided Johnsonian: but he states, that very many people injure their digestion by taking tea too soon after dinner; that nature calls for it or some of its substitutes during the stage of sanguification; that therefore it should not be taken till three or four hours after dinner. We are convinced he is right. As to those few who condemn tea altogether, and refer to their personal experience, the Doctor's observation is conformable with our own, that nobody avoids tea upon principle, who does not drink something a great deal worse. He approves of coffee, but condemns chocolate as too oleaginous, and soda water as hurtful by causing distension, if not in the stomach, at least in the intestines.—Under the head of wine, he takes occasion to correct the nonsense of those who, reasoning evidently from its abuse, condemn its use altogether; and states that even many dyspeptics are the better for it. He then enumerates the various circumstances in which the different kinds of wine are to be preferred; approves of table beer; condemns without exception all pure spirits and liqueurs; and in permitting the occasional use of diluted brandy, recommends that it be diluted twelve hours before it is drunk, as he thinks it is then converted into a compound, which, instead of being absorbed from the stomach like pure spirit, undergoes digestion like wine.

Having thus taken a general view of the different kinds of food and drink, he returns to the subject of solid aliment, and treats of the digestibility and nutritiveness of certain kinds of it,—of the periods for meals, and of collateral circumstances, such as exercise, rest and sleep before and after meals.

He commences with observing that nutritiveness and digestibility are not synonymous terms, and that while nutritiveness depends on composition, digestibility merely depends on the food being in such a state as to be best subjected to the mechanical part of the process of digestion, that is, agitation or churning. As this statement is made in several other passages of the work, and appears incorrect, we cannot pass it without one or two comments. In stating that all kinds of food, which are properly adapted for undergoing the process of churning, are equally digestible, our author falls into the error of conceiving all substances equally digestible, because they are equally well digested

by *different* people. It may be true that oils and fatty matter are difficult of digestion, in part because they are not easily acted on by the process of churning, and that they become much easier of digestion by habit. But it may be questioned whether habit ever renders them so rapidly digestible as fleshy aliments, or whether the mechanical obstacle is the only reason of their general indigestibility. It is a very remarkable fact, at least, that all the animal and vegetable principles which form the leading ingredients in the articles of food most easily digested by mankind in general, approach very near each other in the proportion of their elements, and that the farther they are removed from this proportion, the more indigestible do they become.

We must hasten through the remainder of this section, in order to leave some space for the author's subsequent remarks on dyspepsia. Alluding to milk as an article of diet for invalids, he recommends, in order to make it more nutritive, to boil it in a linen-bag filled with mutton-suet. He very properly commends fish for convalescents, as neither yielding too much nutriment, nor requiring too much effort for its elaboration. But he condemns oysters in all their forms, unless for good, sound, powerful stomachs: It is a great mistake, he thinks, (and we perfectly agree with him,) to suppose, as many do, that they are easily digestible, whether raw or cooked. His remarks on the farinaceous grains are all very judicious. He is equally judicious in his condemnation of nuts; but perhaps abuses chesnuts too vehemently. We have certainly found them more easily digested by most people than he avers they are.—The succeeding observations on the periods and frequency of meals are of great practical importance. Every observing physician must agree with him in disapproving of the custom, which many dyspeptics in the first stage of the disease adopt upon principle, of eating little and often. It will be found that an interval of five or six hours agrees best with most stomachs; but Dr Paris mentions, that by idiosyncrasy some people do better with a much longer interval; and that he has even succeeded in curing incipient dyspepsia at once, by enjoining the patient to prolong the period between breakfast and dinner. He insists, that if health be a man's chief object, as subservient to the activity of all his pursuits, and the perfection of all his enjoyments, dinner ought not to be later than three o'clock. Tea should be taken four hours afterwards. Supper he disapproves of in general, but allows that some are the better for it. He might have added an excellent rule from the practice of trainers, namely, never to go to bed till an hour and a half or two hours after supper. There may be exceptions; but the rule is in general an excellent one, we are persuaded.—As to the quantity to be taken at each meal, he with

great propriety sneers at Cornaro and his modern admirers for their total disregard of constitutional peculiarities, insists that stinting one's self of food is quite as injurious as over-eating, and proposes, instead of any rule founded on Cornaro's system, *that the proper quantity of food be judged of by the first feeling of satiety, the meal being limited to one or two articles, and being eaten deliberately.* He allows, however, that occasional abstemiousness is very advantageous, and considers its utility to spring from the same principles which have directed the ancient athletes and modern bruisers not to attempt to maintain too long the athletic constitution. In our opinion, facts are not wanting to bring into doubt the generally received notions regarding the impropriety and impossibility of maintaining the athletic constitution. At any rate, the utility of occasional abstemiousness must be referred to different principles, and perhaps simply to the fact, that even when a person is under regimen, he eats more than enough, and a little abstemiousness therefore relieves the system of the superfluous load.—On the subject of collateral regimen, he disapproves of the instructions given by some to take exercise to fatigue, and then to rest an hour before meals; but recommends a little gentle exercise, particularly before breakfast. The proper time for full exercise is during *Sanguification*, namely, four hours after eating. Riding is preferable to walking for invalids. The reason he assigns for this is too hypothetical. The simple reason perhaps is, that, when the individual finds he has got enough, he can easily bring it to a close without fatiguing himself, which is not so easy in the case of walking. Digging he considers an admirable exercise for dyspeptics.

The third part of the work treats of indigestion,—its causes, forms, symptoms, and method of cure. He begins with excluding symptomatic indigestion; which, in opposition to the prevailing fashion with London physicians, he alleges is much oftener produced than is generally imagined, by some other cause besides disorder in the digestive organs themselves. He then considers the form of indigestion, which arises from faulty chymification. Under this head, he has given a very neat exposition of the incipient stage of true stomachic dyspepsia; and cautions the man of sedentary pursuits to look well to himself, when he finds that he is liable to transient attacks of dyspepsia, in consequence of the operation of passions of the mind, slight over-distension, or disturbance of the functions of the skin or kidneys. He next considers duodenal indigestion, referring to the opinions of Dr Yeatts in the sixth volume of the Transactions of the College of Physicians, and attaching great importance to that gentleman's views of the part which the duo-

denum plays in disorders of the digestive canal. He then notices the different kind of dyspeptic headaches, and distinguishes them from the other varieties.—Next follows a very elegant summary of the symptoms of dyspepsia in its progressive stages, in which he distinguishes the symptoms indicating mere loss of tone, or weakness of the gastric juice, from those indicating low inflammation in the stomach or duodenum, and from those indicating organic mischief. To this is annexed a very full and useful table for facilitating the investigation of the causes, nature, and seat of indigestion in special cases, followed by a concise but comprehensive commentary on each of the articles contained in the table. It is impossible to abridge this part of the author's narrative; neither can it be exemplified by an extract, as its great merit consists in the combined view given of all the particulars from which indications may be derived. It forms an excellent manual for the investigation of dyspeptic disorders. The author's own views, conjoined with the late researches of Dr W. Philip, are well calculated to do away with the conjectural and hap-hazard method of diagnosis and cure, into which too many routine practitioners are apt to stumble.

Of the section on the cure of indigestion, as relates to diet, exercise and medicinal treatment, little need be said; as the reader would not comprehend it thoroughly, without an accurate knowledge of the preceding section on the differences produced in the disease by differences in its seat. Dr Paris commences with some just criticisms on the precepts inculcated by Mr Abernethy regarding the general regimen of dyspeptics; then treats of the remedies for flatulence; recommends the *vinum colchici* in the varieties of dyspepsia depending on duodenal irritation; lays down the proper rules for the administration of laxatives, particularly when the disease is accompanied with spasmodic affections of the intestinal canal; treats of the advantages and mode of operation of white mustard-seed; considers what rational ground there is for the antiphlogistic treatment of the Broussaists; discusses the merits of bitters, blisters, heat, local as well as general, cold bathing, the shower-bath, warm bathing, change of air, and change of scene and habits; next he winds up the whole with a recapitulation, and short general rules; and he annexes in an appendix a few interesting and apposite cases of a very complicated nature.

Here, then, we must bring this outline to a close, hoping that our readers will have seen, in the preceding summary, sufficient reasons for the high character we have given of his work at the outset; or, at all events, sufficient encouragement for them to adopt the only course by which they can do him justice, and

receive benefit by his labours,—namely, to peruse the book itself carefully and often.

ART. XII.—*Novus Thesaurus Semeiotices Pathologicae*, quem collegit atque edidit MAURITIUS HASPER, Medicin. Chirurg. atque Philosoph. Doctor in Universitate Literarum Lipsiensi, Societat. Medic. Pract. Parisiensis, Naturæ Scrutatorum Lipsiensis et Economicæ Lips. Sodalis. Vol. i., Lipsiæ, 1825. Sumptibus C. H. F. Hartmanni; Londini, apud Black and Young; Parisiis, apud F. B. Bailliere.

VARIOUS reasons induce us to notice the appearance of this volume. Of the dissertations, either inaugural or occasional, which are annually published in the medical schools of the Continent, though many contain information too valuable to be consigned to the dusty shelves of the academical library, yet they are too small to make separate books of proper size, and are too large to be admitted either into periodical works, or into the transactions of scientific societies. For the preservation of such productions in a collected or accessible form, the student has reason to be thankful to the humble but useful industry of Haller, Sandifort, and Baldinger, who, though themselves equally eminent as teachers and authors, did not disdain to collect the scattered dissertations written by their predecessors, their instructors, their friends, and their pupils.

The voluminous but excellent collections of Haller, consisting of nineteen quarto volumes, published in 1750, 1755, and 1758, comprised all the best dissertations on anatomy, surgery, and practical medicine, which were written by the most able anatomists, surgeons, and physicians of Europe, during the end of the seventeenth, and the early half of the eighteenth century. The *Thesaurus* of Sandifort, consisting of three volumes quarto, contains such dissertations and treatises as were published subsequent to the date of Haller's collection, and previous to 1778. Baldinger, the professor of Gottingen, followed, and, by his selection of treatises on subjects in practical medicine, completed the series to 1782.

The example of these collectors was imitated by others to various extent and in different modes. Oberkamp had already collected several of the Leyden dissertations in 1767. A collection of the Upsal Dissertations, on subjects in medical chemistry and chemical pharmacy, was published between 1775 and 1789, by J. G. Wallerius, professor of metallurgic che-