A modern anatomy of the human spleen : to which are added, some strictures on Sir Anthony Carlisle's theory respecting the functions of that organ : addressed to the medical students and junior practitioners of London / by P. Mac Nolty.

(5.)

A

Modern Anatomy

OF THE

HUMAN SPLEEN:

TO WHICH ARE ADDED,

SOME STRICTURES

ON

SIR ANTHONY CARLISLE'S THEORY

RESPECTING

The Functions of that Organ;

ADDRESSED TO THE MEDICAL STUDENTS AND JUNIOR PRACTITIONERS OF LONDON.

BY P. MAC NOLTY,

SURGEON, &c.

"HAUD IGNARA MALI
MISERIS SUCCURERE DISCO."—*Virgil.*

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DEDICATION.

To the Memory of the late John Abernethy, Esq. Professor of Anatomy, Physiology, and Surgery in London, F.R.S. &c. &c. &c.

THE many and important improvements made by this great and justly celebrated individual, in various departments of his profession, eminently entitle his memory to the grateful remembrance of his successors in every branch of medicine and surgery. The advantages I have from time to time derived from his valuable instructions, and his decided approval, in 1826, of my views of the Structure of the Spleen, as may be perceived in the following Anatomy of that organ, call upon me imperiously, hereby to testify my respect for the memory of so highly talented and distinguished a man.

"His saltim accumelim donis,
Et fungor inani munere. *Virgil.*

P. MAC NOLTY.

13, *Queen Street,*
Golden Square.
25*th November*, 1831.

INTRODUCTION.

AS some apology appears necessary, more on account of the delay that has taken place since my announcement in 1826, of an intended work by me, on the Anatomy, Physiology, and Pathology of the Human Spleen, which has not yet appeared in consequence of a long continued series of ill health, besides other unforeseen misfortunes, than the non-existence of a very general complaint that our knowledge of the *functions* of the spleen has been heretofore very partial, as the elucidation of this subject has hitherto baffled the endeavours of the most eminent philosophers.

The various theories that have been advanced were more or less consistent according as the notions of the parties may have been directed by their superior knowledge of, or nearer approach to the true structure of the spleen, without which nothing satisfactory in this respect could be finally determined upon.

As we can arrive at the truth, not by patient enquiry only, but also by shrewd observation, I have endeavoured, as far as the circumstances in which I was unfortunately placed would permit, to use my endeavours in pointing out more clearly the structure of the spleen in the first instance, and afterwards to treat of its functions and diseases; as will appear by the notice at the end of this anatomy; and by the second series of a prospectus on the subject by the author, now in course of re-publication, and which was submitted to many of the first anatomists in London, in 1826—Sir Astley Cooper, Mr. Abernethy, Mr. Brodie, Mr. Brookes, Mr. Carpue, Sir C. Bell, Mr. J. H. Green, &c. &c.

A MODERN ANATOMY

OF

THE HUMAN SPLEEN,

&c. &c.

ALL parties are so far agreed, that practical observations are the only sure grounds whereon to build a lasting and substantial philosophy, which seems now to be the common sense of mankind; I shall therefore confine myself chiefly to a statement of my own ideas and experience, while I endeavour to submit to the perusal of the reader, the substance of my opinions upon this important, interesting, and most difficult subject.

I have not had the leisure or the opportunity of doing the necessary justice to a matter of such great importance to mankind. Yet, if by promulgating my opinions on its various bearings, and that they happen to be cor-

rect, or have even the effect of drawing the attention of the learned anatomist and physiologist, whose opportunities, combined with the other requisite advantages, afford them ample facility thoroughly to investigate this intricate subject, that has been so long suffered to remain in partial obscurity; I may at least be permitted to claim some share in the merit of causing much good to be done to the present and to future generations.

It being my intention in the following attempt, to treat of the functions of the Human Spleen, it appears to me proper in the first instance to give an anatomical description of this organ, and afterwards to point out how it serves to modify the circulation of the blood by acting as its diverticulum or reservoir, and moreover to describe its use in promoting the digestive process, with the advantages arising from the non-existence of an excretory duct, and a paucity of nerves and lymphatic vessels in it.

In entering on the consideration of this subject, the celebrated Haller has said, "In meras hic conjecturas dimergimur obscuriores quam fere alio in viscere." When the names of those who have already been engaged in this investigation are recollected, I am induced to fear I may be accused of presumption in attempting to meddle with it; but notwithstanding this, and considering that much has been accom-

plished by their labours I am tempted into the undertaking by the errors and imperfections which my own experience and research have shewn me to exist in all the treatises which I have hitherto met with on this subject.

The great variety which is met with, as to the size of the spleen, and the great variety of opinions that have so long existed as to its structure, have been very long observed, and have tended to add to the perplexity in which the functions of this organ have been involved; it appears expedient therefore, to advert to such particulars as are, in my opinion, calculated to elucidate the above mentioned circumstances, viz.—first, the structure of the spleen, before I enter on the immediate consideration of its anatomical description; secondly, its variety of size, I shall endeavour to explain hereafter in its proper place.

I shall begin, *first*, by noticing fibre. *Fibre* is an animal thread, of which there are different kinds, some are soft, flexible, and in a slight degree elastic; and these are either hollow like small tubes, or spongeous and full of little cells, as the nerves and fleshy fibres, others are more solid, flexible, and having a strong elasticity or spring, as the membranous and cartilaginous fibres; and a third sort are harder and flexible in a less degree, as the fibres of the bones. Now of all these some are very sensible, and

others destitute of sensibility, some so very small as not to be easily visible, and others on the contrary, so large as to be plainly seen; and most of them when examined with a microscope appear to be composed of still smaller fibres. These fibres primarily constitute the substance of the bones, cartilages, ligaments, *membranes*, nerves, *veins*, *arteries*, and muscles. And again by the various texture and different combination of some or all those parts, the more compound organs are formed, such as the lungs, stomach, liver, spleen, the superior and inferior extremities, &c. &c. the sum of all which constitutes the human frame.

In this respect the structure of the spleen in common with the rest of the body, may be said to be cellular, as the coats of its blood vessels, of an interlacing of which this viscus is principally composed, are of the above described formation, as to the internal or functional structure of this organ, there can be no question about its being vascular, as I shall point out more particularly bye and by.

In regard to that particular property of elasticity, or a power of contraction after the distractile force is removed, upon which the knowledge of the animal mechanism so much depends, too much pains cannot be taken to understand it rightly.

It is well known that any membrane or ves-

sel may be divided into very small fibres or threads, and that these threads may be drawn out into very considerable length without breaking, and that when such external force is removed, they will again become restored to their proper dimensions. It is further also manifest, that this property is preserved to them by a suitable or convenient degree of moisture, because if one of these fibres be dried, it immediately loses it, so that upon the application of a slight degree of force, to stretch it, it will break, as also will its lying soaked in fluid too long, or too much, render it flaccid, and destroy all its restrictive force, when distended.

The spleen is a somewhat oblong viscus, principally composed of blood vessels, and of a blueish red colour, situated in the left hypocondrium, between the stomach and ribs, but more towards the fundus of the stomach, concave towards the stomach, and convex on its outer side towards the ribs, it adheres to the diaphragm, pancreas, colon, and omentum; it has a partial peritoneal covering, and a proper tunic or capsule, which gives off certain processes called by some anatomists septa or cords which pass through its substance, and by means of which the two surfaces of this inner tunic are united; the tortuous course of the vessels of the spleen, also appears admirably calculated conjointly with these septa to give consistence and

formation to this viscus. This inner tunic is not a new discovery, as it appears that a plurality of membranes of the spleen have been spoken of by Reverius, in the year 1653; see his folio Treatise on Physic, London 1655, page 348; although it is described with greater accuracy by modern writers on anatomy and physiology.

The splenic arteries are given off by the cœliac which also supplies the stomach, liver, and pancreas; it is worthy of notice, that the pancreatica magna and pancreticæ parvæ should be supplied to the pancreas from the splenic arteries; the stomach also receives a *large* supply of branches from the splenic arteries, namely, the posterior branches, the left gastro-epiploic, and the vasa bravia: it is also worthy of notice, that the left branch of the truncus arteriosus, takes a tortuous course over and behind the pancreas, passing in a groove in this viscus, which is thus embedded and situated in regard to the splenic arteries, as if introduced between the middle and index fingers.

The veins originate at the termination of the arteries generally, all over the body, and accompany them throughout in their course with perhaps a trifling occasional deviation: the great peculiarity of the splenic veins has been long observed, the frequent distention that the spleen undergoes, and the fact that the blood vessels are capable of adapting themselves to the quan-

tity of the blood flowing in them, is also well ascertained; the venous system particularly, and more especially the splenic veins, which on account of the tortuous course of the splenic arteries and their minute ramefications, receive the arterial blood in a *variety of directions*, producing a *varicose*, or more properly speaking a *sacculated state* of the veins of this organ. This state has been long mistaken for, and described as being cellular; and accordingly, we shall find that very eminent anatomists have been in *error*, in asserting the internal structure of the spleen to be cellular; this sacculated or varicose state will become more apparent in proportion as the velocity of the motion of the blood is increased, which velocity must depend on the exciting cause; so that these *supposed* cells will become more apparent, (by having their dimensions increased,) such state also producing an over distention of the spleen, proportionate to the exciting cause, and the consequent influx of blood to the part under consideration; on the contrary, the cause being removed, such unequally augmented size of the veins will either vanish altogether, or become less apparent; some anatomists have gone so far as to state that they have discovered a substance of cellular appearance in the spleen, not known to anatomists, upon which substance the minute capillary branches of the arteries ramify, and

upon which the veins originate ; this substance, as far as I could collect, they have denominated parenchymatous, but my own observation and researches have not enabled me to have hitherto discovered any such substance.

That the blood passes from the least arteries into the least veins, we are clearly taught by anatomical injections, where from one arterial trunk we easily fill all the arteries and veins, almost throughout the whole body, provided the injected fluid be very thin, so as to pass into the vessels of the head, mesentery, heart, and lungs.

Microscopic observation seems to have put the matter beyond all doubt, in the pellucid tails, feet, and mesenteries of animals, we see that the blood, brought to the extreme parts by the arteries, is poured either into small veins continuous with the reflected artery, or else passes through branches of the arterial trunk into the parallel communicating vein, by which it goes on to the parts nearest the heart.

This is the way in which the blood passes, as well into the smallest veins which are capable of receiving only one globule, as unto those that are somewhat larger, and are capable of admitting two or more globules to advance forward together. That there is not any spongy or parenchymatous interposition between the arteries and veins in the general course of the circulation

is proved both from microscopic observations and injections, for if there were any such parenchyma or spongy substance between the arteries and veins, the hardening injections would shew it, by appearing extravasated in an unshapen mass.

It is, I believe, generally admitted, that the splenic arteries do not form any part of those supposed cells, that is to say, that none of such cells exist in the arteries; I have at least the authority of that celebrated professor of anatomy and surgery, Sir ASTLEY COOPER, Bart. I repeat I have his authority, to support and bear me out in this opinion, which I believe cannot be controverted, and as a proof of which I beg leave in this place to quote a sentence or two from a medical publication entitled the Lancet, to which I refer the reader, see No. 121, vol. ix. London, Saturday, December 21st, 1825, page 456. "The splenic artery," said Sir Astley, in one of his lectures, "is given off from the cœliac, and after distributing branches to the pancreas, left side and cardiac end of the stomach, passes into the substance of the spleen, and divides very minutely: the artery does not in itself," he goes on to say, "form the cells, but the branches ramify on the cells." So far then we have proved beyond a doubt, that if the spleen be cellular at all, which I do not admit, it is only partially

so at all events, although Sir Astley has admitted in the sentence preceeding that which I have above quoted, that he considered the opinion of those who contended that the spleen was cellular, was undoubtedly *true;* which admission in itself appears to me to be a contradiction from his own shewing, tending most materially to confirm my opinions; but this I shall leave to be decided by future disquisition, while I proceed to give an account of my reasons for maintaining my ideas and opinion on the internal structure of the spleen, and these ideas, &c. are not only founded on my own experience solely, but confirmed by the approbation and concurrence of that very justly celebrated professor of anatomy, physiology and surgery, JOHN ABERNETHY, Esq. *whose knowledge and demonstrative powers are so well known, and so universally applauded.*

This will appear evident by my statement of the fact, that when I did myself the honour of waiting on him, to solicit the favour of his patronage, and his sanction to my undertaking; he pointedly asked me my opinion on the structure of the spleen, my reply to his question was, that I considered it to be essentially vascular, upon which he observed, *so it certainly is*, and whatever people may have been saying about cells in the spleen, mattered but little, for that

such appearance was nothing more or less than a tortuous and varicose* state of the blood vessels in it. So far then Mr. Abernethy's opinion is with me, nor is it an indifferent one, and without importance.

The venous blood of the spleen, flows into the vena porta of the liver, and the well known circumstance that the blood of the internal hemorrhoidal vein occasionally flows into the splenic vein, is a matter of great practical importance, and ought always to be borne in mind.

The spleen is very partially supplied with nerves, which arise from a particular plexus, consisting of the posterior branches of the eighth pair, and of certain branches of the great gangliform plexus, which the internal trunk of the splanknic nerve produces.

It appears also that the spleen is partially supplied with minute lymphatics, which are rendered visible only by inflation, maceration, or by powerfully injecting water into its substance.

The spleen is destitute of an excretory duct, which circumstance appears to me to be of very

* It may probably be observed by some, that a varicose state of the veins, is a state of disease ; this however is not the case in the spleen when in a healthy state, it is only the appearance of, or resembling such state, which I have also called sacculated.

great advantage, as I shall endeavour to point out in the sequel of this enquiry : I need hardly observe, that great pains have been taken in endeavouring to discover a duct in the spleen, by many anatomists, who not being successful in their efforts, concluded that this organ was as useless as their endeavours were abortive. The consequence was that they were induced to make experiments on inferior animals by removing the spleen, or perhaps only a part of it, in order to observe what followed the removal, and so prove the inutility of the spleen, but I have not been able to discover that they have been in any respect the more successful by such investigations.

From what I have already stated on the formation of animal fibre, and the structure of the human body generally, and more especially of that of the spleen, supported as my opinions on this subject are, by the concurrence and approbation of Mr. Abernethy, Mr. Brooks, Dr. Gourley, Albert Meckel, with several other most distinguished anatomists and physiologists; I have come to the following conclusion, viz.— that the *organic* structure of the spleen, in common with the rest of the body, is *fibro-cellular*, and that its *ultimate structure*, is to all intents and purposes essentially vascular.

If I be correct in this my definition of the

structure of the spleen, and I do not imagine it can be successfully controverted; it would appear that those anatomists who have held the opinion, that the structure of this organ was cellular, have been altogether mistaken, and wholly in error about the matter, and that such anatomists as have maintained that the structure of the spleen was vascular, were more or less to blame, in not giving a more clear and intelligible explanation of the matter, so as to render it clear and easily comprehended by all those whom it might concern in the prosecution of their studies.

As no proper distinction has been heretofore made, and no satisfactory explanation given on this very abstruse and difficult point, I trust that my efforts to reconcile those clashing opinions that have been advanced so frequently and so ineffectually concernining it, may not be deemed unworthy of approbation, if in particular it will be found that I have placed the thing in so clear a point of view as to prevent future cavilling and doubt upon so important a subject as this under my immediate consideration.

The variety that is observable in regard to the size of the spleen in different subjects, I shall now proceed to notice, by stating my belief, that this depends on a variety of circumstances, amongst which I am of opinion, the following in particular may be numbered, viz:—First,

original malformation of the frame, whereby the capacity of the thorax is too much confined, which state may affect the office of the lungs in respiration; and the sequel of measles occasioning a great predisposition to disease and often a tuberculated state of them; this prevents a free passage of blood through the lungs, thereby occasioning a greater determination or tendency of blood to the other viscera, and more particularly to the spleen if I be correct in my ideas of one of the offices it has to perform, namely, that of being a diverticulam or reservoir of the blood, as I shall endeavour to prove in the progress of this enquiry.

Secondly, Obstructions and other derangements of the liver, and of the vena porta; by which the circulation of the venous blood of the spleen is impeded, this latter viscus is kept in a state of constant and preternatural distention, until it partially, and sometimes wholly loses its elastic power, and acquires a state of enlargement from which it is incapable of restoring itself; this state may perhaps be termed state of adaptation from necessity, and accounts in some measure for the variety in the size of the spleen according to the temperament, habits, and circumstances of different subjects; when however such causes as I have above enumerated, operate in a higher degree and for a very long continuance, they produce morbid enlarge-

ment, &c. as very commonly happens under other circumstances; as

Thirdly, In intermittent fever, and the frequent recurrence of this disease, with all its baneful consequences, for we find that in the cold stage of an intermittent, when the vessels of the surface of the body are suddenly diminished in capacity, and when, consequently, a large quantity of blood must be as suddenly determined to internal parts, the spleen must become unusually distended, at a time too when the disease deprives the patient of his appetite or accustomed desire for aliment, the stomach is therefore empty, which state of this organ is favourable to the distention of the spleen; most, if not all the secretions and excretions are disturbed and deranged, and partially if not very materially suspended. What besides can we expect of an organ so frequently excited into excessive service of this kind, besides first increased growth, and afterwards, should the cause continue to operate, disease and lesion of structure. Those who die of ague it is well known are almost invariably carried off in the cold stage of this disease, and the spleen is found to be prodigiously gorged with blood, if not actually ruptured; more frequently, however the disease being less urgent, scirrhous and other derangements of this organ are produced, of which I shall treat more particularly here-

after. Amenorrhœa also is a disease that sometimes tends to interrupt and derange the functions of the spleen, and the manner in which this disease produces such disturbance admits of as easy an explanation, as that which has been given in intermittent fever. The tortuous course of the splenic artery, appears to me to be in wise accordance with the *shape* and importance of the stomach, the various and complicated directions of the fibres of its muscular coat, &c. &c. seem to require it. The numerous ramifications that are supplied to the stomach from the splenic artery being distributed over certain parts of it in a manner suitable to its shape, and the direction of its fibres ; the blood is transmitted through those arterial ramifications in a manner suitable to the shape and functions of the stomach, which could not happen, if the arterial branches were in a straight direction. It may be perceived, therefore, that the circulation of the splenic blood in this respect is admirably well suited to the shape, and very important functions of the stomach : to the diversified and natural operations of which we are to look for the healthy continuance of our existence ; for whether we are exposed to the extremes of wet and cold, or excessive fatigue, heat, and consequent relaxation, the same stomach must under, all these, and many other circumstances, perform the same functions that

were destined by nature for it to perform, but modified as must be admitted according to circumstances, favourable or unfavourable to health, according to the circumstances in which we may be placed, &c. &c. &c. Therefore, if we take into consideration the manifold operations of the stomach, and how much depends on its natural and uninterrupted functions, as necessary for our well being; it cannot be matter of great surprise that a knowledge of the functions of its preserving associate viscus the spleen, should be a matter of great importance, complication, and consequent difficulty.

To know every thing perfectly, is an attribute belonging only to the omniscient Deity, to endeavour, therefore, to vie with him in this respect is utterly fruitless; but to acquire as perfect a knowledge as the human understanding is capable of, is certainly most laudable. If, therefore, the great Creator of all things, has in his wisdom gifted some persons with riches, it does not follow that in all such cases, he has enriched them in point of talent; the distinction between riches and poverty, (so called) appears, therefore, to be a very nice and difficult point. I shall, by way of illustration, observe, that it is difficult to know one's self; and this will appear the more strictly true, when we reflect on the great difficulty of ascertaining the real use of so small but still of so important

a part as the spleen, the ascertaining the true knowledge of which has puzzled the understandings of the acutest anatomists and physiologists, from the earliest periods of the profession to the present time; nor do I presume to arrogate to myself the capability of deciding this important question, but if I shall by any crude or unrefined ideas, suggest any thing that may throw any additional light on the subject, I shall feel more than compensated if I happen to be thereby the cause of benefit arising to future generations, by the refined improvement of those who are, and may hereafter be, more particularly gifted, and more inclined to follow the example of the good Samaritan than myself.

OBSERVATIONS

ON

SIR ANTHONY CARLISLE'S THEORY OF THE FUNCTIONS, &c. OF THE SPLEEN.

"Errors like straws, upon the surface flow,
He who would seek for pearls,* must dive below."

DRYDEN.

As I cannot concur with Sir Anthony Carlisle in his Theory of the Functions, &c. of the Spleen, and whereas he has thought proper most grossly and wantonly to insult the more learned and liberal portion of his medical brethren, I shall take leave to make a few observations on these points.

A medical friend on whom I had occasion to call on business some little time ago, has directed my attention to a publication, that has appeared in the shape of a pamphlet, purporting to be the substance of a discourse, delivered by Sir An-

* It is said that pearls are sometimes found in *Oysters*, those who pretend to be better acquainted with the natural history of shell fish, particularly the oyster, than I am, may confirm this statement.

thony Carlisle, before a general meeting, holden at the College of *Physicians*, on the 6th day of April, 1829, respecting the Physiology and Pathology of the Human Spleen, and the Thyroid gland.

On a careful perusal of the contents of this pamphlet, and a due consideration of all its bearings, I am inclined to give it as my opinion, that the *First day of April* would have been a much more suitable time for an occasion that has turned out so entirely destitute of interest and so fruitless.

This sapient pamphleteer has thought proper not to have touched upon the anatomy of those organs, throughout the whole of his said discourse, and refers his readers to the observations and opinions of Dr. Stukely (published in 1723) upwards of 100 years ago, rather than rely on his own anatomical researches and observations.

I would ask, does he mean to insist on what he has so boldly insinuated, namely—That no improvement has been made in the Science of Anatomy and Physiology, in this country, since the days of Dr. Stukely. If he does, I can assure him, that I shall prove to the satisfaction of the truly learned, yet less arrogant members of the medical profession, that he is most egregiously mistaken.

Sir Anthony Carlisle either knows, or ought to know, that a difference of opinion exists,

even amongst the very best anatomists, as to the real structure of the spleen; therefore, I contend, that, until this preliminary point be satisfactorily explained, agreed upon, and admitted, any Physiology attempted to be advanced on this abstruse subject, cannot be other than spurious and futile.

Uti in corpore humano medicina versatur, capitis externi trunci et artuum conditionis, viscerum possituram, ordinem, numerum magnitudinem, figuram, duritiem, mollitiem *structuram*, solidorumque et fluidorum partium motus, *discenti*, noscere debent. Hinc *peretia anatomia*. Necessaria est.*—*Vide* Difinitio Fundamenta et Divisio Medicinæ Practicæ.—Francisco Home Auctore.

Here, however, an important question arises, namely, how can *certain boasting* individuals impart a true knowledge of matters of which they themselves are, by their own shewing, if

EXPLANATORY NOTE.

* According as medicines are (or, at least, ought to be) employed for the benefit of man, the relations of the external head, trunk and limbs; the position of the viscera, their order, number, magnitude, figure, hardness, softness, *structure*, and the manner of motion both of the solid and fluid parts, ought to be known to the student; hence the necessity of accurate anatomical knowledge.—*See* Professor F. Homes's Definition, Fundamental Principles and Division of the Practice of Medicine.

not ignorant altogether, certainly not more than partially informed.

I may reasonably infer, from the whole tenour of his pamphlet, that Sir Anthony will feel startled with surprise, to find that any person should exist in this country, besides himself, capable of explaining the structure of the spleen; yet the thing has been successfully attempted, according to the opinions of the celebrated John Abernethy, and Mr. J. Brookes, of London; Dr. Gourley, of Salop; and Albert Meckel, of the Continent; and therefore the author's explanations on the subject have been recorded upwards of five years ago.

However reluctant I may be to engage in controversy, I cannot avoid making a few observations on the present occasion, although the subject matter of the pamphlet itself is hardly worthy of particular notice. Still, I should feel wanting in the duty I owe to myself, to the medical profession, and to the community at large, were I tacitly to suffer an ill-founded, badly-digested, and therefore spurious doctrine, to be imposed on the public by the specious pretences of any man, be his self-importance ever so conspicuous, without cautioning them against its baneful consequences.

In assuming to myself the merit of purity

of intention, and of a wish to support the respectability of my profession, uninfluenced by selfish considerations, I willingly ascribe to others motives equally honourable and conscientious, while I perceive that their object is to arrive at the truth, and to assist in forming a right opinion on matters of such vital importance as the improvement of anatomical, physiological, and pathological science, upon an accurate knowledge of every department of which the entire system of the successful practice of medicine and surgery so mainly depend, and in which, therefore, every member of society must be interested.

I shall, however, be found strenuously opposed to any selfish, monopolising individuals, who may appear inclined to arrogate to themselves exclusively the superior power of reasoning and investigating properly; particularly when I can clearly see, even by their own shewing, that they are palpably in error; and I shall use my best endeavours to put those who boast so much about their *olfactory superiority of scenting* out things of an abstruse nature, on the right scent, when I find them evidently deviating from the true paths of close reasoning, which alone can enable them to form just conclusions whereby they may expect to arrive at the truth.

I trust that in the sequel of this communi-

cation I shall prove, to a demonstration, that Sir A. Carlisle's efforts to point out the more essential and proper functions of either the spleen or thyroid gland have completely failed; and, even conceding to him the full and fair merits of his cogitations, that he has not proved any more than what must be already well known to the merest tyro in physiology, viz. that all the organs of the human body, particularly the internal organs, are capable of imparting and receiving animal heat reciprocally, and it shall be more or less according to their relative situations, their structure, &c. &c. &c., influenced at the same time, in some degree, by the circumstances in which man may be placed.

I shall now proceed to examine the validity of his doctrines and philosophy. He has said that the functions of the human spleen principally consist in imparting heat to the stomach when it is replete with food. How can this be? Whereas, it is a well known fact, that the spleen is the more empty when the stomach is the more full.

"Sic moles lienis cum sit mollissimus laxear est et ampleor cum vacuo ventriculo, ab eodem (*i. e.* stomacho) pleno contra costas expressus *inanitur*."—*Vide* Haller's Physiology.

How, therefore, can he maintain such a

doctrine? Whence the animal heat necessary during the process of digestion, which exists three hours and a half to four hours, more or less, according to circumstances? This puts down his spurious theory at once, in regard to the real functions of the spleen; nor has he been the more successful in explaining the real office of the thyroid gland. By his own shewing, in fact, he has not either shewn or proved any thing novel or of intrinsic value, although he has stated that his sentiments, thus delivered, are the result of long-continued, well-digested, and laborious research. This puts me in mind of the well-known adage; viz. "Parturiunt montes nascitur ridiculus mus."

As the human frame is a mechanico-hydraulic machine of exquisite structure, and as steam has been rendered so very useful lately, by the assistance of machinery and heat, I should not wonder to find this extraordinary philosopher endeavouring to convince us that the spleen and thyroid gland ought to be considered lower and upper Mount Vesuvius, in relation to the human body.

This I think may be reasonably expected in his next more extensive dissertation upon the structure and offices of glandular parts, which he is preparing, under the *same physical views!* which governed him in the present instance. I do not hesitate to predict, that unless

he apply the whole of his reasoning faculties to this subject, (with a better effect than he has evinced in his pamphlet), and not rely altogether, or quite so much, on his olfactory sensibilities, he is likely to render himself still more ludicrous than he has on the present occasion, wherein he has shewn a more general acquaintance with matters of far less importance than the subject he has undertaken to expound.

I cannot for my life perceive, that he has on the present occasion, scented out any thing new, or of such importance as to excite the hatred of the most ordinary and vulgar in the profession, nor can he be rivalled by the most jealous opponent in garbling a story already well known to medical men in general; and further, I venture to assert that he is the greatest prodigy ever heard of in the science of anatomy, physiology and philosophy, in point of *high* nasal talent, *temperature*, and acquirements; such he tells us, are his olfactory powers and sensibilities, that he can scent out or smell things, that are incomprehensible to others, and which it appears he himself does not understand.

In page 6 of Sir Anthony's Pamphlet he has said, "since no sensible or chemical alteration, has been detected in the venous blood returned from the spleen or thyroid gland, and their nervous supplies are manifestly

less than those of the secerning glands, we may reasonably infer that no other change happens to the blood of those organs but that of becoming venous."

This is well known to such as possess an accurate knowledge of the more essential offices of the spleen in particular, nor is the true office of the thyroid gland so exactly similar to that of the spleen as he insists on, the splenic blood is by far more important and useful, because it does not undergo any sensible alteration, than if it had. Why has he not explained this? it is evident he knew not how; here he deviates from the main point, at which, if his boasted talent served him, he might have communicated something worthy of being heard, but no, he is off again to his superficials

"Nugis addere pondus."

He makes a great display of the versatility of his acquirements and what he is pleased to term, collateral illustrations, with all this he has failed in illustrating any thing besides what was already well known, he seems to have made himself much better acquainted with these collaterals, of which he appears so proud, than he has with the main subject, as I have stated above. I am inclined to suppose that his motive may be, to induce the continental physiologists to consider that a

man who is even superficially acquainted with so many things, cannot be otherwise than well acquainted with all the bearings of any one subject, be it ever so abstruse, so that by this species of sophistry, he may prevail on the continental philosophers and physiologists to concur with him, and thus surprise them into a sanction of his crude opinions.

I give the continental physiologists and philosophers full credit for being close reasoners, very learned, and zealous in the improvement of medical science, and I entertain a great respect for many of them ou account of their well known talent and acquirements, so much so that I feel perfectly satisfied that Sir Anthony will find it necessary to furnish them with a better digested production than that herein alluded to, before he can make sure of their unqualified approval, which he seems inclined to imagine already insured.

I would, however, venture to enquire, how far the continental philosophers could have improved the arts of medicine and surgery by any system of physiology extant before the immortal Harvey had discovered and explained the circulation of the blood, yet this celebrated Dr. Harvey was an Englishman; thanks to the stars that Sir Anthony Carlisle was not in existence at the time to have prevented his being so, or to attempt to control

his great genius, as he appears inclined in regard to his own medical contemporaries.

I am almost surprised that the names of that great man Harvey, of the no less celebrated Dr. Darwin, and of the immortal John Hunter, did not start up on the sixth of April 1829, to stare him out of countenance, and by their silent contempt shame and intimidate the haughty arrogant declaimer into silence, and frighten away his deluded audience, most of whom, I take it for granted, must have remained more for curiosity and amusement than any matter of interest or instruction; one thing, however, I must grant, and that is that he has taken much pains in telling us what we knew before. When he shall have presented us with something interesting and instructive we will feel more particularly obliged.

Sir Anthony chooses to dedicate his pamphlet to a nobleman who is very reasonably supposed to be ignorant of anatomy and physiology; rather than, or in preference to, any of the medical gentlemen in London, Edinburgh, and Dublin, who are known to be eminent in these sciences; and states that in so doing, he is actuated by motives of respect and gratitude, because of that individual having so munificently supported through life an ingenious but helpless medical acquain-

tance of his; this is certainly professing a great deal of kindness towards his medical brethren, although the sequel of his pamphlet evinces a feeling diametrically opposite, as it may be seen by the most superficial observer that almost every succeeding page in it breathes a spirit of stigmatising obliquy, contempt, and jealousy, peculiar to himself, to the great honour of most of the members of the medical profession may it be said.

However if he do not respect his medical brethren, he respects and reveres those who befriend them, this is something at all events; the real motive after all appears to be an adulating and selfish sycophancy towards his superiors, in order to acquire a greater esteem and credit than his real merits entitle him to.

He states in the introduction to his pamphlet, "I do not look for a favourable reception of my doctrines until they have been submitted to the more competent physiologists of the continent, and on their disinterested judgment I confidently rely."

Thus then does he make it appear manifest, by his own shewing, that he does not consider any individual amongst our English medical physiologists and philosophers of sufficient importance and dignity to dedicate his little publication to, nor does he consider any of them sufficiently competent and candid to

give a due consideration and favourable sanction to his opinions. What an extraordinary compliment has he thus paid to an Abernethy, a Cooper, a Bell, a Lawrence, a Home, a Brookes, a Brodie, a Carpue, a Green, a Mayo, an Earle, a Stanley, and many other surgeons that could be mentioned, as eminent for their talent and professional acquirements besides the many eminent and learned physicians who might be selected for such a purpose, in the British metropolis. If this be treating his medical brethren with a due courtesy and respect, it may be said that it is done with a vengeance, particularly when we find him so lavish and unsparing in his low epithets such as "*vulgar teachers, forward and rapacious writers, &c.* whose deficiency of education and habits continually lead to the exhibition of their crude opinions in opposition to the first principles of philosophical induction.

I should like to know who those "vulgar teachers" are, to whom he alludes, and whom he thus wantonly stigmatizes, it is evident he means English teachers; see his pamphlet pages 22 and 23, the last; I, for my part, never met with any such in this country, but on the contrary, I found them men of learning and liberality in general. I have not, it is true, derived any part of my medical educa-

tion from his instruction, perhaps this circumstance accounts for my having been so fortunate.

Qui male cogitet et agit, sicuti alios quoque gaudit. I grant that there are a *few* medical men of his caste to be found who are so self-conceited that they imagine their equals in science and literature are not to be met with, however, when their professional experience and boasted talent are put to the test, they are found to be the most ignorant and unscientific.

Sir Anthony dwells much on the high degree of temperature in the splenic blood beyond any other part of the body, and attaches great importance to this circumstance, as it prevents the temperature of the stomach from approaching to, and even sinking below the freezing point, which would be a state incompatible to the animal functions.

It appears by this ridiculous mode of reasoning, that he has paid very little attention to the valuable works of the immortal Dr. Darwin, (see his Zoonomia), where it will be found well explained that the gustatory nerves and tongue, are the monitors of, and constantly respondent to the exigencies of the stomach, in point of eating and drinking.

The sensation of thirst which is at times so very distressingly felt about the tongue and fauces, and with which most persons are fami-

liar, orignates generally in the high degree of temperature of the stomach itself, by whatsoever cause excited; this fact which cannot be controverted, argues so far against his spurious doctrine, that even independently of the equally well known fact, already mentioned, namely that the spleen is most empty when the stomach is most full, completely nullifies and annihilates a doctrine evidently founded in shallow reasoning, as unphilosophic, as ill digested, and consequently so *mystical*, that his own peculiar nasal capabilities can neither explain nor maintain it.

The great advantage resulting to patients from the *copious* libations of *cold spring water*, when labouring under plueritis and other acute inflammatory disorders, is well known through practical experience, and furnishes another of the many arguments that might be adduced to prove the fallacy of his opinions and dangerous doctrine.

At the same time that it cannot, and that it never was sought to be denied, that the spleen supplied a certain degree of heat to the stomach (and also received heat from it,) though not such as he would fain make us believe, still I think enough has been said to convince every rational physiologist and philosopher that with all the boasted talent, acquirements, and highly gifted *olfactory sensi-*

bilities of his scrutinising *proboscis*, he has failed in *smelling* out the more important offices of the spleen.

Furthermore, it is well known that physicians of great skill and eminence prescribe large draughts of hot water, tea, or coffee, for their patients with great advantage, in cases of atony of the stomach, impaired digestion, &c. &c. &c.: here then are two indications of cure diametrically opposite, and yet salutary in their effects; if his physiology could be considered correct, the former remedy would be entirely inadmissible, and the latter one seldom or never required.

In page 21, he quaintly asks, "If it should be conceded by this learned assembly, that a given temperature is essential to the vital fnnctions of the sensorial structure, *and to muscular action.*" What a studied sentence of high sounding words to be lavished on such an occasion, as he must be well aware that it never was questioned that a given temperature is essentially necessary to the vital functions; he must however be much beside himself, if he will have it that muscular action does not produce a degree of temperature proportionate to the action and motion to which muscles shall be subjected.

How far he has been stigmatising and insulting this learned assembly with his studied

sophistry, all this time that he affects to be so complaisant and condescending, I leave him and them to decide; I can, however, plainly see what may be fairly inferred from his attempt at writing.

He goes on to say, "that the intended use of the spleen may be justly regarded as auxiliary to the functions of the nervous and muscular structures of the stomach; and although the heat conveyed from the spleen to the stomach in this way is subsidiary to digestion *it cannot be considered the immediate agent of that complicated process.*" It cannot eh! What an astonishing piece of news this!!! What a shrewd observation, to be made by a president of a College of Surgeons, who boasts so much of his logic, philosophy, and scholastic acquirements, beyond all others. Who besides himself ever thought of such a thing, as that the heat of the spleen could be considered the immediate agent of the digestive process. Is it thus that he explains the functions of the spleen? He does not explain what the spleen does do, (in other words, how useful) but he tells in plain terms what it does not do, and what no physiologist on earth possessed of any thing like rational sense could expect; unless, indeed, the spleen were to alter its position, march into the stomach and there, *in propria persona,* exercise a

direct calorifying influence amidst the contents of that organ.

If also, as it is the opinion of some physiologists, the nerves are the sources of animal heat, and the well known fact that the spleen has a more partial supply of nerves than any other organ in the body, what, in this case, would become of Sir Anthony C's. theory; it would be a death blow to it at once. I do not, however, agree with such an opinion; if seriously held by any physiologists, perhaps they mistake animal spirits for animal heat; a suitable degree of one must have a reciprocal dependence on a suitable degree of the other. Notwithstanding this, however, I cannot at all agree or subscribe to Sir Anthony's doctrine.

This is curious physiology from a man who dares to call others "vulgar teachers," deficient in their education and habits, forward and rapacious writers, adventurers, &c. whose crude opinions (according to his estimate) are opposed to the first principles of philosophical induction. Mutatis tantum nominibus fabula de te narratur. According to this specimen of Sir Anthony's reasoning and argumentation, I am of opinion that I could find at the London University students of no more than one year's standing, even from the colleries and potteries of Staffordshire, capa-

ble of producing a more ingenious, scientific, and instructive essay on the subject, than the pamphlet before me.

Really there appears to be,
As rational men may plainly see;
Some certain thing so hogic pogic,
In this species of false logic;
Which our author has been using,
If not instructive, 'tis amusing;
I feel quite anxious to learn,
As others wonder, to discern;
How this *guid mon*, with pen elastic,
Could write such nonsense so *bombastic*;
In studied terms, quite *pedantic*,
That 'tis plain the man is frantic.

He continues to inform us, that in this country, and at the present time, there is no part of medical science so much behind the average rate of current knowledge as the physiology of glands; structures which induce changes in the elementary fluids of living bodies, little understood (he intimates) by any other besides himself; how fortunate it is that he has undertaken to unfold and explain this abstruse subject. If we may judge from the specimen of his physiology and pretended philosophy now before us, I do not hesitate to predict, that the duty of expounding the subject-matter properly, must necessarily devolve upon some more competent physiologist than he has shewn himself to be on the present

occasion, if the thing be not already much more rationally and satisfactorily accounted for and explained, by the less assuming and humble individual now commenting on his crude reveries and boyishly inconsistent vagaries.

It appears clear, from his own shewing, that it need not be feared he will ever set the Thames on fire, by any forthcoming specimen of his genius, boasted talents, meditations, and ability to do justice to a subject of such vital importance to the community at large. This we may safely augur, particularly when he assures us, that in his future enquiries he is to be governed by the same physical views as on the present occasion, which appear to do him but very little credit.

It would be very desirable that a man who has been so successful in clearing up and explaining all the intricacies of so important a subject as this under present consideration, should be prevailed on to turn his superior *olfactory* attention to the scenting out of a remedy for that most calamitous disorder, hydrophobia, he would be sure, with his *odora canum vis**—*Virgil*, to discover an infallible one.

* Spartan dogs, a species of mongrel hound or beagle, remarkable for their superior power of scenting, such as were used by Queen Dido when she was making love to Æneas.

"All medical men," he tells us, "must concur in desiring more satisfactory elucidations *of the different parts of the human body*; he is quite right in one respect, and if we cannot have more satisfactory elucidations than he appears capable of affording, if we may judge of the future from the very feeble attempt exhibited in the specimen now before us, we are likely to sink below mediocrity if we are to look to him, and to him only, for any thing like an improvement in physiological science.

I take it for granted, that most parts of the human body are sufficiently elucidated, and as well understood as they need be, and as they ever will be. Had he confined himself to particular parts, such as he has been vainly attempting to elucidate; very well—and even these are much better understood by many than he appears to be aware of, certainly much better than he has been successful in pointing out. One thing, however, is quite clear, that if he be deficient in reasoning upon, and explaining those matters, he is not deficient in talking about them, and that, too, in high-flown terms.

"For, while the offices of several distinct structures remain undetermined, neither the knowledge of the aggregated living functions, nor the respective influence of particular organs, can be rationally estimated."

This observation of his, confirms my argument and opinion, as already stated, that any physiology attempted to be advanced on the offices of the spleen, cannot be other than futile and spurious, till the anatomical structure of that organ be satisfactorily explained and admitted, as it cannot be denied that anatomy is a most important primary element of medical science, without a true knowledge of which, little or nothing can be done in the improvement of physiology; it therefore appears quite strange that he has not given an anatomical description of the spleen and thyroid glands, before entering upon any explanation of their respective functions.

The following passage appears to be so very curious and extraordinary, that I shall transcribe the whole of it, and make a few observations on its singular tenor.

"The necessary connection between natural *events* in living bodies, is in some instances obvious, in others *perplexed*, and consequently *dubious*, and the subjects of this memoir are well known to be of the most intricate kind, and although medical physiologists often fail in logical analysis, it does not follow that systematic reasoning should be rejected."

Does he mean the necessary connection between natural *structures*, not events, in living bodies; and if he does, as perhaps he ought, I

am of opinion, that he ought not to stop to enquire the *cause* of any organs being situated in any particular place, as the God of Nature has wisely and conveniently arranged the several organs and parts constituting the human frame, but as a professed physiologist and philosopher, as he prizes himself to be, his only duty as such, ought to be, to explain the functions of any organ in its situation; it is not why or wherefore it is there, but being there, for what purpose it is placed there. Does this not appear sufficiently obvious? I think it does. Does he mean perplexing, (not perplexed) and consequently difficult of solution, not *dubious*; perhaps he has avoided the word perplexing, lest it should be supposed he experienced any difficulty in divining, or in *scenting* out the functions of those organs, and what important discovery has he made after all? Why, nothing besides what was already well known; yet he will have it, that the subjects of his memoir are well known to be of the most intricate kind; and although as a medical physiologist (if he be so) he has failed in logical analysis, it certainly does not follow, that systematic reasoning should be rejected, if it were found worthy of being retained; nor does it appear that his reasoning is of the latter description, or in any wise entitled to any other fate than being at once rejected.

He appears to be singularly unfortunate, not only in his attempt to throw any new light on the subjects of his memoir, but also in the manner in which he has treated all the members of the medical profession, both at home and abroad, as it is manifest that at the same time that he has been grossly insulting his medical brethren of England, he has paid the medical physiologists of the continent a very poor compliment, by conceding to them only, the ability of judging about the merits of the discovery; though not the competency of making the discovery itself! thus, arrogating to himself every power of *smelling* out, and determining discoveries superior to others.

"Being persuaded that scientific men have now attained to greater exactness in every branch of physics than their predecessors, and that the augmented evidences of human and comparative anatomy are at this time sufficient to warrant many new assumptions."

This is very true, and therefore, it appears the more surprising! that he has not assumed something new; and done it something like that kind of justice that might be reasonably expected from a man of his long standing in the profession, and in such situations therein, as afforded him ample opportunities of becoming acquainted with all the bearings of these subjects, if his talents were even above medio-

crity, or at all suited to the investigation of abstruse matters in physiology.

"I shall proceed to offer the assignable uses of the spleen and of the thyroid gland."

Here seems to be a most unwarrantable assumption in insisting that the use he assigns to the spleen is the only one, and that he has made the discovery, being aware as he must be, that what he has thus attempted to impose as novel, has been known for a long time past. Again, why talk about uses, if, as he says, it is useful only in one respect; this appears exceedingly inconsistent, it also evinces a spirit of arrogance and superiority peculiar to himself; and likewise a want of that modesty and discretion which has at all times characterized gentlemen and men of real genius; forsooth, may not others assign a more important use to the spleen, and explain it also, in a much more rational and philosophic style and to greater public advantage, and treat on the functions of the thyroid gland in like manner.

One would imagine, nay, it appears evident from the haughty imperious style of his writing, that his *ipse dixit* is to be the only criterion in determining all matters of medical philosophy, and I submit that the manner in which he presumes to treat others, and undervalue their rising genius and talent, per-

haps, superior to his own, shews that he considers himself to be the *ne plus ultra* of perfection in propounding abstruse matters in physiology; at least, that if it is not contained, and has not room within his cranium, that it is contained in his *sagacious nose*, and as that is so near at hand to be consulted he can never be at a loss; I should not feel much surprise if he should ere long expect that this necessary appendage of his face should be consulted as an infallible oracle to determine all difficult and doubtful matters relating to the medical profession.

"I have classed these two organs together, because they resemble each other in many parts of their structures, and because their offices appear to be similar."

I can tell him, if he knows it not, that he is not the first and only medical man who has associated the offices of the spleen and of the thyroid gland, or at least classed them, though not in the vague manner that he has done it in the present instance, so that if there be any merit in the thing, which I question much, he is not entitled to it, though he appears inclined to monopolise and controul all medical improvement, as much as to say *Sic volo, sic jubeo, stat pro ratione, voluntas.* It appears that if he could substitute his will for *his reason*, things might be considered to

have arrived at a strange pass, as a man of his unbounded ambition would will much, and reason *very little*, and this latter for the best of all reasons, because his reasoning faculties do not seem to be very mature.

"After the unavailing endeavours of some justly renowned medical philosophers, it may appear hopeless to seek for direct proof of the *use* of the spleen, but the impediments to a positive demonstration do not exclude circumstantial evidences, and I now offer those concurring evidences to shew the obvious influence of the spleen upon the stomach as affording a rational solution of its principal, if not of its only function."

In a preceding paragraph of his pamphlet which I have noticed, it will be found that he has spoken of the *uses* of the spleen; in that which I have now quoted he has restricted it to one use only, and that he will have it, to be rationally solved; the well known circumstance that the spleen, as it were, adapts itself very nearly to the state of the stomach either replete or empty, and accommodates it by becoming empty when the stomach is filled, and by becoming replete itself, when the stomach is empty, thus preventing a vacuum taking place in the left hypocondrium, appears to be in itself a function not less important than that which he has laboured so much to have

"*scented*" out; this is a fact which cannot be controverted, and therefore, it is an assignable function of the spleen, without the aid of Sir Anthony Carlisle so to represent it.

If the spleen be useful in this respect, and I think it cannot be denied that it is, then it is manifest that he is not correct in assigning to it one use only, nor does it appear hopeless to seek for direct proof that it does prevent a vacuum in the left hypocondrium, therefore as this fact is self evident, it appears that this use is entitled to the precedence of *his* assignable use which is still involved in doubt, and wanting in argument, such as would render it plausible or probable, whereas in particular the playful accommodation of the spleen to the stomach argues against *his assignable* use, and gives a flat contradiction to his theory altogether.

After all that has been said on either side, and supposing that the uses mentioned are important and necessary, I maintain that the principal function of the spleen is much more important and useful than either; however, as I have treated on this subject more at large in my essay on the *structure*, functions, and diseases of the spleen, which was read to and approved of, by some of the most celebrated professors in London, and by my esteemed friend the learned Dr. Gourley, of Madeley, Salop, the

ingenious pupil of the eminent Professor Portal, of Paris, upwards of five years ago; and which essay is prepared for the press, and would have been published long since, had it not been for a protracted and most painful illness. I must decline entering into further particulars on this occasion, at present.

He continues, by stating, that "The deficiencies of excretory ducts, and of a parenchymatous matrix, occur, *without exception*, in the spleens and thyroid glands of all the animals hitherto investigated," page 4; yet, and withal, he tells us, in page 6, that "In the spleen of the common turtle, 'testudomydas,' the *intervening cellular spaces between the arteries and veins constitute its main bulk*, and they may be easily shown by injecting the splenic blood vessels with hard wax, afterwards corroding away the animal parts."

If this is not an exception, I do not know what is, and if it be not also a contradiction of his own statement, I cannot divine what is; who can rely on the arguments and theory of any man capable of making such contradictory statements; even if a perfect analogy existed between the structure of the spleens of those animals and that of the human spleen, his explanations of it could not be relied on according to his own shewing.

"There is also a remarkable paucity of

nerves assigned to the spleen, and to the thyroid gland, when compared with the nerves sent to the secreting glands; but as I would not rest this assertion upon my own recollection of the facts, I have applied to Mr. Joseph Swan of Lincoln."

Sir Anthony either has very bad recollection, or he is very uncandid in denying that he was apprised of the paucity of nerves of the spleen in particular, by me, in a copy of the prospectus of my forthcoming Treatise on this subject, published in 1826, which I took care to have him furnished with, and he seems to have availed himself, in some degree, at least, of the suggestions derivable therefrom, especially in regard to the arterial blood, but which, at the same time, he appears to have turned to ill account.

" That the functions of the spleen, and of the thyroid gland are not essential to animal life, is shown by the instances of whole tribes of creatures utterly destitute of those parts."

This statement of his does not in any wise bear upon the subject, or tend to show in any respect, that the spleen and thyroid gland are not essential to a perfect state of animal life in the human species; in fact, such a doctrine is, or at least appears to *amount to blasphemy*, as it is *accusing the God of nature* of encumbering the noblest work of his hands with un-

necessary appendages; besides the organization and functions of those inferior animals of which he makes mention, and those of man may not admit of so particular a kind of analogy. Where a spleen and thyroid gland do not exist, no function peculiar to them can be expected to be performed, and it is rational to presume that such is not necessary; where they do, however, it is the duty of the physiologist to ascertain what their proper functions are. Men, of limited understandings, such as Sir Anthony, who have heretofore, and those who still attempt this difficult task, are, upon their failure, too apt to assert, that they are of no utility whatever, nor does it follow, that such should be the case, though the spleen and thyroid gland should be removed by experimentors, and by surgical operations, as I have shown in another place, because those incompetent theorists are alike incapable of pointing out the mischievous consequences of such removal and privation.

"The spleen and the thyroid gland may be therefore, regarded as auxiliaries to more important organs."

In the preceding quotation it will be found that he has attempted to have shewn, that the spleen and the thyroid gland are not essential to animal life; yet he has here admitted, that

they are auxiliaries to more important organs; then, according to his mode of reasoning, we are not to look upon auxiliaries* as being of any importance: this is curious logic indeed, and from such a vaunting, arrogant, empty, self-conceited person, who is foremost in stigmatising his superiors.

"I will not trespass on this enlightened assembly with discussions on the vague and unphilosophical opinions of some modern anatomists, respecting the *use* of the spleen, those opinions being too often illogical or incompetent."

Here he again insists that the spleen has but one use, or is capable of not more than one function, although he has repeatedly spoken of its *uses*; this is another specimen of his logic. I declare that I have not ever seen or perused any publication from the pen of any man, even of *fewer pretensions, more vague, unphilosophical, illogical,* or *incompetent*, than four-fifths of this pamphlet, *now lying before me;* it is true, he has taken up a rejected, because a *bad* doctrine, and he has employed *worse* arguments in endeavouring to re-establish it; *causa patrocinio nonbona, pejor erit,* this is always the case, even in abler hands than his;

* From this mode of reasoning one would be led to think that his auxiliaries Dr. Stukeley and Mr. Swan were of no importance.

it is, therefore, I would have him reflect and render unto Cæsar the things that are Cæsar's, and remain content with the minor degree of mediocrity to which his pamphlet has entitled him; and not again attempt to impose upon himself, and on the community at large. He appears to have been very complaisant and indulgent to the enlightened assembly to whom he was addressing himself, yet, notwithstanding such hypocritical affectation, it will be found, by the concluding paragraph in the preface to his pamphlet, how shamefully he has dared to insult their understanding, and impugn their respectability. What! not one amongst this enlightened assembly capable of duly appreciating his doctrines, or of giving a candid opinion touching their merits. He is right enough in one respect. I am of opinion that there is not a man in existence who can give an opinion of the *merits* of his doctrine, and this too for the best of all reasons, because they appear to be entirely destitute of *merit*; not so, however, in regard to their *demerits*, which are easily apparent to the meanest capacity, and to the most short-sighted. Yet this is the individual who sets himself up as the only man capable of simplifying and illumining the obscure recesses of medical science, which still darken our profession, and expose our

noble vocation to the mischievous adventures of unscientific men. I take it for granted, that he must produce something more convincing of his own competency, before it can be admitted, that he is either capable of improving medical science, or judging of the capability of others.

I am now to observe upon a part of his doctrine, which may be considered highly irrational and preposterous.

"The foregoing reflections" he says, "have induced me to assign a heat-giving power to the thyroid gland, similar to that of the spleen, because the local adaptations of the thyroid gland to the trachea and larynx, must necessarily furnish heat to the nerves and muscles of the organ of voice, whose bloodless! cartilages are exposed both within and without to the effects of atmospheric changes, and *perhaps, the goitre* is no more than *a natural effort to uphold the temperature of those parts!!* under certain influences of climate."

Now, then, it is well known that every part of the throat internally is amply supplied with arterial blood, so are the fauces and the schneiderim membrane, from the nostrils and the parts with which they have a communication throughout, even to the expansion of the bronchial tubes; hence the frequent inflammatory affections of these parts, upon the

slightest cause, and the more so in patients of depraved habits, and in whom the previous occurrence of such affections create a morbid sensibility of these parts, therefore it does not appear that so great a necessity for any additional *high temperature*, as he imagines, should exist. Besides, all bones and cartilages have a due supply of blood during *life*, so as to render them capable of performing the offices allotted to them in the animal economy, though such supplies are not easily traced and demonstrated *post mortem*. The thyroid gland is useful, in sheathing and protecting that part of the organ of voice, vulgarly called the pomum adami, which is composed of five cartilages, viz. the thyroid, cricoid, two arytenoid, and the epiglottis. I have ascribed other more important functions to this organ, and explained them amply in my treatise on the structure, functions, and diseases of the spleen, and shall therefore beg to be excused from entering into further particulars on the present occasion, except that the thyroid gland serves to give an external appearance of comeliness and perfection to the neck.

If this high degree of temperature, which he informs us the thyroid gland possesses, and imparts to the organ of voice, were such as he represents it to be, what would be the consequence when inflammation of the trachea in

particular, and the other adjacent parts, happens, or takes place, which is by no means an uncommon occurrence, when so much phlogiston is produced internally, and so much more of *Sir Anthony's phlogiston* applied externally. Why, it must be the exhaustion and incrassation of the fluids destined not only to lubricate those parts, but also to assist in the performance of other important offices, which I have explained more at large in another place ; under such circumstances, we should have to witness most, if not all, the symptoms of stridulous suffocation, such as difficult respiration, a somewhat convulsed hoarse cough, a stridulous voice, not unlike the crowing of a cock, thirst, a strong and accelerated pulse, not unfrequently accompanied with obtuse pain, and sometimes a tumour in the superior part of the trachea, &c. &c. &c. With such a train of dangerous, and too often fatal symptoms, as those even, though more might be enumerated, which accompany the above-mentioned, and other diseases of these parts, I imagine it will not be an easy matter for him to establish his doctrine of *high temperature* and extra phlogiston, as applicable to those parts, or at all necessary, and therefore useful in the way in which he has represented. This gland is no larger in cold than in hot climates—in winter than in summer, except

in a state of disease which he, Sir Anthony Carlisle, considers necessary. Besides, it is a well-known fact, that the low temperature of the atmosphere is considerably modified, and rendered much milder in its passage from the exterior of the mouth, and of the nostrils, through the anterior and posterior fauces, to the immediate organ of voice, by the natural heat and moisture of those parts; this circumstance also tends to disprove his theory and to shew that the high degree of temperature which he ascribes to the thyroid gland, even supposing it to exist in this organ, is not altogether so necessary for such purpose as he imagines; it is therefore very probable, that, with all his *olfactory tact* he has not yet *scented out* the more essential office of the thyroid gland.

The idea of the goitre being a natural effort to uphold the temperature of parts so abundantly supplied with arterial blood, or even though they were not so supplied, appears to be not only *mischievous* and *blasphemous*, but in every respect futile and ridiculous. What! a state of disease in any organ, yea, and a dangerous disease too, necessary to assist in carrying on the ordinary functions of life in any contiguous part, a præternatural state of the thyroid gland to be considered useful or in any degree essentially necessary for the

more perfectly free state of respiration, or for the harmonious melody of the voice. Who ever before heard of so spurious and untenable a doctrine? such as at once evinces the grossest ignorance, and the most wicked presumption. Is it that a state of disease which impedes the freedom of respiration and deglutition, destroys the melody of the voice, and obstructs the free return of the blood from the head, besides being troublesome, unsightly, and inconvenient in other respects, should be looked upon as necessary for the due performance of the ordinary and natural functions of any contiguous part or parts, and that a theory founded upon such an opinion, should be considered in any other light than as ill-founded, irrational, spurious, fulsome, ridiculous, and futile as it is dangerous.

This appears to shew pretty clearly that he has paid but little attention to the cause and cure of the diseases of the thyroid gland and of the spleen, otherwise he could not have made such a bungling business of the explanation of their functions with which he has presented us.

"But," he says, "this occasion does not permit an extension of these observations, I will therefore reserve for a future time, a more general review of the physiology of glands and other structures, *now rendered* apparent

dependencies on the physical adaptations of the blood vessels."

I am inclined to think that it would have been quite as well for him if he had not extended his observations on those abstruse subjects even so far as he has done, as they do not appear to be beneficial to others, or very creditable to himself, but on the contrary, so much otherwise, that it is to be hoped when the future time which he mentions shall have arrived, he himself will also come better prepared than he appears to have been on this latter occasion, and that his intended "more general review of the physiology of glands and other structures," now, he *significantly* tells us, and I suppose as he would have it, *only now*, rendered by his extraordinary sagacity! apparent dependencies on the physical adaptations of the blood vessels," will be better worth the perusal of philosophers and scholars. What vanity and conceit is here evinced, and what an extraordinary rapacity and desire to monopolize every meritorious discovery, and improvement in the medical profession, without the talent or ability to do adequate justice to such abstruce subjects as he has undertaken to elucidate.

Enough has been said to shew that he is not so capable of explaining, and therefore not so intimately acquainted with the anatomy and physiology of the human frame, as he

seems to be with that of whales, porpoises, turtles, and other animals and reptiles of an inferior order.

Every thing duly considered, it appears quite clear that if he has heretofore stood high in the estimation of his medical brethren, he cannot, in justice be considered capable of maintaining such position any longer, after the crude specimen of his boasted physiology and philosophy which I have been considering. He lies prostrate, by *his own hands*, and may be looked upon rather as an object of pity than of envy, because of the great difficulty there is in retrieving a medical character when once lost.

> Facilis descensus averni, sed revocare gradus
> Iterumque evadere ad auras,
> Hic labor hoc opus est.*
>
> VIRGIL.

"I am not ambitious to become the *sponsor* of additional technical words, seeing that our profession is already clogged with a superabundance: yet I am strongly tempted to propose a generic name for the thyroid gland and

> * The gates of hell are open night and day
> Smooth the descent, and easy is the way,
> But to return and view the cheerful skies,
> In this the task and mighty valour lies.
>
> DRYDEN.

for the spleen. Since they do not perform the secerning offices of real glands, and if at any future period this suggestion should be adopted, some term derived from the Greek verb ΘΕΡΜΑΙΝΩ (which signifies to warm) may probably be thought the most eligible by professional scholars."

Here then, for once, he has the modesty to state that he is not ambitious to become *the sponsor* of additional technical words, yet he is strongly tempted to become the *pater* and *babtisator* of a generic name for the thyroid gland and for the spleen, seeing that they do not perform the secerning offices of *real glands;* then it would appear by his shewing that they are not real glands, because they have not excretory ducts; it also appears that he is considerably puzzled to get over this part of the question, though it seems he will not be satisfied that any one besides himself should be entitled to any merit that might result from being the pater, of this new name, for which he has supplied us with a Greek verb as a mater; it appears well for him that he is at the conclusion of this subject, it being manifest, that the farther he gets into the question the more perplexing he renders it; therefore, it seems but fair to infer, that he himself is very considerably perplexed; it appears curious and singular

enough that a man should have the presumption to offer a generic name for organs, with the functions of which he has shewn himself to be so totally unacquainted. Why not satisfy more competent judges of the correctness of his theory respecting the functions of these organs in the first place, then, indeed, and not till then, has he any right to propose any generic name for the spleen, or for the thyroid gland. Such presumption appears to amount to an insult towards the continental physiologists, to whom he has appealed for a candid consideration and approval of his theory, as it appears he would thus become the judge and jury of his own work.

On the whole, I consider him singularly unfortunate throughout the entire of his undertaking, so much so, that he is left to exclaim in the language of Ovid, Heu potiar telis vulnera facta meis.

I should feel sorry to use language that might be considered harsh or indecorous, or follow the bad example that he has set me, but the extreme arrogance and insulting hauteur evinced by him appears to call for a suitable castigation, in terms more severe than I am capable of; besides the subject is of vital importance to the rising genius of all medical students, and through them to the community at large, that the strongest and most energetic

language is necessary to point out the fallacies of so spurious a doctrine, even independently of the insolence with which he has thought proper to treat his more learned medical brethren of this country, without the least reserve or exception.

In conclusion, I beg to observe, that as he appears to have been equally unsuccessful in his attempt to give any farther elucidation of the Physiology of the Human Hair, I may on a future occasion offer a few observations on that subject.

FINIS.

The following is the Translation of the Latin in the Title and Dedication.

Thus like an alien in a land unknown,
I learn to pity woes so like my own.

DRYDEN.

Hail, O ye holy manes! hail again,
Paternal ashes, now revived in vain!

DRYDEN.

TESTIMONIALS, &c.

See the "London Medical and Surgical Journal," for October, 1831, page 282, the 11th and following lines, wherein the learned and ingenious editor, Dr. Ryan, who has seen and perused some of my writings on this subject, has been pleased, unsolicited, to have alluded to the matter in the following terms, *viz.* "We hope, ere long, to be able to place the Pathology of the Spleen in a proper light before our readers, from the work of Mr. MAC NOLTY, of Queen Street, Golden Square, which contains a great deal of valuable and curious information on the Anatomy, Physiology, and Pathology of the Spleen, and of the great influence of that organ in producing a variety of diseases, ascribed to other causes."

See also his most valuable work on the Theory and Practice of *Midwifery*, lately published by Renshaw and Rush, 356, Strand, wherein that talented and distinguished physician has alluded to two very important cases communicated to him by me, and which cases have occurred to me in the course of my practice in that art. Page 540.

The subjoined casual certificates, independently of many other important testimonials which I can produce, tend to show, at least, that I am not of very recent standing in the medical profession.

"*Winchester, March* 4, 1815.

"From what we know and have heard of Mr. MAC NOLTY, we are of opinion that he is a very fit and proper person, in every respect well qualified to fill the offices of House Surgeon and Apothecary to the County Hospital, Winchester, and we do hereby certify the same.

"ANDREW CRAWFORD, M.D.
CHARLES LITTLEHALES, M.D.
GILES LYFORD.
W. N. WICKHAM.
CHARLES MAYO.

"*Physicians and Surgeons to the above Institution.*"

"This is to certify, that I met Mr. MAC NOLTY, as a medical attendant, in many cases. I consider him intelligent and rational, and possessed of a great deal of medical acuteness, which I think eminently qualifies him for a very useful member of his profession.

"Given under my hand, at Ballina,

"T. M'HUGH, M.D.

"*May the 8th*, 1823."

To those critics, if any such there are, who distinguish themselves more by a display of cavilling at words, than any guarantee of a meritorious production of their own, I would say—

"Si aliquid novisti rectius istis,
Candidus imperti, si non his utere mecum ; *Horace.*

If better sense than this you can impart,
Come do it, Sir, I pray with all my heart ;
If not, however, you contented be,
Join in this opinion yet with me.

To the more learned and liberal of the Nobility and Gentry, from whom I have heretofore received, and from whom I hope hereafter to receive, patronage and encouragement, I address myself in the language of a Roman poet, viz :—

Pastores hedera cresentem ornate poetam
Arcades ; *invidia* rumpantur ut *ilia* CODRO.
Aut si ultra placitum laudarat baccare frontem,
Cingite, ne *mala lingua noceat* vati futuro.
VIRGIL.

Arcadian swains your youthful poet crown,
With ivy wreaths, though *surly* CODRUS frown ;
Or if he blast my muse with envious praise,
Then fence my brows, with amulets of bays ;
Lest his ill arts, or *his malicious tongue*,
Should poison or bewitch my growing song.
DRYDEN.

To those of an opposite caste in the medical profession, who enjoy ill merited monopolies, and occasionally attempt vainly, as unsuccessfully, to write upon some of the most useful and important parts of the art of medicine, such, for example, as that of *Obstetricy*, and whose *limited* capacities could never permit them to become skilful members in this department of the art of healing; who pompously as vainly study their own importance, and *self interest*, rather than the well-being of their fellow men, or the improvement of useful science, of which they are not really capable, at best, and whose conduct I *despise*, I shall address myself in the language of another Roman poet, namely:

Qui rodit absentim amicum, qui non defendit alio
Culpante; Solutos qui captat risus hominum,
Famque dicacis; ille, NIGER EST!!! *tu romane cavato.*

HORACE.

And again,

Odi profanum vulgus et arceo.

How different the *few* to whom I allude, from the great majority of their contemporaries.

Shortly will be Published,

BY THE AUTHOR HEREOF,

A

PHYSIOLOGICAL AND PATHOLOGICAL ENQUIRY

INTO THE

Functions and Diseases of the Human Spleen.

TO BE FOUNDED ON THE FOREGOING ANATOMY.

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