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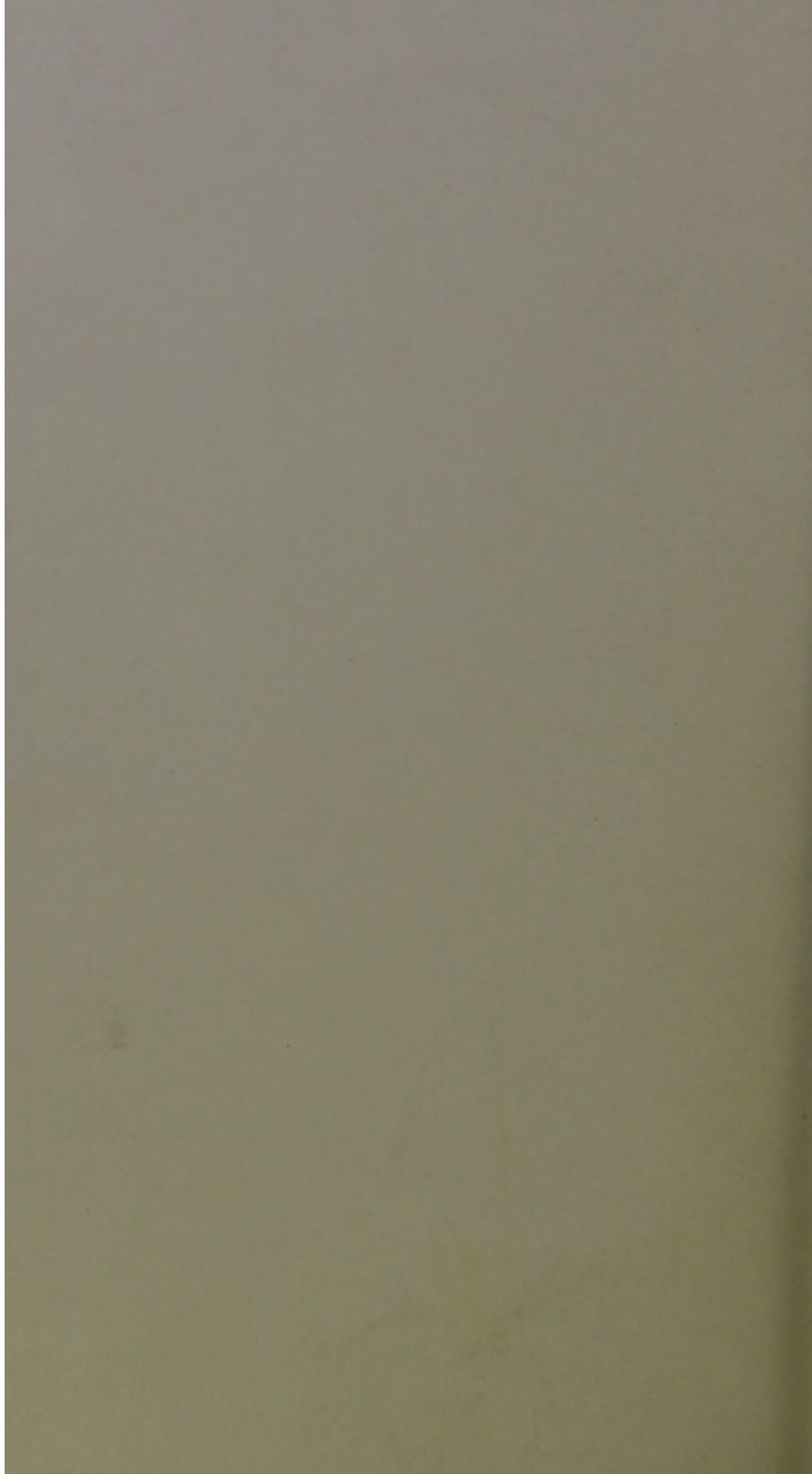
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Dr. Bennett

With the Author's Compl.

ESSAY

ON

TEMPERAMENT.

ESSAY

ON

TEMPERAMENT

INAUGURAL DISSERTATION

ON

TEMPERAMENT.

SUBMITTED TO THE MEDICAL FACULTY OF

The University of Edinburgh,

IN CONFORMITY WITH THE RULES FOR GRADUATION,

BY AUTHORITY OF

THE VERY REVEREND PRINCIPAL BAIRD,

AND WITH THE SANCTION OF THE SENATUS ACADEMICUS,

BY

ANDREW WHYTE BARCLAY,

CANDIDATE FOR THE

DEGREE OF DOCTOR IN MEDICINE.

BERLIN:

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INAUGURAL DISSERTATION

ON

TELEGRAPHY.

PRESENTED TO THE MEDICAL FACULTY OF

THE UNIVERSITY OF EDINBURGH,

IN CANDIDATE FOR THE DEGREE OF DOCTOR OF MEDICINE,

BY

ANDREW WHITE BARCLAY,

OF THE MEDICAL FACULTY OF THE UNIVERSITY OF EDINBURGH.

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UNIVERSITY OF EDINBURGH.

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1860.

TO

JOHN MÜLLER, M. D.

PROFESSOR OF ANATOMY AND PHYSIOLOGY

IN THE UNIVERSITY OF BÉRLIN, ETC.

THIS ESSAY

IS DEDICATED,

AS A TRIBUTE OF RESPECT

TO HIS GREAT AND MUCH-ADMIRERED TALENT,

AND GRATITUDE

FOR HIS ASSISTANCE AND FRIENDSHIP,

BY

THE AUTHOR.

JOHN MILLER, M.D.

LECTURES ON THE HISTORY AND THEORY

OF THE TREATMENT OF FEVERS, &c.

THIS ESSAY

IS INTRODUCED

BY A DISCOURSE ON NATURE

OF THE GREAT AND BEAUTIFUL SYSTEM

OF THE UNIVERSE

AND ITS APPLICATION TO THE ARTS

THE AUTHOR

TO

HIS EARLIEST PROFESSIONAL FRIEND

WILLIAM SHARPEY, M. D. F.R.S.L. & E.

PROFESSOR OF ANATOMY AND PHYSIOLOGY

IN UNIVERSITY COLLEGE, LONDON,

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GEORGE HAMILTON ROE, M. D.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON,

PHYSICIAN TO THE WESTMINSTER HOSPITAL,

AN INVALUABLE FRIEND AND KIND ADVISER,

THIS ESSAY

IS RESPECTFULLY DEDICATED,

BY HIS

FRIEND AND PUPIL,

THE AUTHOR,

IN GRATITUDE FOR THE COUNSEL, ASSISTANCE AND INSTRUCTIONS,

EVER SO LIBERALLY AFFORDED HIM DURING

HIS PROFESSIONAL STUDIES.

GEORGE HAMILTON ROE, M.D.

LECTURE ON THE MORAL QUALITIES OF PHYSICIANS OF LONDON

DELIVERED AT THE WESTMINSTER HOSPITAL

AT THE REQUEST OF THE MEDICAL SOCIETY OF LONDON

THIS ESSAY

IS HEREBY RECOMMENDED

BY THE

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THE AUTHOR

AS A CONTRIBUTION TO THE MORAL, MEDICAL AND PHYSIOLOGICAL

TEACHING OF THE MEDICAL STUDENT

BY THE MEDICAL SOCIETY OF LONDON

TO

GEORGE BARCLAY, M.D.

HER MAJESTY'S STAFF-SURGEON AT CEYLON,

THIS SMALL TOKEN OF GRATITUDE

FOR THE UNVARYING FRIENDSHIP AND KIND SOLICITUDE FOR HIS WELFARE,

DISPLAYED BOTH PRIOR TO,

AND DURING

HIS MEDICAL STUDIES,

IS RESPECTFULLY DEDICATED,

BY HIS AFFECTIONATE

NEPHEW,

THE AUTHOR.

GEORGE BARCLAY, M.D.

NEW METHOD OF TREATING THE TYPHOID

AND THE TYPHOID OF THE STOMACH

FOR THE TYPHOID OF THE STOMACH AND THE TYPHOID OF THE STOMACH

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THE AUTHOR

ON TEMPERAMENT.

In taking a survey of the works of nature, from the lowest grade of vegetable life, to the most perfect structure in the animal Kingdom, we are not more struck with the unity of design that pervades the whole, than with the endless variety every where to be met with; not only forming broad bases of distinction, whereby they may be divided into classes, genera, and species, but entering into every part of their conformation, and producing those more minute differences which distinguish one individual from another. Traceable as this is, in every class of created beings, it is perhaps not more marked in any than in man: Placed at the head of sublunary beings, — designed by his Maker to be the lord of this lower world, — alike fitted for fulfilling the functions of his animal existence, and for executing the higher duties expected of him as a reasonable being, — adapted for existing in the frozen region, or reigning in the torrid zone, shall we wonder that in each individual a conformation should be found, differing from the rest of the species, corresponding in some degree to the situation in which he is placed, and more or less modified to meet the duties which in that situation he may be called on to perform? Shall we consider those varieties of feature and of figure met with throughout the Globe, as a sort of inexplicable *lusus naturae*, without purpose or design? Is it not much more reasonable to suppose that in all,

a plan of unbounded wisdom has been followed; and that, as our reseaches into their causes become more extended, and our modes of investigation more perfect, we shall be able to ascertain, both the laws on which they depend, and the purposes they are intended to serve in the human economy? We can scarcely anticipate the discovery of those hidden and mysterious causes, which prevent a perfect similarity in any two individuals; but we may approach to a solution of those, which have produced the principal varieties, in opposition to the effect of hereditary transmission. To the medical man, in the exercise of his profession, the study of the features is one of considerable importance, not only as indicative of the progress disease has made, or even of the nature of the ailment under which the patient is labouring; but as pointing out to a certain degree, those to which he is more particularly liable, the mode of treatment most likely to be attended with beneficial results, or the probable effects of remedies on his constitution, if he can be classed under some general variety whose properties and qualities have been ascertained by previous investigation: And to this object we wish more particularly to direct attention in the present Essay.

The subject however is one of almost unlimited extent, and I have not as yet been able to devote to it the time requisite for the elucidation of one so obscure, and on which so little has been hitherto written. Following in the steps of their predecessors, each seems to have taken for granted, what he thought it needless to examine; and while most authors have carefully enumerated the several varieties of temperament acknowledged in all ages of medical science, — while some have deemed it expedient to add to their number, to make up for

an ideal or apparent deficiency, and others have been engaged in modifying the explanation of each, according to their several theories, in order to remove some discrepancy discoverable in previous definitions, yet no one has set himself to acquire correct information on the subject, — none have deduced their theories from their only legitimate source, a body of well authenticated facts: And we find ourselves left entirely in the dark in regard to those points on which it is most important we should be informed, — the subject being generally laid aside, with a brief and vague outline of the principal marks of distinction; so that we are inclined to say with M. Thomas of Paris, “On peut conclure que l'idée que l'on fait jusqu'aujourd'hui des tempéramens est tout-à-fait vague et incertaine.”^a It shall be our object therefore to point out in the first instance, as far as may be collected from various sources of information, the varieties accompanying differences of situation, climate etc., and then to shew the variations in the moral and physical character of the individual, concomitant with each of those varieties; without speculating whether the external circumstances of themselves develop the form of temperament, or merely assist in its production by acting on some hereditary or congenital peculiarities; or enquiring, what in these circumstances there is, — what variation, in the qualities of the atmosphere, the soil, or the food, that can be supposed to possess this influence, on the one hand; or stopping to investigate, on the other, in what way the temperament itself is capable of influencing the mind or body of the individual, who is the subject of it: believing that if we can shew any fixed principles of

^a Physiologie des Tempéramens par M. J. Thomas.

acting, or invariable concurrence of circumstances, we shall have sufficiently exhibited some relation at least, approximating in its permanence, to cause and effect.

To deny the existence of distinct forms of temperament altogether, is to deny what has been conceded by all by-gone ages, and found consonant with the general observation of mankind—is, in short, to assert that the word is without signification, and that no condition of body exists, to which the name can with propriety be applied: but to define what is exactly meant by the term, is a matter not so easily attainable. None can admit their reality, and remain ignorant of, or blind to the importance of the careful discrimination of them, or the consequences that may result from their existence; and accordingly, we find the subject, since its first promulgation in the days of Hippocrates, ^a continually reverted to, by subsequent writers. But notwithstanding the reiterated statements thus made of their various denominations, as well as of the diseases of the body and affections of the mind incident to each, yet a distinct account of their several forms and origins is still wanting; and numerous difficulties present themselves in entering upon such an obscure investigation, perplexed as it is, alike by the ignorance of past ages, and the extravagances of more modern times.

By some, temperament has been viewed as the primary agent in the production of the characters observed, while others consider it as but concomitant with them, and indicative of a peculiar condition of the system: Dr. Darwin's definition is, "a permanent disposition to certain

^a Hippocrates de Natura Hominis.

classes of diseases;" ^a but enough will be shown in the sequel, to prove that this is not the case. It appears to me to consist in a certain definite relation between the solids and fluids of the body, exhibiting a preponderance of one over the rest, which marks the particular class to which the individual may be referred; and is dependent on a predisposition, natural or acquired, to an increased developement of particular organs, — a tendency to certain actions, and to be acted upon in a peculiar way, by certain modifying causes, — an idiosyncrasy common to a number of individuals, marked and discernible by certain external signs; or, to describe it in the words of Hallé, "*Des différences entre les hommes, constantes, compatibles avec la conservation de la vie, et le maintien de la santé, caractérisées par une diversité de proportion entre les parties constituantes de l'organisation, assez importantes pour avoir une influence sur les forces et les facultés de l'économie entière.*" ^b It surely requires no great amount of logic to prove, that some persons have an invincible tendency to obesity, while others may consume enormous quantities of aliment without any increase in size: The common information of men is sufficient to make them aware, that one individual from his fulness of blood, has a tendency to apoplectic attacks; while the spare habit of another, sets him free from any apprehension of such an occurrence. That these effects are not produced by external circumstances alone, is evident from the fact, that no efforts on the part of him who is the particular subject of them, can, when the habit is fairly established, to any great degree,

^a Darwin's Zoonomia Vol. I, Sect. 31.

^b Diction. des Sciences Medic. Tom. LIV.

modify the condition of his frame; while, whatever may be said of counteracting influences prior to this period, it is still observable, that persons educated in a similar manner, and placed in similar circumstances, do each manifest a tendency to a particular mode of development; — and to this the name of Temperament is given.

The origin of the term does not throw much light upon the subject: — Dr. Gregory merely says of it, “*tanquam a mixtura et quasi temperatione variorum quae in humano corpore insunt elementorum.*”^a The word *tempero* from different parts of which, *temperamentum*, *temperatio*, and *temperatura* are derived, is evidently formed from the ancient declension, of *tempus temperis*, and signified, to order, in regard to time, and consequently to temper, in regard to qualities; whence these words most properly apply to the due adjustment of the various objects to which each relates; the proportion of the component elements of the frame being implied, when temperament is alluded to; while temperance in the actions of individuals, and temperature in regard to the amount of heat or cold, have also reference to this equal balance of contrary qualities. The oldest acceptation of temperament must have been, we should therefore conclude, the complete adaptation of structure, or the exact correspondence of all the tissues, constituting the perfect type; but it is to the deviations from this, that the name is now almost exclusively applied: and in following up the subject we must turn our attention more peculiarly to these, in order to mark the results in each separate portion of which the whole is composed. It is not to be supposed that we shall be able to discover by outward

^a Gregory's Conspectus Chap. XXIII.

signs, the peculiar idiosyncrasies of Individuals: — deviations from the general laws of nature such as these, are not traceable to causes which manifest themselves externally, any more than a distinct physical cause can be shewn, why a person who has once been the subject of variola, or has had the variolous or vaccine virus introduced into his system by artificial means, is more free from the risk of infection, than one who has not had the benefit of inoculation; while, on the other hand, the contagion of syphilis selects as its victims, alike those who have never experienced, and those who have already suffered from its dreadful ravages: — No more can we trace the cause, why one who has lived for a time within the range of marsh miasmata, should be ever after liable to attacks of intermittent fever.

The temperaments have been variously enumerated by different authors, and have been so, perhaps, more in consequence of the hypothesis which each has sought to maintain, than from any uncertainty in regard to their distinctive characters or their existence; for while some have limited their number to four, others, by subdividing one or other of the more prominent types, have increased them to five, six, or even eight, as fancy has dictated. Their original number was four, and in accordance with Hippocrates' idea of the four cardinal qualities, ^a they received the names of the Hot, Dry, Cold and Moist; or, from the four supposed ingredients of the blood, were distinguished as the Sanguine, the Choleric or Bilious, the Phlegmatic, and the Melancholic, severally relating to the red-colouring matter, the yellow bile, the phlegm or pituitous matter, and the black

^a Hippocrates de natura Hominis.

bile: Boerhaave however does not consider them as synonymous; but, after enumerating the eight as distinct forms of Temperament, declares his belief, that the second series have their origin in a combination of two of the elements of which the first are composed; the sanguine, uniting the warm and moist; the choleric, the warm and dry; while the phlegmatic and melancholic respectively include the cold and moist, and cold and dry. ^a Such theories are now justly discarded; but the quadrate division, although receiving its appellations on false grounds, corresponds so closely to the result of actual observation, that even the nomenclature thus adopted, has been to this day retained by many physiologists. Dr. Gregory has thought it necessary to add a fifth, which he denominates nervous, „quippe cui insignis generis nervosi debilitas et mobilitas contingant;” ^b — but rather as superadded to the rest, “Talis generis nervosi conditio in omnibus temperamentis effici potest.” ^c But, with all due deference to the opinion of so great an observer of nature, I cannot help remarking, that the description of the choleric comes so near to that of his nervous, that it appears to me, we have no just cause for separating the one from the other; and any cases which came under his observation, and seemed to call for such a distinction, might have been with greater justice accounted for, on the principle of the varieties produced by the combination of one and the same temperament with others; for it is scarcely possible to point out any individual, who does not unite, with that which forms the

^a Boerhaave Institutiones Medicae.

^b Gregory's Consp. ut supra.

^c ibid.

predominant form in his constitution, some portion of one or more of the others.

It is evident that authors have differed nearly as much in the characters they have assigned to each denomination, as in the nomenclature they have adopted: one describing under one name, that which is described by another, under an appellation totally different, and not unfrequently applying the same term to two, the very opposite of each other. As an example of this, we may compare the description given by Cabanis, ^a of the "temperament bilieux," with that of Richerand. ^b The former has added to the four ordinary varieties, two, which he has denominated the nervous and muscular; but their character is so vague and ill defined, that they may with justice be considered, only as representatives of morbid conditions of individual temperaments, or as arising from their combinations with others. In speaking of the bilious, he mentions as its characters, "dispositions violentes et ardentes, et ce sentiment habituel de mal-être et d'inquiétude;" he adds "Ainsi les impressions seront rapides et changeantes," and, "le caractère âcre et ardent, que les dispositions impriment à la chaleur du corps, l'extreme sensibilité de toutes le parties du système, donnent à l'individu un sentiment presque habituel d'inquiétude;" these and similar qualities he absurdly attributes to "un foie volumineux et une grande énergie des organes de la generation," which he alleges "augmentent la sensibilité des extrémités nerveuses et les sensations." ^c

This, as we shall afterwards show, corresponds very

^a Rapports du physique et du moral de l'homme.

^b Nouveaux Elémens de Physiologie.

^c Memoire VI.

closely to the definition of the true nervous or choleric temperament, which was in the ancient division synonymous with the bilious; but differs in toto from that of M. Richerand, who gives the description more commonly received among modern writers, making it synonymous with the melancholic, “le poulx fort, dur, et fréquent — les chairs fermes, les muscles prononcées, les formes durement exprimées etc.,” and “le caractère ferme et inflexible.” ^a Both these Authors however, attempt to distinguish the bilious from the melancholic, in consequence of which, the latter is reduced to a mere non-entity, or at best a morbid condition, produced by a degree of melancholia superadded to the form of temperament, and perhaps heightening its character; while to the bilious, those features are ascribed, which would have made the nervous of the one, and the muscular of the other, more complete. If we thus reduce the number, in each case to four, their descriptions will on the whole, I think, be found good, uniting as they do, the exclusively humoural ideas of Stahl, ^b with the exclusively antihumoural doctrines introduced by Haller. ^c Under the Name of muscular or athletic, M. Richerand describes with considerable perspicuity a form, that evidently combines many of the characters of the sanguineous and nervous, with what it ought more closely to resemble, the bilious or melancholic; and which might with greater propriety be considered, as the model of perfect physical health.

Similar remarks apply with equal justice, to the state-

^a Nouveaux Elémens de Physiologie. Chapit. XI.

^b Physiologiae Memb. I. Sect. IV. etc.

^c Elementa Physiologiae.

ments of other authors, who have but too frequently involved the subject in greater obscurity, by the addition of their own theoretical opinions to the sufficiently incomplete statements of preceding writers; thus rendering both equally confused, while they have at the same time, occasionally given remarkably good and forcible descriptions of particular forms of temperament, such as are to be met with in the writings of Hallé, *a* and Venette. *b*

In the divisions of the temperaments, authors have generally overlooked the possibility of two existing in combination, they have not therefore sought to analyse the forms which have been presented to them, but assigning separate names to each, have selected those which appeared to them sufficient to comprehend the majority of individuals; and these are sometimes so various, that they appear to have scarcely any correspondence to each other: the Melancholic, the Choleric, the Bilious, the Athletic and others, have doubtless reference to certain forms of body of common occurrence; but, as they give no explanation of the cause and origin of each, it is impossible to include them all in a scientific arrangement. Heterogeneous as they at first sight seem to be, we may observe a species of approximation in the system of each: Thus, the Lymphatic and Sanguineous have never been confounded with the others, dependent as they are, upon forms of body which can never be mistaken, and having origins so perfectly distinct: further, in every statement we can easily perceive, that one has invariably received some appellation expressive of a mental origin, while the others are more purely corporeal. Knowing, as we do

a Diction. des Sciences Medic T. LIV. Art. Tempérament.

b La generation de l'homme etc.

in the present day, the intimate relation between the mental faculties and the nervous system, we can hardly do wrong in ascribing to the latter, the influence in the production of physical phenomena which was at one time conceived to be due to the former; and, selecting the most prominent and best defined of the rest, we shall find no difficulty in shewing, that the other forms are but modifications and combinations of the original quadrate division.

M. Thomas of Paris appears the first to whom the idea has suggested itself of a combination of the temperaments. He has propounded a theory, ^a based upon a ternate Division, altogether different from that adopted by his predecessors; but it appears to me, that he has fallen into a fatal error at the outset, in ascribing to the effect, that which is due only to the cause. He has observed the consequences resulting from varieties of temperament, in the protuberant paunch of the lymphatic man, and the athletic form and largely developed chest, displayed by those individuals in whom there exists a combination of the melancholic and sanguineous temperaments, — and in place of searching for the cause of these phenomena, has set them down, as themselves producing two varieties of temperament, while for the third, he selects the occasional preponderance of the nervous system: these, under the names of abdominal, thoracic, and cephalic temperaments, form the principal divisions in his arrangement, and the details are filled up by their mutual combinations. M. Thomas has surely forgotten, that the appearances to which he alludes, may indicate an original tendency to a peculiar

^a Physiologie des Tempéramens.

development, but that long ere habit has produced such marked results, some natural tendency must have existed. He cannot have been led to conclude that habit alone is the cause of variety of temperament: neither can he imagine, one would think, that enlargement of the abdomen stands in the same physiological relation to the frame, as an originally unusual preponderance of the nervous or sanguiferous systems. Again, while he himself points out that the brain has not, to the nervous system, any definite ratio, — that the action of the one, is totally independent of the other, — that the nerves have reference, merely, “à la promptitude ou à la lenteur de la transmission des impressions,” ascribing to the brain, “la susceptibilité, la force, et la durée de ces impressions, et leur combinaisons,” and adding, “que les nerfs n’ont pour fonctions, que de transmettre les impressions, du cerveau aux organes, et des organes au cerveau,” ^a in other words, that the brain has reference to the mind, the nerves to the system; — yet he maintains the palpable absurdity, of taking the size of the head as an indication of the nervous temperament: many instances might however be adduced, where a large head is unaccompanied by a distinctly marked nervous diathesis, — many, where a decidedly melancholic or lymphatic temperament, actually causes the action of the brain to be sluggish where the head is large. Further, M. T. takes it for granted, that where there is a due proportion between each of the great cavities, the temperament is natural; yet how many cases must be familiar to the mind of every one, where a large head, bearing a due proportion to the chest and abdomen, occurs in persons of a

^a Thomas ut supra.

corpulent or lymphatic tendency; and on the other hand, where a small head, chest, and abdomen are accompanied by the florid, lively aspect of the sanguine temperament.

Still more surprising is it to find Phrenologists praising his doctrine, and saying, that "in principle, in simplicity, and in practical usefulness, it excels all that have preceded it;" and that, "whatever may be its ultimate fate, Dr. Thomas has succeeded in making at least one step in advance, in a difficult and intricate path." ^a Much as Phrenology seems to be on the decline in this part of the world, if it may be said ever to have had, here at least, many able supporters, we cannot pass over, without a remark, the fallacy into which a man of Mr. Combe's general good sense has been betrayed in this matter. For while frequently reiterating the statement, that "*ceteris paribus*, size is a measure of power," and qualifying it by saying, that "the better constituted, though smaller brain, will manifest the mind with greater vigour," ^b and accounting for this on the principle of varieties of temperament, — yet we find him maintaining, in his review ^c of M. T's. work, that the cranial temperament, (by which no other can be understood than what he elsewhere designates the nervous), is marked by the large head; and thus at once doing away with the possibility of a large brain being rendered inactive by a lymphatic tendency, on which he lays such stress in other parts of his works. True it is, that he combines with it in *his* definition, "a spare form

^a Phren. Journal Vol. IV. Review of Thomas' Work.

^b Combe's System of Phrenology.

^c Phren. Journal ut sup.

and moderately developed thorax;" but he only by this, denies the principle already laid down, of its being dependent on the size of the cranium. Such indeed is the error into which the theory must of necessity lead; and, while the expression "*les formes greles*,"^a is introduced as a passing notice of one of the indications of this variety, it is evident, that this, more than any other, must form the distinguishing character. No one can maintain, that in a full habit of body, and a tendency to obesity, combined with indolence of disposition, the head, which is frequently large, can indicate a nervous diathesis; or, on the contrary, that, in an easily excited nervous system, accompanied by hysteria and other evidently nervous disorders, a small head can indicate the absence of this temperament. Such mistakes however, must arise in any case, if we overlook the condition of the rest of the system, and confine our attention to the developement of one particular organ, or part of it, as an index of the state of the whole.

The large abdomen, which he takes as the proof of the lymphatic temperament, is produced, as is well known to anatomists, not so much by an enlargement of the viscera, as by a deposit of adipose substance in the omentum, and under the peritoneal coat of the intestines. In describing the "*Tempérament Abdominal*," he says, "*l'abdomen prédomine, par son volume, sur le crane et le poitrine..... La paroi antérieure de la grande cavité abdominale, forme une saillie considérable en avant.*" As the reason of this he gives, "*les organes abdominaux tendent à augmenter de volume et d'énergie, aux*

^a Thomas. Partie II. Chap. I. §. 2.

dépens de tous les autres." ^a But, whatever be the producing cause, it is evident that these symptoms rarely exhibit themselves in youth or boyhood; and consequently, we are led still further from the truth by the inference, that at this age no such temperament can exist, ^b and that according to the age of the individual, the rest are convertible into each other; and thus, to the modifying power of age, an undue importance is ascribed, and the natural tendency to any particular form, is altogether lost sight of.

From the allusions already made, might perhaps be sufficiently gathered, the arrangement and definitions, which we intend to adopt in this essay; but it may be well, before passing to the further consideration of the subject, to describe each variety more distinctly. The quadrate division, as remarked by Cullen, ^c was probably first founded on observation, and afterwards adapted to the theories of the Ancients; and if we allow with him, that distinct temperaments have a real existence in nature, we may perhaps most conveniently follow up the plan thus pointed out, grounding it on some theory, more consonant with the views of modern physiologists.

We know that the body is primarily formed of the same elements which exist in diversified forms throughout nature, such as, oxygen, nitrogen, hydrogen and carbon; and that these are united into what have been denominated proximate principles, constituting, neurine, fibrine, stearine etc. — each perfectly distinct in composition, but bearing a certain relation to each other, and

^a Thomas. Partie II. Chapit. I. Sect. 4.

^b "Ce tempérament n'est qu'accidentel et acquis." Ibid.

^c Cullen Lectures on Materia Medica.

to the whole. By anatomists it is divided into various tissues, which hold in union different proportions of these proximate elements, while the tissues themselves are again arranged into systems of organs, each fulfilling its peculiar functions in the economy, and all combining together, either to perform those vital actions necessary to the maintenance of the whole frame, or to execute those movements by which one being is linked to another. Of these we may consider as the four most marked, the nervous, — the muscular, — the sanguiferous, — and the lymphatic or secreting systems: not that we wish to maintain, that all the muscles of the body are united together as the nerves or bloodvessels are, or that the involuntary part of the system is associated in action with the voluntary, but that there is a correspondence in development and power, as well as a common sympathy among the majority of them, which justifies this classification; just as, while the secreting system is not entirely dependent for its power or inefficiency on the chyloferous or lymphatic vessels, still, by some unknown sympathy, all the parts necessary to secretion in general, are excited to simultaneous action, when an increased demand is made upon them.

An excess to any extent of one of these tissues, when compared with the rest, will lead to a general derangement of all the functions, and without a due relation being maintained through life, the harmonious whole which nature has so beautifully established, could not exist; but it is well remarked by Dr. Bostock, that while, "if the disproportion be too great, disease ensues, yet there are many gradations compatible with health, where this disproportion is very observable;" ^a and to this we must

^a Bostock's Physiology Vol. III.

trace the predisposing temperament of the individual. It may be objected, that we thus omit many very important parts of structure, as for example, the osseous; but by this portion of the system, no peculiar function is performed, — it stands, as it were, as the ground-work or scaffolding of the building, and is merely part of the mechanism, whereby the muscles are enabled to perform the locomotive acts, of which the animal frame is alone capable; and in fact, is as much subservient to, and dependent on the muscular structure, as the tendons by which the two are linked together. The excretory functions, on the other hand, are so diversified in their actions, and so little linked together by any common bond of union, that it is impossible to unite them in such a way, as to refer them to any common temperament or sympathy of action, by which, having ascertained the extent and power of one, we can predicate any thing concerning the rest; and we shall find as we proceed, that many of them fall to be considered under the heads already enumerated. M. Thomas has, in his usual infelicitous manner, taken notice of this circumstance in the following words, “on peut leur demander, avec raison, pourquoi ils n’ont point aussi reconnu des tempéramens *séreux*, *fibreux*, et *osseux*, et sur tout, *cellulaire*, et *muqueux*; ces systèmes étant aussi important, et aussi repandus?”^a But these are evidently such, that the minute variations to which they are liable, cannot be supposed to exercise any influence whatever over the general character of the individual; and if appreciable to the scalpel of the anatomist, are quite beyond our powers of discrimination during life.

^a Thomas Phys. des Temp. Preface Chap. VII.

We have said that there are four principal divisions of the body, which are so manifestly distinct, as to be easily discerned in their operation during life; and perhaps it might be well, were we to denominate each variety of temperament from one or other of these, dropping altogether the nomenclature of the Ancients, as well from the ambiguity of the terms themselves, and the uncertainty of their employment, as also from their reference, occasionally to mental, and occasionally to corporeal phenomena. We should then have the Choleric represented by the name of *Nervous*; the Bilious and Melancholic, which are frequently confounded together, but occasionally also stand in conjunction with the Choleric, would be described as the *Muscular*; the terms *Sanguineous*, and *Lymphatic*, would still continue as the appellations of those, in which a preponderance of either of these systems was visible; and the other cognomens, Phlegmatic, Atrabilious, Hot, Cold etc., might with great justice be consigned to oblivion. But, as some of these names still continue in use among authors, we would wish it to be understood, that such is intended to be their signification, when they occur in this Essay.

Mr. Combe when speaking of Temperament, gives a very good summary of each, which shall be quoted under their respective heads: Of the Nervous he says, that it "is recognised by fine thin hair, thin skin, and thin small muscles, quickness in muscular motion, paleness of countenance, and often delicate health: the whole nervous system is predominantly active." ^a M. Lignac in mentioning this variety, writes thus, (I quote from the translation, in the absence of the French copy), "their

^a Combe's System of Phrenology. Edit. 1836.

visage is long, — their eyes, great and languid in youth, become dark as they advance in years; — their body is slender, their legs and thighs thin, and their arms and fingers long and lean." Of the women, "their skin though dry, is beautiful, and their negligent gait is by some esteemed graceful and majestic; Balsac," says he, "in describing a nation in which that temperament predominated, said, we should be apt to look upon them as queens that had espoused their slaves." *a* He then goes on to point out its effects, — in powerful eloquence, a persuasive tone, and a lively imagination; leading a man to heroic actions on the one hand, or making him an accomplished villain on the other. M. Richerand says, "on reconnaît ce tempérament, à la maigreur, au peu de volume des muscles mous, et comme atrophiés, à la promptitude et variabilité des déterminations et des jugemens." *b* But we must distinguish the quickness of perception, the acuteness of judgement, and the promptitude for action produced by an excessive development of the nervous system, from the vivacity, the quick movements, and the fickleness and uncertainty which characterise the sanguineous temperament; in reference to which he says, "la susceptibilité nerveuse sera assez vive, et accompagnée d'une successibilité rapide, c'est-à-dire qu'affectés aisément par les impressions que les objets extérieurs font sur eux, les hommes chez qui cet excès des forces circulatoires s'observe, passeront assez rapidement d'une idée à une autre idée, la conception sera prompt, la mémoire heureuse, l'imagination vive et riante." *c*

The excess of the nervous temperament is removed

a Physical View of Man and Woman Chap. I.

b Nouveaux Elémens de Physiologie Tome II.

c Richerand ut supra.

as far as possible from the lymphatic, — the nutritive functions appear to be almost dormant, and the nerves most largely developed; the pulse may be either soft and rapid, or hard and slow, as the tendency is to the combination with the sanguineous, or the melancholic temperament; the muscular system is always more or less weak, and the subject of it complains much of lassitude and fatigue, after any species of exertion, from the excessive action of the nerves, and their predisposition to excitement; the cranial department is sometimes large, but not necessarily so, and invariably acts, from the energy of the nerves, with considerable force in whatever direction its natural tendency may lead;— for a nervous temperament may be either the seat of a clear and decisive judgement, or of fierce and unbridled passions, according to the character and circumstances of the individual. Let me not however be supposed to imply, that post-mortem examinations exhibit an increased ratio of the nerves; that such is really the case, is extremely probable, and that it may exist without being cognizable to our modes of analysis, is equally likely, but I am not aware that any investigations have been made with this view: differences however, in their minute structure, or degree of tone, which we cannot estimate but by their effects, are quite sufficient to account for the varieties of power conferred upon them, and it is enough for our purpose that these effects on the system are well marked and defined.

The Sanguineous forms a decided contrast to the preceding, nevertheless the effects of both are very apt to be confounded; for there is often an equal susceptibility to impressions displayed, although arising from totally different causes. It has not however, from its very

nature, the same relation to external objects, — dependent on an excess of the circulating fluid, its effects are not so much due to its own primary agency, as to its connexion with other parts of the system; and it is thus, only in a subordinate way, because of this combination, that any moral influence is manifested. It gives an increased degree of vigour and activity, in contradistinction to power, and when in combination with a largely developed nervous system, the acuteness of the perception, and the rapidity of action are greatly increased; but it detracts from the steady perseverance in pursuit of an object, and the intensity and durability of passion, whether of love or of hatred, which so peculiarly characterise that temperament; ^a and, in their absence, gives a

^a This contrast is thus forcibly marked by Shakspeare,

Caes. "Let me have men about me that are fat;

"Sleek-headed men, and such as sleep o' nights.

"Yond' Cassius has a lean and hungry look;

"He thinks too much: such men are dangerous.

Anth. "Fear him not, Caesar, he's not dangerous:

"He's a noble Roman, and well given.

Caes. "Would he were fatter:—But I fear him not:

"Yet if my name were liable to fear,

"I do not know the man I should avoid

"So soon as that spare Cassius. He reads much;

"He is a great observer, and he looks

"Quite through the deeds of men: he loves no plays,

"As thou dost, Anthony; he hears no music:

"Seldom he smiles; and smiles in such a sort,

"As if he mocked himself, and scorned his spirit

"That could be moved to smile at any thing;

"Such men as he be never at heart's ease,

"Whiles they behold a greater than themselves;

"And therefore are they very dangerous."

Julius Caesar Act I. Scene 2.

fickleness and unsteadiness to all the movements and purposes of the mind.

The greatest excess of this form is in childhood; it diminishes with age, when the rapidity of the circulation declines, and the maturity of the intellect corrects the ebullitions of youth. It is more frequently to be met with however, in combination with the athletic frame and well developed limbs of the muscular temperament, when there will result a delight in corporeal exercise, in change of scene, or in martial exploits, — a bent of mind that often brings the subject of it into difficulties, from which his mental energy is unable to extricate him: Such persons are ever meeting with adventures, and a lively imagination may clothe the whole with a feeling of the romantic, which greatly enhances the pleasures of life, and keeps them at equal distance from the refined enjoyments of mind, and the sensual pleasures of the table. Combe says of it, “the sanguine is indicated by well-defined forms, moderate plumpness of person, tolerable firmness of flesh, light hair, inclining to chesnut, blue eyes, and fair complexion. It is marked by great activity of the bloodvessels, fondness for exercise, and an animated countenance.” ^a M. Lignac describes it in language almost precisely similar, adding, “He has through his whole bodily structure a pleasing warmth, accompanied by ardent desires, which intimate his propensity to pleasure; to this he is also impelled by a natural liveliness, a fruitful fancy, and a strong inclination to mix in society.” ^b With these definitions I am inclined for the most part fully to coincide, but I must remark, that if red

^a Combe's System ut sup.

^b Lignac's Physical View.

hair and blue eyes be distinctive of this temperament, and their absence indicate a different variety, we must deny its existence, in almost all nations south of Germany and the northern parts of France, in which we know, that among the natives, the xanthous variety of colour, properly so called, occurs but very rarely; — an assumption, which it appears to me, we are quite unauthorised to make. The characters however, of a florid complexion where discernible, a full — firm pulse, and vivacity of expression, are sufficiently distinctive; and its importance as an indication in the diagnosis of disease, or the proper mode of treatment, can stand in no need of demonstration to persons in practice, by whom the state of the patient's pulse is always one of the first things considered.

The Bilious or melancholic temperament is one, about which much more confusion seems to have arisen among physiologists, and we find M. Thomas expressing his surprise, that those, who in compliance with usage have adopted the term bilious, have not ascribed to it, "*un volume considerable de foie.*"^a We have already pointed out the origin of this antiquated nomenclature, and since the days of Boerhaave and of Stahl, no such idea has been at any time attached to this one: neither are we at all justified, in ascribing to it any thing like a hypochondriacal disposition, by the descriptions of authors in general; who have, with the exception of those who considered it the same as the choleric, ever described it as consisting in a firm and compact texture of the solids of the body, accompanied by a large supply of blood, which is necessary for their maintenance in that condi-

^a *Physiol. des Temp. ut supra.*

tion. It is in this form that the greatest amount of animal vigour is present; and it thus stands opposed, as well to the nervous, in which mental powers are more marked, as to the sanguineous, in which activity is the leading feature; but, while the sanguiferous system is greatly kept in check, there is evidently a tendency to plethora; and by absorption, during the continuance of many acute diseases, the one variety is not unfrequently, for a time, converted into the other: — But of this more hereafter.

The characters as given by various authors, were there no other reason, are such, as would fully justify the employment of the term Muscular, being almost all drawn from the solid textures. Even the strenuous humouralist Stahl mentions these as distinguishing features, "*Et carnes et ossa, pro reliqua, in singulis talibus individuis corporis magnitudine, robustioris atque densioris texturae esse comparent quam in aliis hactenus.*" ^a The description of M. Lignac corresponds very closely to that already given, as quoted from Richerand; ^b "The characters of a man of this temperament, indicate great bodily strength; his bones are large and solid, his muscles well delineated, and his flesh adheres firmly together; his thin and dry skin is of a dark red, brown, or olive colour; his pulse full, strong and quick." ^c Combe's language is precisely similar in describing the bilious temperament; and as "all the functions partake of great energy of action," ^d the vigour of the nervous man is often exhibited by the melancholic; but in him, the animal

^a *Physiologiae Sect. I. Mem. IV. Art. 3.*

^b Page 14 of this Essay.

^c Lignac's Physical View.

^d Combe's Phrenology.

propensities, and the physical part of his nature predominate over the mental; the frame-work of the constitution is in its most perfect form, while the nerves have, in general, a tendency to act sluggishly.

We have already pointed out the error into which Cabanis has fallen, in laying too great stress upon the particular function of generation, and thus subdividing the nervous and muscular into four. But whatever be the name we adopt, whether the bilious, in compliance with the usage of the majority of authors; the melancholic, from the absence of the susceptibility of the nervous, and the liveliness of the sanguine man, (a term however equally applicable to the lymphatic, although that employed by the ancients); or with M. M. Cabanis, Richerand, and others, confer on it the name of muscular, which may still be objectionable on the ground of classification, because scarcely so comprehensive as either of the older names; still, if by various authors, and under different appellations, we find the same form ever discriminated from the rest, I think no doubt can remain on our mind, as to the existence of a well marked variety, possessing the characters we have already indicated.

Of the Lymphatic, Phlegmatic, or Pituitous, less will require to be said, as all agree in the outline they have given of this form of temperament; and we may select that of Mr. Combe as an example of the rest. "The lymphatic is distinguished by a round form of the body, softness of the muscular system, repletion of the cellular tissue, fair hair and a pale skin. It is accompanied by languid vital actions, and slowness in the circulation." ^a I am inclined to doubt the correctness of this statement, only

^a Combe's Phrenology ut supra.

in so far as regards the languor of the vital actions: For, why call it lymphatic, if that system be in a languid state? The chyloferous vessels perform one of the most important vital functions, and to the energy of these actions alone, can we attribute the corpulence and plethora of this temperament. There may be a degree of languor in some of the other functions; the nutrition of the muscles is frequently slow and irregular, the flesh soft and flabby, and the bowels in a torpid condition; but the digestion goes on with rapidity, a large quantity of ingesta is daily taken into the stomach, and there is an abundant secretion of chyle, whence arises the deposit of fat in the adipose tissue, which overpowers and clogs the rest of the system, to such an extent, as to render laziness and sleep habitual and agreeable to the lymphatic man.

We must again remark, that although we have given these definitions of the more marked types of each variety, we cannot expect to find many cases in which they are exhibited in so distinct a manner: on the contrary, as no individual can possibly consist entirely of a nervous or sanguiferous system, and as each portion must depend for the continuance of its vitality on the rest, so there must be in every one, some trace, however obscure, of the effects of all, although concealed to a certain degree, under the more evident influence of the predominant variety. In the majority of persons, we may expect to find the combined influence of one or more of the different forms always at work, thus leading to the confusion that has arisen in the definitions of various authors; the numerous subdivisions which they have introduced, being each but departures, differing in

manner or degree, from the perfect type which nature would seem to aim at establishing in all her works.

It is evident that if each individual contain within himself, the rudiments of all the varieties; then all may be to a certain degree manifested, — all may be depressed to make way for the predominance of one, — two may be exhibited in considerable force, at the expense of the other two, or one alone may be lost sight of, in the development of the remainder. We have not sufficient information to be able to form a decided opinion, as to whether any of them have a natural tendency to be found in union, or whether in the wide range of the habitable globe, one form of combination is more frequently to be met with than another; although perhaps all will agree, that, *a priori*, we should not expect to find a union between two so incongruous as the nervous and lymphatic, yet, I believe, we cannot absolutely deny its existence. Of the other compound forms, that of the nervous and sanguineous will be found to combine the effects of both in an increased degree, from the mutual stimulus which they impart to each other; and liveliness and vigour will be combined with energy and continuance of mental action, rendering their possessor capable of planning and executing great enterprises; but without an addition of some portion of the muscular, the frame will be unfit for laborious exertion or excessive fatigue. The muscular, on the other hand, cannot be supposed to exist altogether without the lymphatic and sanguineous, as from thence its nourishment must be derived; although the subsequent effect of obesity and accompanying indolence is prevented, by a proportionate action of the capillaries, in giving a due direction to the excess of nutriment. And while a combination of the

sanguineous and muscular will produce the powerful athletic frame, that needs to be continually refreshed by aliment and sleep; that of the nervous and muscular will constitute the thorough soldier, capable of enduring long continuance of fatigue, with scanty fare, and sleepless nights; though incompetent at any one time, to perform the feats of strength peculiar to the purely athletic form: this is the variety so often to be met with among the hardy mountaineers of various countries, while the other is much more common among the field-labourers in the lowlands. But it were an endless task to specify the numerous modifications, either congenital, or produced by subsequent occurrences, which the varied combinations may originate; indeed we know of no limit that may be set to them, short of the unceasing variety which marks every individual of the whole race, and of the causes and origin of which, we are to this day, in almost total ignorance.

Temperament, unquestionably, does not so much spring from the circumstances in which an individual may happen to be placed, however it may be affected by them, as from hereditary peculiarity; which, though having a tendency to continue unchanged through successive generations, may undergo considerable alteration, as well from a combination in the offspring of the varieties discernible in each of the parents, as from the continued operation of those external influences upon the race, which induce modifications among individuals. At what period differences first marked the human species, history does not inform us; the account of it being so meagre and scanty, that philosophers have been even puzzled to ascertain, whether man originally sprung from one source; or whether from the beginning, several varieties existed, giving rise to

distinct species, which have maintained their characteristic differences to the present day. Little information on the subject of the present essay, can be derived from the numerous volumes written in defence of both sides of this question; one long ago settled in the minds of those who estimated aright the testimony of Revelation, and now happily set at rest by the able and philosophical disquisitions on the subject, written by Dr. Prichard, ^a Mr. Lawrence, ^b and others; who have proved, in as far as can be done from the history of man, the unity of the species. In these disputes, the differences of temperament have never assumed any importance, because occurring indiscriminately in each of the different varieties, and therefore not forming any ground of objection to the prevalent theory; and while much time and labour has been spent in attempting to define the progress of mental development among nations and individuals, and long accounts have, with this view, been given of the habits and customs of various tribes, no allusion is made to a cause, which must have operated so powerfully in their establishment; although it is allowed on all hands, that the physical character and natural disposition, have such an influence in assisting or retarding the enlightenment and manifestation of the mental energies. In the further elucidation of the subject, we must therefore seek to trace in the habits of various tribes, the form of temperament that characterises them, and to point out any peculiar customs which have thence derived their origin; and, where their actual form and appearance is set forth, we must compare together those inhabiting various districts of country, and living in different climates, in order that

^a Researches into the Physical history of Man.

^b Lectures on the Natural history of Man.

we may discriminate between those characters which, derived from some unknown source, have long marked individual nations; and those which, produced by causes acting within a certain range, have been limited to one particular climate or region; and then point out the usual effects resulting from the four forms of temperament already delineated.

If we pass from the Torrid zone to the Artic region, from the burning sun of the equator, to the perpetual snow of the poles, we find the inhabitants of each, somewhat assimilated; — in mental character, in stature, and in colour, they resemble each other, while forming a very marked contrast to the inhabitants of temperate regions. The same languor and lassitude of body, and the same slothfulness of disposition, have been so generally observed in both, as to have led Buffon *a* and Smith *b* to maintain the absurd position, that extreme cold has the same effect upon the frame, as extreme heat. But let us compare the dull, death-like apathy, and indifference of the Esquimaux, with the sprightliness that invariably accompanies or precedes the languor of the Indian; let us mark the acuteness of his perceptions, nay, his occasional vigour and activity, and I think we shall be led to the conclusion, that while in each, there is a tendency to assume the same form, there is also a combination with one, in many respects different; which, taken in conjunction with other modifying causes, occasionally so alters the character, as to render it almost doubtful whether we ought to consider them in any respect similar.

a Buffon Hist. Natur. Tom. V.

b Dr. S. S. Smith on the causes of variety of colour etc., in the human species.

In the Travels of Capt. Franklin,^a Sir John Ross^b etc., the corpulence of the Esquimaux tribes, the state of torpor in which they pass great part of the Winter, with their stomachs distended with food, and their slothfulness and stupidity, are frequently mentioned; while similar facts are recorded of the Greenlanders in the history of the Moravian Missionaries there,^c and of the northern tribes of Siberia and Kamtschatka by our enterprising Countryman Capt. Cochrane.^d It is well known, that an African beauty is not estimated according to any standard of features, but is proverbially a load for a camel; and, though the kind of food used by the Hottentot be generally vegetable, while that of the northern Nations is almost solely composed of animal matters, and these frequently of the very coarsest quality, yet the same tendency to excess in quantity is observed in both. At the same time, this difference in the kind of food, must necessarily cause a considerable difference in their constitution; and accordingly we find, that it is only among the very lowest Negro tribes, whose nervous system is evidently very feebly exercised, that obesity and stupidity occur, and even then, never to such an extent as among the northern nations. There is in fact, a greater or less admixture of the sanguine temperament, and the development of this would seem to be in the inverse ratio of that of the other: the consequent admixture of acuteness and susceptibility with stupidity, in their constitution, is thus alluded to by Dr. Falconer, "The delicacy of the organs of sensation which renders these people so susceptible of every impression, is accompanied by a sort of laziness

^a Franklin's second Narrative.

^b Ross's Narrative of a voyage in search of a N. W. Passage.

^c Moravian Missions in Greenland.

^d Cochrane's Pedestrian Journey.

of mind connected with that of the body, by which they become incapable of any effort." *a*

It would appear that the tendency to the lymphatic temperament, was designed in either case, to preserve the individual from the effects of the extremes of temperature; both by rendering the vital functions more languid and less easily acted upon, and by affording to the body a covering of a substance, which from its non-conducting powers, is alike impermeable to intense cold, and to the scorching rays of a tropical sun. Mackenzie *b* among others, informs us, that the American Indians frequently pursue the objects of the chase in the severest frost, covered with but slight ordinary clothing; while Winterbottom *c* remarks of the women and children in Africa, that they wear nothing on their heads either in rain or sunshine, and the men often go with the soles of their feet exposed on a burning sand — a range of temperature extending from about 40° below zero of Fahren. to 140° above it. "Man in his animal capacity," says Fergusson, *d* "is qualified to subsist in any climate. He reigns with the lion and the tiger under the equatorial heats of the sun, or he associates with the bear and the reindeer beyond the polar region. His versatile disposition fits him to assume the habits of either condition, or his talent for art enables him to supply its defect."

Heat, it is well known, acts as a stimulant, while cold invariably operates as a sedative, and therefore while we affirm that the negro has in his constitution, probably a preponderance of the sanguiferous temperament, as

a On the influence of Climate etc., on Mankind B. I. ch. XX.

b Travels in North America.

c On the native Africans Vol. I.

d Essay on Civil Society.

compared with the Esquimaux who is more purely lymphatic, it must be remembered that the sanguiferous system is more than any other, liable to excitement or depression from changes of temperature, and thus, in warm climates, the usual features of this variety may be exhibited, although arising in great measure, only from the excitement produced by external circumstances, when there is no original tendency to the assumption of such a form. But, judging of these races as we must do, in the circumstances in which we now find them, we can come to no other conclusion, than that such is their real character; although it yet remains to be ascertained, in how far this is due to temperature, and in how far to hereditary transmission: and further, I feel convinced, that the phlegmatic nature attributed by many to that people, is frequently more justly referable, to the extremes of vivacity and languor of the pure sanguine temperament, accompanied by great want of energy in the nervous system, and a tendency to assume the lymphatic form, — than to the latter alone.

A very good description is given of this combination by Barbot: ^a “The blacks in this part of Guinea” (speaking of the Gold coast) “are generally well limbed and proportioned, being neither of the biggest nor of the lowest stature, — they have good oval faces and sparkling eyes, — fresh red lips, — a sleek smooth skin, with but very little hair on their bodies.” At the same time he adds, “their stomach is naturally hot, capable of digesting the hardest meat, and even raw entrails of fowls, which many of them will eat greedily.” A similar contrast is found in his account of their mental qualities; “As for their natural parts, they are for the most part,

^a Barbot's Account of Guinea.

men of sense and wit enough, of a sharp, ready apprehension, and an excellent memory; on the other hand, they are slothful, and idle to such a degree, that nothing but the utmost necessity can induce them to take pains; and very little concerned in misfortunes." To this condition of body may in some measure be referred, the acuteness of the organs of sense, as related of the Hottentots by Barrow ^a and others, and by Mr. Collins, even of the degraded inhabitants of New Holland and New Zealand; ^b where they are described as seeing objects, which experienced eyes could not take up, even with the aid of a telescope; and tracing with minuteness and accuracy, the track of wild animals, or the print of their companion's foot, not merely in sandy or barren regions, but even among grass and brushwood, where the mark was imperceptible to European organs of vision. This is doubtless attributable, to the power which these organs acquire from constant use, but perhaps more to their usual acuteness, and the inferiority of their mental faculties, which we find in the lower animals, accompanied by an increase in the power of the natural senses; for though a similar acuteness of vision is observable in seamen, who are accustomed to be always "on the look out," it never reaches the state of perfection, exhibited by these savages.

Of the condition of the nervous system with regard to warm climates, it is more difficult to speak: it would appear that climate has very little, if any influence in its development; and we equally find nations and individuals, exhibiting strongly marked features of the nervous temperament, in all climates. Of course those, who in intertropical countries, exhibit traces of this tempera-

^a Travels in Southern Africa.

^b Account of New South Wales.

ment, will also generally indicate the presence of a large share of the sanguineous. Negroes however, if we may credit the statement of Dr. Moseley, do not generally betray any symptoms of it; "They are void of sensibility to a surprising degree; they are not subject to nervous diseases; they sleep sound in every disease, nor does any mental disturbance ever keep them awake: They bear chirurgical operations well — much better than white people, and what would be the cause of insupportable pain to a white man, a negro would almost disregard." ^a Such general statements must however be received with caution; exceptions certainly exist, and in proof of this, we may just mention the description of the Tuaric tribes near Fezzan, given by Capt. Lyons. "They are the finest race of people I ever saw, tall, straight and handsome, with a certain air of *independence* and *pride* which is very imposing. They are generally white, that is comparatively so, etc.;" and a somewhat similar account is given by him of the Tiboo; — speaking of the women, "they have aquiline noses and lips formed like Europeans, their eyes are expressive, and of the brightest black; they are light and elegant in form, and there is something in their walk and erect manner of carrying themselves which is very imposing." ^b These I take to be pretty distinct evidences of the occasional existence, even among the black races, of this temperament; and where such a development does exist, it will of course receive considerable additional force in its manifestation, from the combination with the sanguineous. But their general character is quite the reverse of this description, and "the distinction of colour between the white and black

^a Treatise on Tropical Diseases.

^b Travels in Africa.

races is not more striking, than the pre-eminence of the former, in moral feelings and mental endowments." ^a "That the Ethiopian taken altogether, is decidedly inferior to the Caucasian variety, in the qualities of the head and of the heart, will be soon recognised by any one, who attentively weighs the observations of all unprejudiced and disinterested observers, respecting the conduct, capabilities and character of the Africans, whether in their own country, in the West Indies, or, in America; and the continuance of the whole race, for more than twenty centuries, in a condition, which in its best forms, is little elevated above barbarism, must give to this conviction, the clear light and full force of demonstration." ^b

In the valuable work of Dr. Falconer already referred to, we have some very accurate statements of the actual condition of the inhabitants of various climates, and however we may differ from him in his conclusions, as to the causes which have operated in bringing them into these conditions, we cannot but point out some of the peculiarities which he mentions, although they will fall more properly to be considered, under the effects of temperament. He refers ^c to the passionate temper and vindictive disposition, united with great fickleness and levity, exhibited by the more sensitive of these nations; as observed in the Chinese, and more remarkably among the Malays and Javanese, in the tropics, and extending in a very marked degree to the Italians, who inhabit one of the warmest countries in more temperate regions; in whom we may observe the characters of the sanguineous, united with a good nervous development, as is proved by the

^a Lawrence's Lectures. Chap. VIII.

^b Ibidem.

^c Falconer on Mankind. Chap IV.

many heroic exploits of the Romans, and the talent for painting and music, among the more modern inhabitants. Arising from a totally different form of temperament, we observe, on the other hand, the hostile feuds of northern nations, which, in the instance of the Scottish clans, were handed down from father to son for many generations, yet connected with a generosity of disposition, frequently exhibited in sparing an unprotected foe, and showing him many acts of kindness, when not under the influence of that deep-rooted hatred and aversion, which might lead to acts of cold-blooded atrocity in different circumstances, on the very same day. As the result of the combination of temperament already indicated, we observe perfidy, inconstancy and fraud, connected in warm climates, with indolence, luxury, effeminacy, and consequent timidity; evidently exhibiting a vacillation between these variations: if along with this, we take into consideration, the physical characters of form as quoted from Barbot, — their great liability to perspiration,^a and the sleek velvety skin denominated "*cutis noloseric*" by Linnaeus, — we shall see the ground for the statement made in a previous part of this Essay, that the sanguineous temperament is not confined to men of a fair complexion and yellow hair, but may be traced more or less, from the whitest to the blackest of the species.

These effects evidently point out the existence of some cause of very general application, as we observe an approximation in character, between nations so widely apart, that no relation of habit or custom, can be supposed adequate to account for it; and divided by nations that differ so completely from them, that there is no

^a One of the evidences or effects of the Sanguine Temperament according to Lignac.

room for the idea, that it can have originated in hereditary transmission, seeing that the nearest point at which the races coincide, is probably in the persons of the antediluvian-patriarchs; along with this, we observe a great similarity throughout the vast extent of country between the tropics, inhabited by the Negro races, and a corresponding relation as we proceed northward, among the inhabitants of different latitudes; and to what can we attribute these effects, but to climate? I am aware that the more modern authors on this subject, are as much averse to the idea of the influence of climate, as those of half a century ago, were keen in referring all the varieties in the human species, and all the changes exhibited in various nations to that source, and to that alone. Dr. Prichard says of it, "This notion however I venture to conclude is altogether incorrect;" ^a but at the same time, he qualifies this assertion by adding, "It must be observed, that the principal observations on which these writers ^b have founded their opinion, are correct." ^c And we find him explaining this further, in the following words, "On considering these and analagous phenomena, we can scarcely avoid concluding, that the variation of animals proceeds according to certain laws, by which the structure is adapted to the necessity of local circumstances. It would not be difficult to point out some instances, in which the varieties of mankind are in a degree suited to certain climates." ^d It is in this way I should feel inclined to view the influence of climate, as depending on certain causes, which operate, partly through the adapting

^a Physical Researches Book IX. Chap. I. Sect. 1.

^b Buffon, Smith, Blumenbach, etc.

^c Prichard. B. IX. Ch. I. Sec. 3.

^d Ibid. Sect. 6.

power of nature, originating, by means unknown to us, those connate varieties, afterwards perpetuated by hereditary transmission in the different climates for which the peculiar forms are best adapted; and partly, through the inability of other varieties to maintain their existence, during a continuance of ages, in a situation unsuited for their development; ^a to these, I would add the powerful stimulus of heat, already alluded to, as capable of producing the ordinary effects of a sanguineous diathesis, among those who have no natural tendency to it; and the sedative influence of cold in frozen regions, producing results quite the reverse.

In this view of the subject, omitting entirely for the present all consideration of the tribe or race to which any particular nation may belong, we have an explanation of the apathy and stupidity of some of the most northerly tribes, both in the new and old World. Their exertions on some occasions, shew that they do not want physical power, but the depressing influences, as well on the nervous as the sanguiferous systems, restrain them from any effort to which they are not driven by necessity; and this, combined with their hereditary lymphatic tendency, and unrestrained engorgement of their stomach whenever occasion offers, is sufficient to account for the condition of these people, independently of the absence of those modifying causes, which lead to different results among more civilised nations. They are timid, inactive and indifferent, although they border, in America, as well as in

^a This view of the subject is remarkably borne out by the fact notorious to breeders of the finer kinds of animals, that in breeding "in and in," as they term it, there is in each generation, an approximation to the indigenous variety of the same species; and it is necessary to cross them constantly with one that has the peculiar form they wish to propagate, in the highest perfection.

Siberia, on active and warlike tribes. Chappell thus describes them, "The male Esquimaux have rather a prepossessing physiognomy, but with very high cheek-bones, broad foreheads, and small eyes—rather further apart than those of Europeans. The corners of the eyelids are drawn together so close, that none of the white is to be seen; their mouths are wide, and their teeth white and regular; the complexion is a dusky yellow, but some of the young women have a little colour bursting through this dark tint. The noses of the men are rather flattened, but those of the women are rather prominent. The males are, generally speaking, about five feet five inches, or five feet eight inches high, bony and broad shouldered, but do not appear to possess much muscular strength; the flesh of the Esquimaux feels soft and flabby, which may be attributed to the nature of their food." *a*

In the neighbouring nations, the physical condition is considerably changed. Although but a few degrees to the south, the influence of a powerful sun, if but for one or two months in the year, excites a genial warmth over the whole surface of nature;—the region of perpetual snow is no more, — and all nature abounds in activity, and revels in a rapid and luxuriant exercise of her energies,—and should man alone be unblessed during the propitious season? Again, those tribes are by nature and habit, wanderers, and they migrate to the southward in the winter; they live by hunting, and they must follow the animals of the chase, which cannot find sustenance in the dreary solitudes of an Arctic Winter. But it is not merely from habit, that they follow such a mode of life, — in this, perhaps as much as in any thing else,

a Narrative of a Voyage to Hudson's Bay.

they differ from their northerly neighbours, that their delight is in this wild and manly sport. They are by the accounts of all travellers, a finely formed, athletic race: ^a In short, whether we pass from the Esquimaux and Greenlanders, to the Indians of North America, or from the Kamtschadales and Finlanders, to the Tartar tribes of Siberia, or the European Russians, we observe a well marked transition from the lymphatic, to a distinct form of the muscular temperament: love and hatred, two passions almost unknown to the former, find place among the latter, and activity and bravery succeed to slothfulness and timidity. It is curious to observe the correspondence between the change of climate, as we proceed still southward, and the regular progression, from those among the Indians, approaching nearest in character to the Esquimaux, up to their most perfect form — especially among the nations to the North; the Chipewyans stand among the lowest, ^b then come the Copper-mine, after them, the Cree and Slave Indians, ^c till we arrive at the natives of Carolina and Georgia, who according to Bartram, are superior to any. He says “They are tall, erect, and moderately robust, their limbs well shaped, so as generally to form a perfect human figure; their features regular, and countenance open, dignified, and placid; yet the forehead and brow so formed, as to strike you instantly with heroism and bravery; the eye, though rather small, yet active and full of fire, the iris always black, and the nose commonly inclining to aquiline. Their countenance and actions exhibit an air of magnanimity, superiority and independence. Their complexion

^a See travels of Hearne, Mackenzie, Franklin, etc.

^b Sir A. M'Kenzie.

^c Franklin's First Narrative.

is of a reddish brown or copper-colour, their hair long, lank, coarse and black as a raven, and reflecting the like lustre at different exposures to the light. The women are tall, slender, erect, and of delicate frame; their features formed with perfect symmetry; the countenance cheerful and friendly. The Muscogulge women, though remarkably short of stature, are well formed; the visage round, features regular and beautiful, the brow high and arched, the eye large, black and languishing, expressive of modesty, diffidence and bashfulness." ^a The Tartar tribes, as described by Pallas, ^b present great varieties of character; some approaching in feature and general appearance very near to Europeans, while in others, there seems to be a degeneration gradually assuming a similarity to the Samoiedes, who are described as a race of destitute savages, in the lowest state of wretchedness and degradation, of which human nature is capable;" ^c and who with the Esquimaux, as well as perhaps the N. American Indians, all belonged originally to the same tribe. But I fear we cannot certainly draw from his statements, any conclusion, further, than that those to the south, shew a decided superiority over those to the north. ^d We would not however have it understood, especially in regard to the Americans, that we believe the difference of a few degrees of latitude is sufficient of itself, to account for the diversity of appearance; but at present, only point out the effect of climate, in assisting and co-operating with other causes, in the development of particular forms.

^a Travels in N. and S. Carolina, Georgia, Florida.

^b Voyage en Sibirie. See his account of the inhabitants of Crim Tartary.

^c Prichard ut supra.

^d Pallas' description of the Turknemen.

Again in proceeding from the South, we observe the intermingling of the muscular and the nervous, with the sanguine form: We there meet with the Assyrian and Babylonian Empires in days of old, subsequently overthrown by the Persian, — the Grecian states, — the Kingdom of Macedonia, — and the Roman Empire; which, each in their day, defied the world, and performed exploits, evidently far beyond the power of the helpless nations of the tropics; but were unable to withstand the seducing influences of luxury and effeminacy, — the natural consequences of wealth and prosperity, and thereby betrayed their tendency to the same fickleness and levity of character, and all the other failings which characterise these tribes:^a consequently, at the present day, the name and situation of several of them are forgotten, in the very places where lay the scenes of their glory and their triumph. The mingling of the nervous temperament, which carried forward their celebrated leaders, — which exerted its influence over each individual, and strengthened and animated all to the conquests they made, under the benign influence of various other concomitant circumstances, — manifested itself in the days of their decline, only in impotent passions and unbridled licentiousness; and, in the absence of that culture of mind necessary to give it due direction, sank, as in the case of the modern Greeks,^b to a soft effeminacy, —

^a Rollin's Ancient History Vol. I. — The debaucheries of the Babylonians in general, and of Ninyas and Sardanapalus in particular, B. XIII. Chap. I. and even of Alexander, Vol. II. B. XV. §. 12. In Gibbon's Decline and Fall, the same fact is shewn in regard to the Romans.

^b In some of Lord Byron's letters from Greece, and the accounts of his proceedings there, — the character of the Souliotes points out the existence, to this day, of the same nervous temperament that made the navy of Athens and the troops of Sparta so dreaded in former times, and the same fickleness that proved their ruin. — Ali

a weak susceptibility, which but makes them feel their yoke more galling, and curse the chains they are unable to break. At the same time, this has not been the case with all; even now the Persian kingdom maintains a standing, which, taking into account its altered relations at the present day, with other countries, in consequence of the advances made in cultivation and knowledge, may be supposed to fall not far short of its ancient elevation. To what an extent was the cultivation of the arts and sciences, and particularly medical knowledge, carried among the Arabians, who may be said to be the connecting link, between modern physicians, and him who has been so justly called the "Father of Physic." The mental and bodily vigour of that nation, seems to have been headed up in the amazing system of conquest and proselytising, that has for centuries, held under its domination all the principalities of the east: which, proceeding originally from the comparatively insignificant district of Arabia, under the favourable auspices of that great master-mind, the Prophet Mohammed, first established the great Mogul Empire in Turkey; and then marching along with rapid strides, under his successors, east and west, was lost among the long established creeds of Zoroaster, Bramah, and Confucius, in the one direction; and finally stopped in its career in the other, by the victorious arms of Christianity in Spain. But the empire thus founded, has continued to the present day; and still, in its decline, retains its position as one of the balancing powers of Europe, though it has long ceased to be dreaded as one aspiring to universal sway. In

Pacha too, is a noted instance of this form, although influenced by a mental conformation, superior in power to the majority of that nation. Moore's life of Byron. — Life of Ali Pacha of Joanina. q. v.

nothing perhaps, is exhibited more remarkably, the fickleness and uncertainty of the sanguine temperament, as combined with the ebullitions of rage and violence dependent on the nervous, than in the history of this nation; confined neither to the despot, nor to the instruments of his despotism,—not even to the soldiery, whose position was well qualified for exhibiting it, but spread over the mass of the people. Too well did the Impostor know the temperament of the people with whom he had to deal; but perhaps by pandering to their passions, while laying on their luxuries restraints, against which they had not the inclination to repine, he has laid the foundation for the overthrow of that very system, which these maxims enabled him to establish; and which he raised from the very dust, to such a height of prosperity and power, with an energy almost unequalled in the annals of History. ^a

In the accounts of the *physical* peculiarities of particular nations inhabiting this range of climate, we find numerous statements corresponding very closely with the variety of temperament under which we have classed them, deduced from their actions and position as furnished by history. One traveller describes the Persians, as “having well made, powerful frames, piercing black eyes, and noses generally inclining to aquiline; A deep ruddy hue glows through their dark brown skins, and their appearance is altogether characteristic of health, hardihood and independence.” Mr. Elphinstone informs us, that among the western inhabitants of Afghaun, “the men are all of a robust make, and are generally lean, though bony and muscular; they have high noses, high cheek-bones

^a For further elucidation of the present character of the Turks see Lady Mary Wortley Montague’s letters.

and long faces; Their countenance has an expression of manliness and deliberation, united to an air of simplicity, not allied to weakness."^a These belong to a mountainous district. The Belooches, again, are described as a "tall, active, handsome race of men, not possessing great physical strength, but adapted and inured to changes of climate and season;—they have good features and expressive countenances, some of them lean, and meagre in form;"^b these however are more confined to plains and low countries.

Such descriptions evidently point out a sort of oscillation between the combination of the sanguine with the nervous, and that with the muscular temperaments, as characteristic of the inhabitants of this latitude. In Dr. Prichard's elaborate work,^c a description of the people of Muscat, is followed by De Pagés' account of the Bedouin Arabs, which perhaps puts this in a clearer point of view than can be done by general definitions. "Those of the superior orders, who came under our observation, as the sheiks and their families, bore a strong characteristic resemblance to each other in features. The countenance was generally long and thin; the forehead moderately high, with a rounded protuberance near its top; the nose prominent and aquiline, the mouth and chin receding, giving to the line of the profile, a circular rather than a straight character; the eye deep set under the brow, dark and bright: thin and spare, deficient in muscle, their limbs were small, particularly the hands, which were even sometimes of feminine delicacy."^d Of the Bedouins on the other hand, it is said

^a Elphinstone's Account of Cabaul.

^b Prichard's Researches B. V. Chap. III. Sec. 3.

^c Ibidem.

^d Narrative of a Journey in Khorasan by Fraser.

“They run with extraordinary swiftness, have large bones, a deep brown complexion, bodies of an ordinary stature, but lean, muscular, active, and vigorous. The Arab has a large, ardent, black eye, a long face, features high and regular, and as the result of the whole, a physiognomy peculiarly stern and severe.” *a*

It would appear therefore, that this region is that best suited for the development of the nervous temperament; for although it exists also largely in temperate climates, it is there more confined to individuals; and it is apparently more owing to the unfortunate situation of the natives of this district, in regard to government and education, as well as their fickleness and want of application, than to any lack of natural endowments, that such works of genius are not now produced by them as formerly. We have sufficient evidence of the existence of a similar temperament among the Italians, manifesting itself even at a comparatively recent period in their painting and sculpture; and in the intriguing policy of Rome and of Venice, which were long the dread of most other nations. These have alas long since died away; but in the beautiful language of the late Dr. Fergusson, “A modern Greek is perhaps slavish, mischievous, and cunning, from the same animated temperament, that made his ancestor ingenious and bold, in the camp, or in the council of his nation: A modern Italian is distinguished by sensibility, quickness, and art, while he employs on trifles the capacity of an ancient Roman; and exhibits now in the scene of amusement, and the search for frivolous applause, that fire, and those passions with which Gracchus burned in the forum, and shook the assemblies of a severer people.” *b*

a De Pagés' Travels round the World.

b Essay on Civil Society.

In the centre of Europe and Asia we meet with a more even balance between the sanguiferous and muscular systems, while in individuals alone, do we discover a predominance of either a lymphatic or a nervous temperament. In short, in these regions the temperature is such as to cause, neither an undue stimulation, nor an undue relaxation of any of the particular tissues, and accordingly, we meet with "a much greater variety of disposition and character in temperate climates, than in either of the two extremes of heat or cold:" nevertheless there are points in common, in which they differ decidedly from the nations either to the North or South, which it may be well to point out. There is a strenuous and steady perseverance to a fixed object, united with a despising of dangers and obstacles, arising from a consciousness of innate power, which characterised so remarkably, in the late wars which shook Europe to its very foundations, the soldiers and seamen of Great Britain; and in the decline of the Roman Empire, marked out the Germans as the best adapted to form the tributary legions, in which their strength latterly consisted: and consequently, the greater and more efficient part of their auxillaries were drawn from thence. This is less manifested in the French, who have, on the contrary, more sprightliness and vivacity, with less stamina: a considerable difference may be observed even between the inhabitants of the northern and southern districts of this island; the former of whom, though scarcely so reserved as the northern Germans, are still very deficient in the liveliness, which in the South of England approaches to the talkativeness of the French. The inhabitants of temperate climates are not so subject to violent sallies of passion as those of warmer climates; but it may be remembered, that in defining the bilious

temperament, we had occasion to mention, that when any violent emotion takes firm hold of the mind, it is much more permanent and powerful. Tacitus mentions of the ancient Germans, that they did not much keep up the outward signs of grief for the loss of relatives, but long retained their internal sorrow, and that they esteemed tears and lamentations, as more belonging to women than to men. ^a This temper may account for the atrocities committed by them — occasionally in their anger, as he says, murdering their servants, or even their friends. Such occurrences are unfortunately to be met with, even in our own enlightened nation, and but too frequently in a sister island. Perhaps we should view as connected with this, the crime of suicide, which seems to be in some measure dependent on this constitution, and to arise from the habit of pondering over misfortunes, and allowing them to work on the imagination until a sort of frenzy be produced, which renders life intolerable, and thus leads to the fatal result; were it not now at least, nearly as prevalent in the South of Europe as in the North.

It has been remarked, that “the sensibility and vivid imagination of hot climates, has been favourable to suggesting discoveries. Thus we find that most of the useful inventions of life were originally derived from thence.” ^b But on the other hand, it is to the steady perseverance peculiar to higher latitudes and ruder temperatures, that the philosopher is indebted for discoveries in science, which had probably for ever lain hid from the inhabitants of warm countries. “The fruits of industry,” says Fergusson, “have abounded most in the North, and the study of science has here received its most solid improve-

^a Taciti Germania.

^b Falconer on Mankind Book I. Chap. XIV.

ments; the efforts of imagination and sentiment were most frequent and successful in the South. While the shores of the Baltic became famed for the studies of Copernicus, Tycho Brahe, and Kepler, those of the Mediterranean were celebrated for giving birth to men of genius in all its variety, and for having abounded with poets and historians as well as men of science." ^a That happy combination of temperament which leads a man to heroic actions, is in like manner, not confined to any one particular region: that amount of nerve, — that conformation of brain, combined with a form capable of great endurance, which led on to victory the conqueror of the world, or enabled a Nebuchadnezzar of old to say, with no less truth than haughtiness, "Is not this great Babylon which I have built, for the house of the kingdom, by the might of my power, and for the honour of my majesty?" — which nerved the arm of a Caesar, and carried forward the crescent of a Mohammed, — must ever be anomalous in any nation. But to the warmer climates this is not confined: the same genius planned the huge designs of a Henri Quatre, whom but the interference of providence, in striking the fatal blow, seems to have prevented from the establishment of a universal monarchy; — the same power led through his short but luminous career, the bold and uncompromising Napoleon, and stirred up the man who laid his proud spirit in the dust, — ranged in hostile array the destructive craftiness of an Edward, and the heroic patriotism of a Wallace, and a Bruce, — nay, — has extended its power to the far North, and animated a Charles the XII. and a Peter the Great. But where the powers of mind are equally

^a Fergusson's Essay ut supra.

balanced, the ardour of the South must always yield to the cool determined vigour of the North, — the predominant sanguine temperament of the Tropics must bow to the combined muscular and nervous energy of more temperate regions.

Great variableness, or sudden changes of temperature must be productive of evil effects, such as do not result from either the permanent cold of the North, or the unvarying heat of a Southern latitude. It cannot be matter of indifference that, in the Eastern district of Europe, or the Northern Continent of Asia, “at one season the plagues of an ardent summer reach as far as the Frozen Sea, and the inhabitant is obliged to screen himself from the noxious vermin, in the same clouds of smoke, in which he must at a different time of the year, take refuge from the regions of cold: while, when Winter returns, the transition is rapid; and, with an asperity almost equal in every latitude, it lays waste the face of the earth, from the Northern confines of Siberia to the descents of M. Caucasus, and the frontier of Ida.” *a* But we have not been able to trace any permanent character as peculiar to this climate, and distinct from those, verging on a hot or a cold region.

Countries however, do not differ merely in the general characters of climate and temperature; each possesses certain well defined features, which must exert an influence more or less marked, over the constitution of the inhabitants. The richness or poverty of the soil, the smooth, undulated, or hilly aspect of the district, as well as its local situation, whether bordering on the sea-coast, or further inland, — insular or continental, — are well

a Fergusson's Essay ut supra.

known to have reference to various endemic diseases, which are found at particular seasons to infect them; and this can hardly be the case, without some correspondence being traceable in the varieties of temperament that are there found. Accordingly we observe in all parts of the globe, a greater difference between the inhabitants of highland districts and their immediate neighbours in the lowlands, than can be accounted for by the difference of temperature:^a the residents on the sea-coast generally differ materially in their physical constitution, from those of inland districts; and the inhabitants of populous territories are marked by some peculiarities, that are not met with among those of large waste tracts. In reference to this, we have the following very appropriate remark by Dr. Prichard; "There are indeed instances, in which we can perceive an advantage in the varieties of form, and an adaptation of particular breeds to external circumstances. The small and agile races of oxen and horses are particularly suited to mountainous districts, where activity is required, and there is not sufficient sustenance for a large and fleshy body; the larger and more finely developed forms which would be ill placed on barren and craggy mountains, are fitted to flourish in rich and luxuriant plains:"^b and a similar adaptation, as might be anticipated, exists in the human species. Dr. P. in his original paper "On the varieties of the human species," read before the Medical Society of this place, seems to wish to limit this to the effect of exclusive intermarriage;

^a Zimmermann however (*Zoologia Geographica*) ascribes this quality to the coldness of the situation; "*Frigoris igitur perennitas, et artus, et integra corpora, comprimendo corroborat, efficitque ut naturam longe firmiorem, valentiorumque induant.*"

^b Prichard's Researches. Book IX. Chap. I.

and thus, he says, "in the lapse of time they, i. e. Nations diverge, if I may be allowed the expression, in the characters of body, and national Physiognomy becomes established. Hence, no doubt, the difference between the English and Scottish people; surely no one will imagine diversity of origin in this case, or attribute the peculiarity to difference of soil and climate." ^a Mr. Lawrence seems to hold the same view; "In what other way, (than by exclusive intermarriage) can we explain the difference between the English and Scotch? Would it be more reasonable to suppose that they descended from different stocks, or to ascribe the high cheek-bones of the latter to the soil or climate?" ^b But why such a conclusion is come to, is in neither case mentioned, and for my own part, I am at a loss to conceive, what influence the confining of marriages to persons belonging to the same tribe, can possess, in originating any peculiarities not observable in either of the parents, and not ascribable to differences of soil and climate. Were I called on to mention any country in which these effects are more marked than another, I should be inclined to single out my native land; for there, not only has a decided contrast sprung up between the English and lowland Scotch, — supposed to be derived from the same stock, but a great assimilation has taken place between the Scots and the Celts, who are sprung from races totally distinct; and if this be not owing to the mingling of the different races, to what else can it be attributed but the influence of such modifying causes?

In the days of Hippocrates perhaps even more stress than we should consider warrantable, was laid upon

^a Unpublished Transactions of the Royal Medical Society of Edinburgh.

^b Lawrence's Lectures.

situation, in attempting to account for these varieties; as when he says “καὶ τ’ ἄλλα τὰ ἐν τῇ γῇ φνόμενα πάντα, ἀκόλουθα ὄντα τῇ γῇ.”^a But on the question of the influence of mountainous districts, he says with considerable justice, “ὅκόσοι μὲν χώραν ὄρεινήν τε οἰκέουσι τρηχείην καὶ ὑψηλήν, καὶ ἄνυδρον, καὶ αἱ μεταβολαὶ αὐτέοισι γίνονται τῶν ὥρέων μέγα δε διάφοροι ἐνταῦθα εἰκόδες εἶδεα μεγάλα εἶναι, καὶ πρὸς τὸ ταλαίπωρον, καὶ τὸ ἄνδρεϊον εὖ πεφυκότα· καὶ τό τε ἄγριον καὶ τὸ θηριῶδες αἱ τοιαῦται φύσεις οὐχ ἥκιστα ἔχουσιν.”^b “and again, ὅκούδ’ ἐστὶν ἡ χώρα ψιλή τε καὶ ἀνώχυρος, καὶ τρηχείη, καὶ ὑπὸ τοῦ χειμῶνος πειζομένη, καὶ ὑπὸ τοῦ ἡλίου ζεκαυμένη· ἐνταῦθα δε σκληρούς, τε καὶ ἰσχυροὺς, καὶ διηρθρωμένους, καὶ ἐντόνους, καὶ δασέας ἴδοις.”^c Dr. Prichard observes, that “high mountains and countries of great elevation, are generally inhabited by people of lighter colour than those where the level is low, such as sandy or swampy plains on the sea-coast..... Even within the tropic, in some very elevated regions, as in the forests of Harruzza, and in the mountains where the Senegal and Gambia rise, the people are of a red or copper colour:.... In Mexico we find no Negroes among the native inhabitants; but in the low, flat country of California, which is near the northern tropic, the people are nearly as black as Negroes.”^d Particular instances of this sort may be observed, wherever a mountainous tract borders on a level country; of which the Scottish highlanders, and the Swiss and Tyrol mountaineers are among the most familiar examples. We are informed by Barrow that some of the Tungusian tribes, such

^a ΤΗΠΟΚΡΑΤΗΣ περὶ ἀέρων ὑδατῶν καὶ τόπων § νή.

^b Ibid. § ς.

^c Ibid. § νή.

^d Researches ut supra.

as the Kalmuck and Mantschu Tartars, bear so close a resemblance to the Chinese, that "they are scarcely distinguishable by external appearances: the Chinese are rather taller, and of a more delicate frame than the Tartars, who are in general short, thick, and robust;" ^a thus forming a contrast between the effect of inhabiting the plains and following the various branches of industry, as is the case with one people; and roaming at large as do the others, over the wild mountainous districts to the North.

As might be anticipated, where the mountain ranges are the highest, the effect on the inhabitants is greatest: thus, among the Corderillas in America, and the Himmalayas in Asia, we find the Carribees in the one district, and the Brahooes and Ossetes in the other, differing so completely from the tribes adjoining, as to make it great matter of doubt among travellers, whether they should be considered as belonging to the same family with them. Lieut. Pottinger says of the Brahooes, "In fact I may assert that I have not seen any other Asiatics, to whom they bear any resemblance." ^b Von Humboldt remarks that the Carribees "*different de tous les autres Indiens par sa forme physique et intellectuelle; je n'ai vu nulle part une race entière d'hommes plus élancée, et de stature plus colossale....Leurs yeux, qui sont plus noirs que chez d'autres hordes de Guyane, annoncent d'intelligence, on diroit presque l'habitude de reflexion.*" ^c And again, "dans les forêts de Guyane, surtout vers les sources de l'Orénoque, vivent plusieurs tribus blanchâtre, les Guiacas, les Guajaribes, et les Arigues,

^a Barrow's Travels in China.

^b Travels in Belochistan.

^c Voyage aux Regions Équinoxiales T. III.

dont quelques individus robustes, et, n'offrant aucun signe de la maladie asthenique que caractérise les Albinos, ont le teint des vrais métis." ^a

Such a similarity as exists between the highlanders of Scotland and the Swiss, is surely not a mere fortuitous occurrence; their habits and mode of life, — their institutions and natural character, correspond to a surprising degree. They are each patient and laborious, — suffering but little, from what would destroy the constitution of a lowlander, and generally of considerable muscular power; — some of them tall, swarthy, and athletic, others of smaller stature with an ardent and vigorous temperament, and the majority of them at the same time, free from the nervous atony of the purely muscular form; whence they are more or less a thinking people. An unbounded patriotism, and a bold independence of spirit, invariably characterise the native of the mountains; thus the inhabitants of the rocky fastnesses of Scotland and of Wales, put a stop to the victorious arms of the Romans and the Saxons; and "the mountains of Asturias in Spain served as a barrier against the Moorish conquests, and at last produced a people who reconquered the remainder of Spain from these invaders." ^b Swinburn in speaking of the Catalonians observes, "The nature of the country appears to have a great influence on that of the inhabitants, who are a hardy, active, industrious race, — of middle size, with brown complexions, and strong features..... They are excellent for light infantry, or the forlorn hope, or for a coup de main.... With good words you will always find them docile and tractable, but they

^a Humboldt *Essai Politique sur Nouvelle Espagne*. Liv. II. Chapit. VI.

^b Falconer B. III.

cannot bear hard usage.”^a This passage may be well contrasted, with a quotation given in a subsequent letter, from the History of Spain by Abi Abdallah ben Alkalhibi Absaneni written in 1378, where the inhabitants of the low country of Grenada are mentioned, as “in person comely, of a middle stature, with small noses, clear complexions, and black hair; elegant in their language, but rather prolix in their discourse: — the women are handsome but of stature rather below the middle size, so that it is rare to meet with a tall one among them, they are delicate, and proud of encouraging a prodigious length of hair, — light and airy in their gait, of a sprightly, acute wit, and smart in conversation.”^b

Mr. Lawrence, in wishing to leave out of consideration the effect of climate altogether, has brought forward an explanation of the difference between the lowland and highland Scotch, which is not only quite unsatisfactory, but in fact contains its own refutation. He first classes together the Spaniards, French, Welsh, Manks, and highland Scotch under the common name of Celts, and then adds, “The German race, originally situated more to the North and East, have long ago obtained settlements by war and conquest, in many of the countries peopled by the Celts. Under the names of Saxons, Angles, Danes and Normans, numerous supplies of Germans successively arrived in England, and gradually drove the original Celtic population into the most distant and inaccessible parts of the island. An exposure to the *same climate*, for so many centuries, has not approximated the physical characters of the more recent German, to those of the older Celtic inhabitants, in the smallest degree; and

^a Swinburn's Travels in Spain. Lett. IV.

^b Ibid. Lett. XV.

both descriptions are equally unchanged, after a progress from barbarism to the highest civilisation.” ^a Does Mr. L. mean to affirm, that an inhabitant of Fife or Midlothian is as *distinct* in physical character from a highlander, as the latter is *similar* to a Frenchman? — If such be the facts on which the reasoning is based, we shall be at no loss to account for the fallacy of his conclusions; and we are only left to wonder that such a statement should be broadly made, in this country, and this age. The corroborative instance too, brought forward by him, of Vandals existing in the *mountains* of Aurez in Africa, according to Bruce, ^b is too vague to have any weight, except in strengthening the argument we have adopted, with reference to the effect of a mountainous district in modifying the character of different races, and is proved to be completely without foundation, by the fact mentioned by Shaw, ^c that in language they do not differ from the other Kabyles, who inhabit the plains, and are swarthy in colour.

Another very remarkable feature of the inhabitants of a hilly country, is their delight in music: not the soft strains of the luxuriant Greeks or Italians, but the wild out-pourings of a spirit, fired by the majestic grandeur of the soul-stirring scenes, that every where surround it. “Is there any one so lost to all admiration of those glorious works of Nature, that he feels no pleasure in gazing at the frowning steep, the wide expanded lake, or the narrow ravine, — in winding through the lonely glen, or standing beside the foaming cataract? — No wonder then that the land of the mountains should be the birth-place

^a Lawrence on Man. Sect. II. Chap. IX.

^b Bruce's Travels in Abyssinia.

^c Travels in Africa.

of song, and that here the poetic minstrels should have flourished of old, though now they lie mouldering in the dust, — their names as well as their actions consigned to oblivion, or but the subject of vain and uncertain tradition." But it may be answered, if this spirit of song be characteristic of these people, why is it, that it is dying out so fast in the present day? In reply, I can only say that I believe it to be the result of a change in other circumstances, exercising a modifying power over the natural disposition.

In connexion with this, we must take into consideration, the barrenness of soil, that invariably accompanies inequalities of surface. For this, ample provision is made by nature, in all whose works there is a perfect adaptation of the means to the end, in the appointment, that where the ground is bare and unproductive, — wherever more peculiarly "by the sweat of his brow man eats his bread," a race of inhabitants should exist, whose physical powers are adequate to overcome the obstacles in their way; and in fact, that within certain limits, these shall increase in the ratio of the amount of difficulty. Hume beautifully points out, that it is no less true, than strange at first sight, that the misery and debasement of certain nations proceeds from the fertility of the soil they cultivate: view the fertile plains of China or of India, — of the south of France or of Spain, — of Italy or of Greece, and compare the condition of the population, with the Hollander, who is obliged to save himself from perpetual inundation, by dams and dykes, — with the tenant of the barren heathy moors or rocky wastes, or even with the English lowland farmer, who must of necessity exercise his industry to the utmost to gain his livelihood, and the contrast will be sufficiently striking. "The fine vineyards

of Champagne and Burgundy which yield to the landlord at the rate of L. 5, an acre, are cultivated by peasants who have hardly bread." ^a "It is in the least favourable situations that the arts have flourished the most," says Rousseau; "I could shew them in Egypt, as they spread with the overflowing of the Nile; and in Attica as they mounted up to heaven from a rocky soil and from barren sands, while on the fertile banks of the Eurotas they were not able to fasten their roots." "Where mankind," writes Dr. Fergusson, "from the first subsist by toil, and in the midst of difficulties, the defects of their situation are supplied by industry: and while dry, tempting, and healthful lands are left uncultivated, the pestilent marsh is drained with great labour, and the sea is fenced off with mighty barriers, the materials and the cost of which, the land to be gained, can scarcely afford, or repay. Harbours are opened and crowded with shipping, where vessels of burden, if not constructed with a view to the situation, have not water to float. Elegant and magnificent edifices are raised on foundations of slime, and all the conveniences of human life are made to abound, where nature does not seem to have prepared a reception for men; and the shade of the barren oak and the pine are more favourable to the genius of mankind, than that of the palm and the tamarind." ^b Let us conclude with a quotation from Dr. Falconer: "Fertile and pleasant countries, although they may appear at first sight highly desirable, have not been found by experience to favour the perfection of the human species: the inhabitants of such, are said to be disposed to be indolent and effeminate in their dispositions, mischievous and cruel in their tempers,

^a Hume's Essays.

^b Fergusson's Essay on Civil Society.

debauched and profligate in their manners, little disposed to make improvements in arts and literature, and slaves to a despotic government. Fertile countries are also observed to produce a people less courageous than what are found in barren ones."^a It seems then to be an opinion generally founded on observation, and one that we cannot set aside from any theoretical opinions, when confirmed by the statements of so many authors, who could not be all blinded by the same prejudice, that barren and hilly countries produce a particular conformation of body and mind among the inhabitants, tending principally to the muscular form of temperament, with a greater or less development of the sanguineous; and thus in some measure simulating in the same latitude, the effects of a colder climate or more northerly district.

The production of the lymphatic temperament in a moist atmosphere, and in low swampy plains, is referred to by some writers, and would seem to be confirmed by the few instances to which we can refer. The Bœotians, it is well known, were proverbial for their dulness and stupidity, — characters ascribed by the ancients to the moisture of the climate they inhabited; Falconer alludes to the apathy and listlessness of some of the tribes of N. American Indians who inhabit large swampy plains,^b as probably arising from the same cause. Hippocrates held the same opinion in regard to the natives on the banks of the river Phasis, "*περὶ δε τῶν ἐν Φάσει· ἡ χώρα ἐκείνη ἐλώδης ἐστὶ, καὶ θερμὴ, καὶ ὑδαῖνι, καὶ δασεῖα· ὁμβροὶ τε αὐτόθι γίγνονται πᾶσαν ὥρην, πολλοὶ τε καὶ ἰσχυροί. ἦτε δίαυτα τοῖς ἀνθρώποις ἐν τοῖς ἐλεσίν*

^a Falconer on Mankind B. III. Chap. II.

^b Ibid B. I. Chap. XXIII.

ἔσιν, τὰ τε οἰκηματα ξύλινα καὶ καλάμινα ἐν ὕδασι
 μεμηχανημένα.... διὰ ταύτας δὴ τὰς προφάσεις, τὰ εἶδεα
 ἀπηλαγμένα τῶν λοιπῶν ἀνθρώπων ἔχουσιν οἱ Φασιηνοί.
 τὰ τε γὰρ μεγέθη μεγάλοι· τὰ πάχεα δ' ὑπερπαχές, ἀρθρόν
 τε κατ'ἀδηλον οὐδὲν οὐδὲ φλέψ. τὴν τε χροιοὴν ὥχροὴν ἐχού-
 σιν.” ^a Swinburn after mentioning the amount of

irrigation in Valencia, and the moistness of the atmosphere
 in that part of Spain, speaks of the flabby nature of all
 the productions of the country: the meat, when cut into,
 seems to consist of nothing but juice, and when that has
 escaped, remains, as he expresses it, a mere “caput mor-
 tuum.” “Vegetables of the finest outward show, taste
 of nothing but water, and this washy quality seems to
 infect the bodies and minds of the Valencians: they are
 largely built and personable men, but flabby and inani-
 mate.” ^b In a curious essay on the medical topography
 of Hamburgh, we find the following remarks on the town
 and inhabitants. “L’immense quantité de l’eau qui en-
 toure la ville, qui pénètre dans toutes ses parties, l’humidi-
 té, et mal propriété des pavés font dominer d’une ma-
 nière excessive, le principe aqueux dans l’atmosphère; et
 il n’est personne que ne puisse juger, que le vice habituelle-
 ment marqué de l’air, est une extreme humidité.... Ainsi
 l’Hambourgeois habite un terrain plat, découvert, sans
 forêts, ni montagnes voisines; la partie la plus conside-
 rable de cette plaine est liquide;.... les productions spon-
 tanées et celles que l’art lui arrache, tiennent à cette cha-
 ractère, elles présentent beaucoup de phlegme et peu des
 parties actives et sapides..... Dans cette situation il ne
 peu qu’avoir de mœurs douces, des passions tranquilles
 et modérées; la passion factice et cruelle n’est qu’acciden-

^a ἸΗΗΟΚΡΑΤΗΣ περὶ ἀἰσθῶν § λή.

^b Travels in Spain.

telle..... Le caractère d'Hambourgeois est en général phlegmatique et froid; en vous le rappelant, vous jugerez aisément, que, l'humeur sereuse et le sang dominant, il doit être en général sanguin et phlegmatique, lache et mol;.... les hommes et les femmes sont d'un taille médiocre, ont le teint frais et coloré, et assez d'embonpoint. Sous un gouvernement doux, un climat humide et continuellement le même, avec une sorte d'uniformité générale et constante, il y a dans la constitution physique, une sorte d'apathie, de mollesse, de lenteur qui sans nuire précisément à la santé, sont un obstacle à l'énergie, à l'activité de l'esprit et du corps; les Hambourgeois qui sont sains, ne sont pas robustes."^a We have given these lengthy extracts from this work, as referring to a people well known, and containing, it appears to me, a very good description of the general characters of a form of temperament frequently to be met with in such districts.

On the other hand, the proximity of the sea does not seem to have a similar effect, and consequently we cannot conclude with Hippocrates and some of the older writers, that, to inhalation of moisture by the lungs, we are to ascribe this tendency to a lymphatic development: as where he says, "ἡ ἡρ τε πουλὺς κατέχει τὴν χώραν ἀπὸ τῶν ὑδάτων.... τῷ ἡέρι χρεώμενοι οὐ λαμπρῷ, ἀλλὰ χνοωδεῖ τὸ καὶ διερῷ."^b Edinburgh, the site of our "Alma Mater," is perhaps as much exposed to wet sea-fogs, as any city in Europe, yet we do not find, in consequence of this, that the people are predisposed to obesity, or dulness of intellect. At the same time we are ready to admit, that there is a cast of countenance peculiar to

^a Essai sur la ville d'Hambourg par J. J. Menuret.

^b ἸΗΗΟΚΡΑΤΗΣ ut supra.

a sea-faring life, which a landsman never acquires, — a turn of mind usual to sailors and marking them out among their countrymen, — a sharpness of features, a muscularity of frame, and a blunt good-humouredness of manner, quite their own; but I think we shall find that all this is more attributable to their mode of life exercising a continued influence over both body and mind, than to any original or hereditary peculiarity. The appearance of the females belonging to fishing villages, would however, lead me to conclude, that there is perhaps, among them at least, an invariable and hereditary modification of the national character by a combination of some portion of the lymphatic temperament.

It is remarkable that sea-port towns, and countries bordering on the sea-shore have always been celebrated, as producing scheming, powerful nations. Tyre and Sidon at the most remote periods; the Cretans and Phœnicians; Athens and Alexandria at times more within the range of history; and in still more modern days, Venice, Holland and England have each claimed the dominion of the sea, and exhibited the advantages that accrue to a people, from such a situation. But with the exception, that in warm climates the refreshing coolness of the sea-breeze, must give a liveliness and vigour not possessed by continental districts, I am inclined to believe, that the form of government, the intercourse with other nations, and the feeling of power which a man has, when stemming the stormy billows of the ocean, and carrying every where his arms or his merchandise with unrestrained freedom, have much more influence in forming the character of the people, than any physical causes can exert in altering their natural configuration; and that this effect

is more confined to the individual, than perpetuated among his offspring, or extended to the nation at large.

Such is but a hasty outline of the differences in the human constitution, coinciding with the principal differences in climate and situation with reference to temperature and external circumstances, observable throughout the Globe: and in viewing them in this light, I think we shall be justified in concluding, as well from the facts thus brought forward, as from the changes that can occasionally be traced in an alteration of circumstances, that to these we are to ascribe many at least, of the varieties already adduced. Dr. Prichard refers to "the the tall, lank, and otherwise remarkable figures of the Virginians and men of Carolina, as strikingly different from those of the short, plump, round faced farmers of the midland counties of England. The race is originally the same, and the deviation in it must be attributed to the influence of the circumstances, whatever they may be, which are connected with *local situation*." ^a He remarks, that "if a race of white people removed into a tropical climate, led a wandering life such as that of the Bedouins of the African deserts, or adopted the habits of the Shangalla, or the negroes of Soudan, the results might be different in their posterity," from those invariably observed in the case of European colonies established in such countries. But in whatever light we view the origin of these varieties, it must still be evident, that the distribution of them is not so uniform, as to indicate that this is the only, or perhaps even the chief agent in their production. Under whatever circumstances they are traceable, there is a hereditary tendency to the

^a Prichard's Researches Book IV. Chap. I.

production of the particular form; and though as in the case of the native of the tropics, on the removal of the stimulus of heat, as we have shewn, the excitement of the sanguineous system may be diminished and the lymphatic habit gain more the ascendancy, which I believe experience also teaches us, when the health is retained; yet the son of black parents will have the same propensities as they, and will, when removed to his proper climate, there exhibit all the characters which are peculiar to his race. How long it may be ere one hereditary peculiarity be substituted for another, on a change of climate, we have not data from which to form any conclusion. "It may be however, that particular varieties once established in the stock, and transmitted for many generations, though originally resulting to a certain degree, from the influence of local causes, will nevertheless continue permanent, long after the race has been removed from the climate in which they originated:.... And it is impossible to determine how long such an impression may subsist, even when the circumstances which gave rise to it are wholly withdrawn, or only exert their agency in a less degree." ^a

Among nations as well as individuals we observe many hereditary varieties, which cannot be referred to the agency of any such influences, and must be traced to the operation of the First Great Cause; these can only be received by us as matters of belief, or at best of vague and profitless speculation, and our enquiry into their origin will but terminate where it began, in recognising throughout the whole, an endless diversity, conjoined with an amazing harmony of structure. Nor

^a Ibid. Book VII. Chap. IX.

is the intention of nature in this arrangement visible, further than the carrying out of the grand principle, that the stronger shall give law to the weaker, and the greater rule the less. Why one man should be blessed above his fellows in any of the circumstances of life, — why the light of revelation or natural science should overspread one land, while another is left in midnight darkness, its inhabitants scarcely removed one degree above the brutes that perish, are questions referable only to the secret wisdom of the Almighty; and we must therefore rest content with collecting as accurately as may be, the information to be found regarding their actual condition, without framing theories empty as wind, which must ever prove inadequate to their explanation.

In pointing out one original head, as the fountain from which all these deviations have subsequently sprung; and in tracing a natural predisposition to the hereditary transmission of each particular form, which bids defiance frequently for long, to the influences of climate and locality, and distinguishes nations whose situation is in other respects altogether parallel, we have seen a principle at work, that would lead to exact similarity in every individual of the species: but in opposition to this, are ranked, not only the variations of climate and soil, producing permanent alterations; but also the mental development and moral condition of nations and individuals, inducing temporary modifications; as well as the totally inexplicable circumstance of the occurrence of congenital varieties, which are almost invariably perpetuated: and could we trace through the lapse of ages, the character of a whole nation, unaltered by other circumstances, to some such congenital variety occurring in the progenitor, we should have the most correct example of what may

be termed *national* Temperament -- and to which we must next turn our attention.

Let those philosophers, whose department it may be, argue whether man's original colour were white, tawny, or black; let those, who consider it necessary to the support of their theories, maintain, that the prototype of the human species was similar to the most degraded among the Negroes, while those who consider a contrary opinion necessary to the establishment of the truths of Revelation, declare him to have corresponded in every particular to the most perfect form of the Caucasian variety;—let the Negro preacher idly hold out that the white colour was produced by the Fall, and the European missionary as idly assert that “the Negro is in God's image though carved in ebony;” — alike frivolous are the arguments on either side — alike uncertain the conclusions that may be drawn from them. But in the present case, we can have no hesitation in affirming, that the progenitor of our race must necessarily have contained the rudiments of each of those forms of temperament to which we have alluded: in so far therefore, was he the perfect man; and I think we may conclude, from the analogy of families in the present day, that there was a tendency to transmit the form which he thus received from his Maker, unchanged to his posterity. Whence then the multifarious combinations and varieties with which the whole race abounds? Whence originated the distinct, nay, the opposing temperaments we have had occasion to notice? And, whence the differences in individuals, in families, and in nations, which we now find handed down from father to son for several generations? Are we to ascribe them all to congenital varieties, or to the influence of circumstances? These questions it must be confessed are

more easily put than answered; and, were it not that the instances to the contrary are too numerous and too well known, to be for a moment disputed or denied, one would be inclined to cut the Gordian knot, and ascribe, all the varieties at present existing, to external circumstances alone, and come to the hasty conclusion, that hereditary transmission consists but in a similarity of situation, habits and education between the parent and the offspring; while the argument on the other side, based on the vast difference sometimes observable between individuals placed through life in similar circumstances, would fall to the ground, because of the improbability, not to say impossibility, of the occurrence of an exact similarity in the place of birth, the residence, the education, and all the pursuits of any two men: and "*il doit savoir*," in the words of Deslongchamps, "*qu' en medecine, de même qu'en physique, les plus grand resultats dérivent bien souvent des causes les plus simples, et les plus légères en apparence.*"^a But if on the other hand, we can bring forward instances, in which through all the varieties of climate, in all changes of temperature, and in every position in regard to wealth or poverty — whether of indolence, consequent on affluent circumstances, or of labour and industry, as the result of poverty or the love of riches, whether educated or illiterate, — if in all these a general character is still visible throughout the whole race, we cannot withhold our belief in the existence of some principle, altogether beyond the power of these fortuitous circumstances: such an example is found among the Jews; in whom, religious principles have prevented inter-marriage with other nations so completely, that their

^a Dict. des Sciences Med. Tom. LIV.

peculiar form of countenance may be easily traced in every land into which they have wandered. To this, only two exceptions occur to memory, that of one tribe of Jews inhabiting the borders of Prussia and Russia, who are generally known by the name of Polish Jews, and have assumed so completely the characters of these nations, as to leave scarcely any doubt that there has been a mingling of the blood of the two races; and the instance mentioned by Dr. Buchanan, on the coast of Malabar, ^a where he informs us, there are two races, distinguished by the names of Jerusalem and black Jews; the one of which appears from their own records, to have kept their blood pure, while the other has been to such an extent assimilated to the natives in appearance, that in the absence of any proof to the contrary, he thinks himself justified in concluding them to be descended in great part from them. We can hardly agree with Dr. Prichard, who, when alluding to this statement says, "perhaps the facts relating to the white and black Jews at Cochin, are not known with sufficient accuracy to allow of any positive inference. It is possible that those termed white Jews, are the descendants of more recent colonists, and that the black Jews are not so separate from them as it has been supposed." ^b Dr. Buchanan's opinion seems much more borne out by collateral instances, such for example, as the Gipsies, who although spread all over Europe, yet everywhere maintain their characteristic differences, of form and features.

It might perhaps be suggested, that a wandering and unsettled mode of life has, in this case, operated in rendering their appearance so different from the rest of

^a Christian Researches in Asia.

^b Prichard. Book IX. Chap. I.

mankind, were not this inference opposed by the fact, that the ancient Scythians and Getae, and the wandering Arabs of the present day, have all followed the same mode of life, which would lead us to conclude, that its influence can only be exerted in a secondary way, by keeping them aloof from the aboriginal inhabitants and preventing intermarriage with them. The argument on this side is strengthened, as well by numerous instances, in which the peculiarities of small towns or districts may be traced to a definite origin, such as the gigantic stature of the inhabitants of Potsdam in Prussia, mentioned by Forster,^a which he ascribes to the celebrated guards of Frederick the Great having been stationed there for a long period; as also by the continuance of particular features in the same family for several generations; to which we may add, as having a considerable bearing on the subject, the general similarity maintained among nations at large, in spite of considerable alterations in circumstances, by the propagation of the colour and feature of the parent to the offspring. Of the influence of hereditary transmission, the breeders of cattle are well aware; and the knowledge, that qualities remarkable in the grandsire or grandam, though lost in the present generation, may reappear in the next, gives its importance to "Pedigree," as pointing out the faults or perfections that are likely to mark the offspring.

In giving as examples of national temperament, short sketches of a few tribes in which peculiar development is most specifically marked, and where the peculiarities of climate or district of country are not such, as satisfactorily to account for differences between them and

^a Observations made on a Voyage round the World.

their immediate neighbours, we must follow the plan already adopted; inferring the form of temperament, as nearly as possible from its effects, when the physical account of the inhabitants is wanting; and pointing out in few words, as we have already exceeded the usual limit of such essays, the connexion between particular conformation and various habits and modes of life, in those instances, in which an accurate description is afforded. We must not therefore confine our researches to those nations only, which are by their proximity more particularly placed under the field of our observation, and where so much depends on habits, laws and education; but extending our investigations as far as possible over the Globe, include those, who are in a more uncultivated state, and less under the operation of such causes.

Adjoining to the Hottentots, in the neighbourhood of the Cape of Good Hope, is a race, in every respect very distinct; — their appearance, their character and their habits, each pointing them out as alike different in their origin and present condition. The Caffres, according to Lichtenstein ^a and Barrow, ^b are one of the finest races of men in the world, tall, robust and muscular; they have the fine forehead of the European, although combined with the high cheek-bones and thick lips of the African; “their carriage is manly and open, and good humour beams in their countenances.” Of their habits again, it is said, that “their diet is simple; their exercise of a salutary nature; their body is neither cramped nor encumbered with clothing; the air they breathe, is pure; their rest is not disturbed by violent love, nor their minds ruffled

^a Travels in Southern Africa by Lichtenstein.

^b Barrow's Travels in Africa.

by jealousy; they are free from those licentious appetites, which proceed more frequently from a depraved appetite, than from a real want of nature; they eat when hungry, and sleep when nature demands it." ^a In short, this tribe seems to be the beau idéal of travellers in that part of the world, holding in their opinion, the enviable position of freedom, as well from the usual defects of a savage state, as from the evils, that too frequently accompany advances in civilization. On the other hand, the Hottentots are a slothful, insensible race, unaffected by a sense of wrongs, or by feelings of strong attachment. "They are a mild, quiet and timid people, perfectly harmless, and honest and faithful, but extremely phlegmatic;" though well proportioned and erect, "they are delicate and effeminate in make, — not muscular, and their joints and extremities small." Their diminutive height, — in the Bosjesmen rarely exceeding or even coming up to five feet, contrasts very strikingly with that of the Caffres, who are frequently described as from 6 feet 10, to 7 feet high. This, in the case of the Bosjesmen or Bushmen, is so marked, as to form one among several points in their character, almost at variance with that of the rest of the Hottentot tribes, which probably have their origin in the moral condition of that family: — a subject yet to be discussed. They are lively, though in the very lowest state of physical and moral degradation; they have all the deformities incident to the race in an increased degree, combined with a keen eye, ever on the alert; they sleep in nests formed in the bushes, and live by depredation; and in their habits and manners, perhaps approach nearest, with the exception of the Australians, to what is erroneously

^a Barrow.

termed a state of nature, in opposition to one of high civilization, because it is more nearly assimilated to the natural or wild state of the lower animals.

In the northern districts of Africa we meet with the Moslem tribe of the Foolahs or Felattahs, to whom continual reference is made in the writings of travellers from the days of Mungo Park,^a to Burckhardt,^b and Denham and Clapperton;^c each pointing them out as in their manners and appearance, differing very much from the Negro tribes with whom they associate. By their means, the small amount of traffic that is carried on in the central parts of Northern Africa, is entirely maintained; they are also a pastoral and agricultural people, and mild in their manners; they seem to be considerably further advanced in civilization than their neighbours, and look down on them with an eye of contempt as their inferiors; which it would appear, does not as among most barbarous nations,^d arise from a want of intercourse with others,

^a Travels in Africa in 1795 and 1805.

^b Travels in Nubia.

^c Travels in Northern and Central Africa in 1822—24.

^d The pride of a people, whose intercourse with the rest of mankind is limited, is thus pointed out by Dr. Falconer. "The map of the World in China was a square plate, the greater part of which was occupied by the provinces of this vast Empire, leaving in its outskirts a few obscure corners, into which the wretched remains of the species were supposed to be driven. The Russians, when in a barbarous state, called all other nations by the name of Nemci or *dumb nations*." "This disposition is still more marked in the American Indians. The Iroquois styled themselves the *chief of men*. Caribee, the name of the inhabitants of Windward Islands, signified the *warlike people*. The Cherokees from an idea of superiority, call the Europeans *nothings* or the accursed people. The *froth of the sea* was another appellation, by which the Americans designated the people of Europe."

because many of them travel about as traders, but from an innate feeling of real superiority. Their figure is more free from the lymphatic tendency of the negro; their features are small and regular; and being prevented by religious prejudices from intermarriage with the other races, their peculiarities are more easily perpetuated.

But what shall we say of the ancient Egyptians? The indelible marks of superior powers of intellect, gathered, as well from the pages of history which refer to them the origin of many of the arts and sciences, as from the lasting memorials of their mental and physical abilities, in temples, pyramids and obelisks, point to a conformation of mind, and a nervous energy, very superior to that of the other nations of Africa; while the fact of their conquests being few, and the extent of their dominion comparatively limited, shews a want of that combination of muscular force, which was mentioned as generally characterising those who have been distinguished in the field. These conclusions we find fully borne out, by the numerous examinations of mummy skulls, reported by various authors, and the paintings recently discovered in the ruins of their temples;^a which, while they go to prove, that the conformation of the head corresponded to the Indo-European or Caucasian variety, at the same time instruct us, in common with the writings of ancient authors, that in figure, in feature and in colour, they approximated very nearly to the African races. Further, the Copts of modern days, "who are well known to be the descendants of the ancient Egyptians,"^b are described by Denon, as characterised by *flat foreheads*, eyes half closed and raised up at the angles, high cheek-bones,

^a See Narrative of Belzoni's Discoveries in the Pyramids etc.

^b Prichard.

a broad flat nose — very short, a large flattened mouth placed at a considerable distance from the nose, thick lips, little beard and shapeless body, crooked limbs, and without expression in their contour.”^a And while any correspondence among the Egyptians to such a description as is here given of the Copts, is amply sufficient to account for their aversion to military enterprise on the one hand; the difference in the shape of the head, on the other, points out the cause of their superiority in mental powers, and why in the one, all trace of the ancient ardour of the other is completely lost.

Again, to contrast with the softness and indolence of the Hindoos, and many of the Islanders of the Indian Archipelago, we have a few tribes of Malays inhabiting the coast, and Javanese, who are cruel in disposition, and endowed with great activity of character; their institutions laws and customs, — very different from those of the continental races, all partaking of the same spirit. Mr. Montesquieu^b ascribes this difference to climate; but one can hardly conceive any such peculiarity in the climate of Malacca or Sumatra, as compared with that of Hindostan or some of the adjacent islands which are peopled by a different race, sufficient to produce in the people characters not only so distinct, but so diametrically opposite. They have subsisted for many ages as traders; and their present superiority in knowledge and information, as well as the “numerous remains of splendid temples, with images and inscriptions in stone and brass,” in many of the districts belonging to the Papua races, show a very decided national character, perfectly distinct from that of the Polynesian Islanders. In appearance they are smaller and more slender,

^a Travels cited by Prichard.

^b Spirit of Laws.

their forehead more elevated, their countenance open and expressive of thought and anxiety; a greater or less degree of civilization renders them either cruel and ferocious, or artful and cunning. The natives of Otaheite and Marquesas, as specimens of the Polynesian race, are finer men with reference to external characters, both taller and better proportioned; but they have no mental qualities to distinguish them, being like the Hindoos soft and mild, though not nearly so much civilized as they.^a

The latest speculations on the subject of the almost unaccountable difference of these islanders amongst themselves, would seem to attribute the distinctive characters of the Malay and Javanese, properly so called, either to their conversion to the religion of the Brahmans, prior to the establishment of their own insular settlements, but subsequent to the dispersion of the other races; or to the limited dissemination of these principles, with the accompanying knowledge of arts and manufactures from Hindostan, to which they were before strangers. But either hypothesis will, I think, prove inadequate to the explanation of the fact, that although the inhabitants of adjacent islands have frequently but few characters in common, yet some sunk in the lowest state of degradation, bear evident marks of affinity to others greatly elevated above them by their information and mental attainments, while residing on islands at the greatest distance from each other. Thus Prichard, in alluding to the differences, pointed out by Péron, between the inhabitants of New Holland and the other Papua races, says, "notwithstanding this attempt to contrast them so strongly, they have, as it appears from a comparison of numerous statements, many characters in common."

^a See Cook's Voyages.

Another very important consideration is, that were we to attribute their mental superiority to the introduction of these arts from the Birman Empire, we cannot in any way account for the very opposite character of the Hindoos, who have, notwithstanding the progress of the very same arts among them, and the existence of the very same religion, continued to be of a soft and effeminate disposition. The fact, that "a remnant of the disciples of Zoroaster, flying from the Mohammedan persecution, carried with them to the western coast of India, the religion, the hardy habits and the athletic forms of the north of Persia; and that their posterity may at the present day be contemplated in the Parsees of the English settlement at Bombay, with mental and bodily powers, absolutely unimpaired after a residence of a thousand years in that burning climate,"^a shows very clearly, that no peculiar form of religion or customs could, by their introduction from without, have so re-modelled a few of these tribes, confining its influence to them and not affecting the rest, without there having been an original tendency to the characters which have been developed through their agency. It seems to me much more natural to conclude, that they had from the first, in their constitution, an intermingling and excess of the nervous temperament, which, having been acted upon by subsequent occurrences in their history, aided in the production of the physical characters now manifested by them. They are always mentioned as a "finely formed people" — "upon the whole gracefully formed" — "well shaped" etc.,^b with slender limbs, particularly small at the ankles and wrists.

^a Wilk's Historical Sketches of the South of India.

^b Marsden's History of Sumatra. — Raffles' History of Java. — Crisp in the Asiatic Researches.

The character of the hair, it is somewhat curious to observe, with reference to the form of temperament; — soft and lanky in this, as well as in each of the nations we have already alluded to as particularly distinguished by their activity and powers of mind, it forms a very marked contrast to that of the races surrounding them. The Caffres have it but slightly curled, while in the Hottentot it is perhaps more frizzled than in any other tribe. Of the Foulahs, Park says, that their hair is silky; the mummies of Egypt are almost without exception found to have longish, lank and slightly curled hair, while that of the Copts is woolly; and in the people at present under consideration, the hair of the Papuans is much straighter than that of the Polynesians. This is perhaps more matter of curious speculation, than of philosophical argument; and I would not lay any stress upon it, being merely led to make this passing allusion, in consequence of the remarkable coincidence, that fine thin hair is, in the European at least, usually an indication of the pure nervous temperament. ^a

In speaking of the influence of climate, reference was made at some length, to the Esquimaux and North American Indians. It seems pretty well ascertained, that both sprung originally from the same race; some features they have in common, and some also that would seem to link them to the Tartar tribes in the North Eastern districts of Asia; but the connexion of all, must have been at a period so very remote, as to be completely beyond the bounds of history. It is not to be supposed, that differences so very striking as those existing between the Esquimaux or the wretched Samoiedes of the Frozen Sea, on the one hand, and the Indian savages or Crim-Tartars

^a See page 19 of this Essay.

on the other, are traceable to the effects of climate alone; for besides the circumstance of their pursuits and aliment being different, there must be in the former a hereditary tendency to laziness and sloth, an obtundity of intellect, and a sluggishness of frame, which lead them to neglect or despise the manners of their immediate neighbours, though in many respects superior to their own; to wallow, apparently to delight in filth and nastiness, and to avoid the most energetic, and at the same time the most natural occupation of the savage in other countries. We need not again enter into a detailed description of their physical characters and mental qualifications; it remains for us now to advert to those, in whom, while residing under the same climate and in similar circumstances, a natural liveliness or a greater amount of physical, perhaps too of mental power, and an absence of the phlegmatic tendency, modify the whole character, and produce very different results; which it appears, can only be accounted for on the supposition, that an original variety of temperament prevailed among them.

Two nations are mentioned in the eastern extremity of Siberia, the Yukagirs and the Tschutschki, who were warlike and bold, and of a larger size, less uncouth in appearance, and in every way superior to their neighbours: the former are now nearly extinct, but it cost the Russians much labour in former times to extirpate them: Capt. Cochrane says, "they are certainly the finest race of men I have seen in Siberia; the men well-proportioned and with open and manly countenances; the women are extremely beautiful."^a The latter, their constant enemies, at length aided the Russians in accomplishing

^a Capt. Cochrane's Pedestrian Journey in Siberia etc.

their final overthrow, and are described as "a fine, stout, active people; they hold little men in contempt; their features are masculine:" etc.

If we turn to the Finns and Laplanders, who inhabit countries, nearly allied to each other, and follow nearly the same mode of life, we find, that the latter are diminutive, lean and meagre, but very active; their limbs are small, but they are swift of foot; in running, in bending the bow, in jumping and also in swimming, they are expert far beyond any of their neighbours; their hair is black, straight and thin, and their heads large; in short, they seem to maintain in spite of the effect of climate, the temperament — a combination of the nervous and muscular, belonging more properly to the temperate regions in the centre of Europe, from whence they seem to have had their origin. ^a The Finns differ not greatly from surrounding nations, and have, though in a more modified form than the Esquimaux, the general characteristics pertaining to cold countries. The colour of the hair and eyes is strongly contrasted in the two nations, it is thus mentioned by a German author cited by Prichard. "Die Augen der Finnen liegen etwas tiefer. Ihr Haar ist größtentheils roth. Auch einige andere Sprachverwandte der Finnen, als die Permäcken, Siränen, Voljaken, und die Obischer Voljaken haben fast durchgängig rothe Haare und bläuliche Augen. Dieser Umstand ist desto merkwürdiger, da andere Sprachverwandte der Finnen, als die Lapländer, Tschere-misten, Morduinen, Wogulen schwarze Haare und schwarz-

^a The Hungarians, it is now almost universally believed, belong to the same tribe, and they, in all probability, as well as the Laplanders, lived to the South of the Uralian Chain, while the Finns, Permians etc. proceeded from a district farther to the North. Some indeed consider the former as the ancient Scythae.

braune Augen haben. Zu dem schwarzhaarigen Stamme gehören wohl auch die Ungern, daher denn ihre Sprache mit der Wogulischen näher verwandt ist.^a Among the Laplanders it would appear that a temperament is occasionally springing up, more suited to the climate, which therefore thrives better, and numerous examples are now to be met with of the xanthous variety, approaching the stature of the Finns, having their yellow hair and light eyes, and their lymphatic tendency. It is probable, that the diminutive size of the majority of the race, indicates a want of due adaptation to the climate, and is an effort of nature to counteract the evils that would arise, were the fine figure of temperate regions to be developed in such a barren district. Dr. Prichard remarks that "it seems here, as if the appearance of the xanthous variety with the fair, florid complexion, was the result or accompaniment of a greater degree of vigour in physical life, and a more ample development of the body, and particularly of the sanguiferous system. Perhaps this state of the system and bodily growth, is connected with the abode of the parents and birth of the children in a cold climate; the adaptation of such a habit of body to a cold climate is evident."^b But though the sanguiferous system be enlarged, it does not follow, that the signs of a sanguine temperament will be manifested, that increased vigour or ardour of mind is the consequence; the stimulus to such a constitution is still wanting, and in its absence, a cold lymphatic temperament results.

The similarity of the Indian tribes has been made the subject of much discussion among authors, with reference to the origin of nations; and it has conse-

^a Literärische Nachrichten von J. Dobrowsky.

^b Prichard's Researches.

quently not escaped observation, that there are, though not very observable at first sight, some remarkable differences among them. The Chipewyans, for example, are scarcely allowed by Sir Alex. Mackenzie to belong to the aborigines of America.^a The nations in the neighbourhood of the Plata, differ in many particulars from the general character; and, somewhat in stature, as well as in physiognomy, approach to that of the Esquimaux, although residing in a region very far removed from them, and in a climate, that has no characters in common. "Their average stature is less considerable, their faces have more latitude, and the Roman nose is less predominant;" — their hair and skin too, are often of a much lighter colour, especially in youth. In the race of the Apaches, we find the light colour and flaxen hair predominating. Some tribes described by Mackenzie, among the Rocky-mountain Indians, "have small grey eyes with a tinge of red, and hair of a brown colour." Von Humboldt points out, that some tribes, who live to the north, are still occasionally much blacker than those to the south: "*Les Mexicains sont plus basanés que les Indiens de Quito et de la nouvelle Grenade, qui habitent un climat entièrement analogue.*"^b Of the same nation, he shews that a melancholic temperament prevails to a much greater extent among them, than among the rest of the Indians; "*Nous ne reconnoissons en lui, ni cette mobilité des sensations, de gestes et de traits, ni cette activité d'esprit, qui caractérisent avantageusement plusieurs peuples des régions équinoxiales L'indigène Mexicain est grave, mélancolique, silencieux; cette gravité est surtout remarquable dans les enfans Indiens Je ne connois aucune*

^a Mackenzie's Travels.

^b Essai Politique sur Nouvelle-Espagne, Liv. II. ch. VI.

race d'hommes qui paraisse plus dénuée de l'imagination." ^a To collect from the numerous volumes of travels in that country, sufficient information, on which to ground a correct division of tribes according to temperament, is a labour far too extensive to be undertaken for the mere purpose of showing, that the different varieties are marked in these as well as in other nations, and that they are not wholly dependent on climate; and enough has I think been brought forward to establish this point.

An idea, taken up by Buffon, ^b and supported by Robertson, ^c that there is a deficiency in the nervous development, — a mental inferiority among the natives of the New Continent, corresponding to a fancied decrepitude among the lower animals, has met with many able refutations, from the skilful pen of Jefferson, ^d and the accurate information of Humboldt, ^e and others; whose accounts can leave no doubt on the mind of an unprejudiced person, that, prior to the corrupting influence of European example, they exhibited moral qualities of the very highest grade. Not only is there a fortitude exhibited in their patient endurance of wrongs, — a patriotic heroism in the gallant defence they made against the unceremonious intrusion, the unjustifiable attacks, and the unparalled barbarities of the Spaniards; but there is to be found among them a lofty spirit of independence, a devoted friendship, an inflexible fortitude, and a keen sense of injuries, which these writers would fain restrict to a more genial clime. Their simple affirmation is as much

^a Ibidem.

^b Histoire Naturelle.

^c History of America.

^d Notes on Virginia.

^e Essai Politique. — Voyage aux Regions Équinoxiales.

to be relied on, as the oath of the more enlightened, but too frequently, faithless European. At the same time, in common with all the branches of the Mongolian family, they possess a cerebral development decidedly inferior to the Caucasian; and a corresponding deficiency in the powers of reflection, may also be traced among them. Exceptions to such a sweeping conclusion are likewise found, in the existence of the empires of Mexico and Peru, where a degree of progress in arts and civilization was at one time reached, greatly beyond the attainments of the majority of the natives. They built cities, constructed roads and aqueducts, and have left behind them in the great pyramids which are yet standing, traces of a superior genius and a knowledge of architecture, quite imperceptible in the rude huts of reeds and grass, which to the present day form the only habitations of vast numbers of the race:^a while their daring courage, and strenuous defence of their country and their liberties, were not less remarkable, than the ingenious artifices and the bold stratagems of the Spaniards, who, after a century of hard fighting, with the superior advantages of fire arms and a better system of military tactics, were scarcely able to crush the brave spirit of these barbarians. Such instances are surely sufficient to shew, that in some at least, the superior physical qualities with which all are endowed, may also be accompanied by an extraordinary degree of nervous energy.

Among the nations of Europe, we find numerous other causes in operation, which produce their effects with as

^a Of the inhabitants of Norfolk Bay and Cox Canal, it is remarked "les indigènes montrent un gout décidé pour les peintures hiéroglyphiques." (Voyage de Marchand).

much certainty and power, as those of soil and climate, but which are also combined with national peculiarities. Here, where the illumined page of history has pointed out more distinctly, the various stages from barbarism to civilization, or from aboriginal occupation to subsequent subjection to a foreign force, or even to final extirpation; — here we can trace nations, who from time immemorial, have tilled the same plains, have roamed over the same hills, or dwelt on the banks of the same streams, where the ashes of their forefathers have slept, undisturbed by the pillaging hand of foreign invasion, secure in the fastnesses of their native rocks: Others, who have felt the shocks of war, or tamely submitted to the power of a Conqueror, — whose political institutions have been overturned, and the accumulated literature of ages swept away before the desolating march of a savage barbarian, or consumed in the fire kindled by his sacrilegious hands, and who have been reduced to the lowest state of political and moral degradation, still remaining unaffected by the change; — their national character unaltered; — the victors themselves having become extinct in the blaze of their own glory, and sunk so completely into the mass of the vanquished, as scarcely to leave their name behind among the people: But there are also countries so overspread by foreigners, that the natives must have been either extirpated at once, or forced to fly to districts, which, if not more genial in their climate, or kindly in their aspect, yet fostered the ardent spirit of liberty, and bade defiance to all the arts and prowess of the most victorious troops. In each of these we may observe, more or less perfectly developed, the original character of the natives, or the subsequent and super-

imposed one of the victors, just as we might from their history have been led to anticipate.

In our own country the livelier features of the Saxons, are not more marked in the inhabitants of the fertile districts of England, than the strong outlines of the aborigines among those of the wilds of the Welsh mountains and Highland districts. The Romans, by establishing their consuls in various towns, and keeping their legions marching to and fro through the countries, held under their domination the greater part of the old world; but no sooner had their power begun to wane, and their forces been withdrawn from the occupation of each particular district, than the people resumed their own peculiar habit and character, and remained in exactly the same condition in which they had been, prior to the first Roman invasion. The Spaniards, though more completely subjugated by the Moors, still retained some portions of the country into which the arms of their invaders never penetrated, and here the spirit first stirred, that roused the sleeping energies of the nation to throw off the yoke; yet after their expulsion, in but a few places, and that only where their head quarters had been, was any alteration visible in the temperament of the people. Clovis with his 30,000 Franks once overpowered the fertile and populous districts of Gaul, and Attila with his hordes of Hunish barbarians once revelled in the luxuriant plains of Italy; but the very small comparative numbers that finally settled in these provinces, could not affect the national character and constitution. But while the Normans have as evidently undergone a complete change from the settlements of the Danes, and the whole of Western Europe from the conquests of the Goths, still on the whole, notwithstanding their occasional change of situation, and

the similarity in many respects, to which the spread of civilization and knowledge, and mutual intercourse have given rise, the nations which have formed the principal divisions of Europe have remained pretty nearly distinct for upwards of 2000 years. So long ago as the days of Julius Caesar and Tacitus, had the Germans the same features which now distinguish them; not only in physical characters, but even in their natural bent and disposition, though modified to a certain extent by the changes in their institutions and mode of life, can we trace a close correspondence with the statements made by these writers.

The Teutonic race has always been pointed out as differing essentially from the other nations of Europe, by the prevalence among them of brownish or red hair, a fair complexion and blue eyes. This was no doubt greatly exaggerated by the ancients, and particularly by those who had not the opportunity of making personal observation; and, in reality, was perhaps not more universal among them than in the present day; it is, nevertheless, so constant in all the branches, as to give rise to their being described by various authors as belonging to the "sanguine constitution." We must not be led from this to conclude, that the sanguine *temperament* is among them the predominant form; on the contrary, we find nothing in their history that would lead to such an inference. In persons belonging to the same class or tribe, it is true that a florid aspect, which is not unfrequently accompanied among northern nations by a light colour of hair and eyes, is indicative of a sanguineous temperament; but the latter character alone, when common to the whole tribe, can never justify the conclusion that this is the all-prevailing form: On the contrary, in the Germans for example, who are a branch of the Teutonic

race, the muscular and nervous, or a combination of the two, seem to be those which may with greatest propriety be attributed to them: for we find that in former times, they did not follow the milder occupations of farming or the cultivation of the arts, but were addicted to war and plunder; by these they gained their livelihood; and, so far from robbery being detested among them, they encouraged and applauded it, when executed with skill and address; and this, not as among the Spartans, from its being an institution of the state, but from the natural bent of their disposition; while cowardice, the frequent concomitant of a sanguine disposition where not fortified by nervous or muscular energy, was punished among them with death. This is farther proved by the absence of that fickleness of disposition, so characteristic of the sanguine form, which, debarring them from the purer regions of fancy, has rendered the Germans celebrated for the depth of their researches, and the acuteness of their reasoning. In their passions, whether of love or of anger, there are no sudden gusts, accompanied by great elevation and sudden depression, but a permanence, quite harmonising with the imperturbable serenity for which they have become proverbial. These peculiar characters deduced from their ancient condition as described by Tacitus, and that mentioned in various modern volumes of travels,^a I have not been able to collate with any distinct statement of their actual physical condition, but in so far as I have myself had the opportunity of judging, have appeared to be fully borne out by facts;—the form of temperament exactly corresponding to their moral features, and though varying in different individuals, easily

^a Tacitus Germania.—De Staël.—Hodgskin etc.

traceable throughout the whole, and much more commonly met with than the sanguine. A very remarkable circumstance in their history, is the existence in combination with these, of a very decided lymphatic tendency:—more distinctly marked in the Russian and the Hollander, each belonging to the Teutonic race, but placed, the one in a colder region to the North, and the other in a flat swampy country,—I am much inclined to believe that in Germany itself, its prevalence and permanence, chiefly observable among persons advanced in life, is owing in great measure to the excessive use of soup-maigre, poor wines and beer, operating on frames having in their constitution the rudiments of this form. This combination will of course vary, not only among individuals, but also in different parts of the country and in different branches of the tribe, from the heavy Dutch boor, to the animated and florid aspect of some of the Danes, who appear to partake more of the sanguineous, than any others of the race.

The national character of the Spaniards would seem to be very slightly influenced by their situation in the south of Europe: in nothing do they partake of the sanguine character;—dull, heavy, and morose, the Spanish Don seems swallowed up in pride; though evidently not phlegmatic, he has a great antipathy to labour, and is without natural liveliness or activity. This would seem to be the result of depressing causes, acting on a melancholic temperament, and producing in it a degree of real Melancholia; to which, as well from the application of this name to the particular form, as from the low state of the sanguineous system, there appears to be a natural tendency under certain circumstances: for there cannot be a doubt, that occasionally there is displayed an acti-

vity, a readiness for action, and a willingness to undergo bodily fatigue, which we should not from the general features, be at all led to anticipate; and which in favourable circumstances, if combined with mental capabilities, might have produced a very superior set of men. The causes operating in this case, have been the pride and over-bearing disposition of the aristocracy, only equalled by the terrors of the Inquisition, and the degradation of the lower classes; who, having been so completely repressed in former days in their attempts to achieve their freedom from so galling a yoke, have not recovered sufficient energy again to repeat their efforts, or to assert their independence. But the long and harassing predatory warfare carried on by the Guerilla bands during the late continental wars, shews that they have the power of acting for themselves, and an obstinate pertinacity in carrying out their purposes; and that an occasion alone is wanting to call these qualities into general operation.

Dependent, as the actions of a nation must ever be, upon the circumstances in which they are placed with reference to their neighbours and their own political institutions, as well as upon the character of their sovereign, and even that of the individual, or set of men who may, for the time being, have the direction of public affairs; — upon the status which good or bad counsels, and the energy or pusillanimity of persons in power, have given to them, and also upon the period of their national existence, and the objects which have always engrossed them, or even those to which their attention may have been recently more particularly directed; we must ever be liable to err in deducing from these the prevailing form of temperament, although their continued operation for a length of time, must have the effect of

assimilating the character to one from which such results might be supposed naturally to spring. In speaking of individual temperament, again, we are apt to be led astray, alike by our ignorance of the varied motives external to the person himself, which may induce several persons to perform the very same act; and by the impossibility of ascertaining, whether the particular form under consideration be congenital, or but the consequence of peculiar habit and education, and induced by circumstances altogether foreign to natural constitution, or the alterations in structure at different periods of life.

In the diversity of the species, the deviations from any general standard that may be attempted to be set up, whether limited to a nation, a district of country, or a particular family, must greatly exceed the number of those exactly corresponding to it: it is but the prevalence of one common form in its combinations with others, and varying both in its proportion and the numerous adjuncts with which it may be associated, in which we can trace the connexion that has been already pointed out, as having a predisposition to be established in the ramifications of one common stock. Two principles are easily recognised as giving rise to original differences in individuals, — the meeting in the parents of different simple, or compound forms, and the springing up in the offspring of congenital varieties which have no analogy to those met with in either. It is quite unnecessary to bring forward, from the transmission or production of other varieties of form, collateral evidence in proof of the correctness of this statement. The colour of the children produced by the union of a white and black parent, varying from the slightly sallow complexion which scarcely differs from a European, to the deepest black, is

sufficient corroboration of the one, and the frequent congenital varieties occurring in man and in most of the mammalia, amounting in some cases to malformations, fully establishes the other. Instances are occurring every day, in which, peculiar formation, marks, and naevi materni, are produced by no apparent cause, and have consequently been absurdly traced to impressions made on the mind of the mother; and cases are not at all uncommon, both of the albino variety springing up in families in which there was no trace of it in previous generations, and of original deviations from the natural form, such as supernumerary fingers and toes, being handed down from father to son for several generations. ^a Of this we have a very remarkable instance in the history of the Porcupine man, cited from the Philosophical Transactions. ^b

To this we must trace the great superiority of those men who have distinguished themselves in various nations, at least when occurring in individuals whose parents were not at all celebrated for the same qualities, and sometimes even among a people in general quite in the back ground. Such were Philip of Macedon and Alexander, who raised their people to be the head of nations very superior in character to their own. Such were the Czar Peter and Catharine of Russia, and Charles the XII. the latter of whom by his mental and physical energies, was enabled with a nation actually incapable of self-defence, and, subsequent to the battle of Pultowa so easily overpowered, to carry the terror of his arms, into the heart of his enemies country: but into such details, time forbids us to enter. It is evident however, that we cannot predicate concerning any family, that such and

^a Prichard B. XIX. Chap. I. Lawrence, Richerand etc.

^b Prichard B. II. Chap. IV.

such will be the character of its individual members; we may observe that one particular type from its being very much marked in each of the parents, will probably constitute the prevailing temperament of the whole; but of each individual we are quite uncertain what may constitute the most decided feature, and still more in the dark, as to what may afterwards be developed by the chain of circumstances in which he may be placed.

Similar deviations from original character are constantly produced by the effect of education, morals and religion, which develope features, differing in each, according to the extent of their influence over the frame, and the force with which they may operate upon the natural temperament of the persons composing it. It is however, a matter of considerable difficulty to determine, whether these external circumstances themselves, be not owing to modifications in the laws and the political institutions, originating in the natural genius of the people; nevertheless when once established, from whatever cause, I think there can be no doubt that they will tend, according to circumstances, either to alter or confirm the original character. Thus, the steadiness of the British, co-operating with their love of liberty, has produced that beautiful and harmonious constitution, which while fostering the liberty of the subject, has enabled the sovereign power, with physical resources inferior to those of many other states, to make itself respected, and to maintain for so long a period its ascendancy all over the world; but its further operation has been, to inspire the people with a love of change unknown in feudal times: on the other hand, the pride of the Spaniard has thrown the power into the hands of the aristocracy, which has been used but too frequently with a view to their own aggrandisement, at the expense of both sove-

reign and people; and has always succeeded in crushing the spirit of insubordination, or desire for bettering their circumstances, which has at various times manifested itself in their history; and stamped more indelibly on their character, that sullen apathy and inactivity already alluded to: again, the indolence of the people at large in the Turkish or Russian Empires, by vesting the whole power, legislative as well as executive, in the person of a despot, at whose every word or movement the people are wont to tremble, has perpetuated their natural tendency to inactivity. Occasional changes are however observed in national character, which we cannot trace to any peculiarity in their previous history, as for example, the alteration in the French, indicated by a comparison of their present condition with that referred to in an expression of the Emperor Junius, who says "I love the Parisian because he, like myself, is serious and grave."

There is perhaps no cause more likely to modify the manners of a nation, than the introduction of a foreign religion; but it has been well observed, that in the change which the Christian religion underwent at the Reformation, the particular form which was finally established in different countries, manifested very much the natural disposition of the people, and corresponded very closely to the form of government that previously existed. We can never suppose, that to the terrors of the Inquisition, the permanence of the Roman Catholic religion in Spain was solely, or even principally owing; neither can we believe, that to the inclinations of the Great Founder of the Lutheran Church alone, or even to the successful inculcation of these principles on his more immediate followers, was to be attributed its establishment in one part of Germany, with its ecclesiastical dignitaries, while those

of Calvin, for a similar reason, took its place in another; nor can we for a moment imagine, that mere accidental circumstances, or the mode of its introduction, gave rise to the diversity of character between the two forms established in this country. The Mohammedan religion is, on the other hand, more natural to those countries in which it has gained the ascendancy; and that of the Greek church, to the Empire of Russia. The wise regulations of Solon and Lycurgus were adapted to the national inclinations of the people for which each of these lawgivers had to legislate; but they also led to results, which neither of them would probably have attained, without the establishment of their respective codes. It is scarcely possible that the Spartan laws could have been introduced at Athens, or had they been forced on that people, that they could have elicited in them the character of the Lacedæmonians; many of their institutions would have led to constant discontent among a people naturally luxurious, and others would as infallibly have fostered a corruption of morals in the one, as they prevented it in the other: but the condition of the inhabitants of Lacedæmon prior to the days of Lycurgus, indicates that their natural temperament was undergoing a modification, which would in the end have assimilated it in a greater or less degree, to that of the Athenians, and but for this remarkable event in their history, would soon have been established as their national character.

It is well known that the Chinese date the settling of their civil code from the days of the celebrated Confucius, and no people give more striking evidence of the powerful operation of such a cause than they. The laws of that country seem to be in as far as possible, adapted to the climate, while corrective of its evils; and

are framed so much in accordance with the spirit of the government, which is purely despotic, that no change of any importance has occurred in them under the numerous dynasties which have ruled the Celestial Empire. Should any of their princes, led by luxury, indolence, or a desire of personal aggrandizement, deviate from the original constitution, the effects are so soon felt, that disturbances immediately break out, sufficient to recal him to his duty; or they rapidly increase to such an extent, that some more successful rival, who has taken advantage of the general disaffection to establish himself in some distant part of the empire, marches to the relief of the malecontents, and makes himself master of the sceptre and the throne. The ground is scarcely capable of maintaining the population with which it is crowded; and the utmost regularity and strictest surveillance on the part of the ruler, is scarcely able to provide against the effects of an unfavourable season, which deprives them of their only means of sustenance, the productions of the soil; in consequence of this, the government has a paternal as well as despotic character, its principle being, the strictest observance of the laws and of the regulations of the Emperor, which have for their object, the interests and improvement of agriculture. The effect of this combination of circumstances is, the stimulating to industry a people otherwise inclined to idleness, and producing a spirit of subservience and subordination where the tendency is to anarchy and tumult; and this may account for some of the anomalies in their constitution, in general so puzzling to historians. It has probably also given rise to the perfidy and duplicity so well known to, and so often mentioned by our traders in the East, in leading them to devise means to evade, rather than to obey arbitrary

laws, against which they dare not openly rebel. I cannot here refrain from observing, although not much connected with the present subject, that it seems to be indicated by this, as well as numerous similar instances, that oppression and poverty, combined with an arbitrary rule under which the people have not the desire to think nor the power to act for themselves except in conformity to ordinances or invariable custom, have the effect of causing the females to be more prolific, and the population to increase more rapidly than in free states:—Such, for example, we are informed was the case with the Israelites in the days of their bondage in Egypt, and such is said to be true in regard to the slaves in the West-Indies.

Under the continued operation of these influences, the Chinese have distinguished themselves above all the nations of the East, by their progress in the arts of civilized life; but, beyond a certain point, they cannot advance: in literature, in the arts and sciences, and in their civil and domestic relations they are far behind the people of Europe; which, it appears to me, cannot be satisfactorily accounted for by the alleged mental inferiority of the Mongolian race alone, because the Turks, another branch of the same family who were for a long period in a similar condition, have, through their intercourse with free nations, risen to a comparatively high elevation. Russia has long been under the sway of a despot, and the result, in their inferiority to the other states of Europe, is such as needs no comment: but an almost daily improvement has been taking place, since the sudden and somewhat revolutionary changes in their mode of government introduced by the Czar Peter, and amended under the wise and politic administration of the

celebrated Catharine, by whom the despotic tendency of his proceedings was counteracted, the imperial power itself restrained, and her subjects stimulated to think and act for themselves.

This affords a ready solution of the problem, why Russia is now progressing towards the most formidable position in the balance of European politics, although still adhering to despotic principles, while the Turks are daily falling from their standing. A Sultan Soliman might again raise them during his reign; — a Peter might for a time force them to exert their energies, and be, what they ought to and might be; and an Egyptian Ali may introduce European arts and manufactures; but under their present form of government, and their present religion, which ties up the hand of their princes, and cramps their efforts, — however able or willing to remedy the defects in their constitution, the Turks can never be in a condition to vie with other countries in political power, or for a moment to regain the supremacy they have lost: nevertheless, as we had occasion to point out in referring to them, they are by no means deficient in endowments of mind and physical powers; and as stated by Lawrence, “it is generally allowed, that they are superior in natural qualifications to their conquerors the Russians.”^a The Arabians were once in similar circumstances, and had they, “like the people of the West, possessed the inestimable advantages of a religion favourable to the arts and to useful knowledge, they would have brought to perfection every branch of philosophy.... But the Mussulman religion was incompatible with this development of the mind; the Arabs were exposed to the alternative of renouncing their faith, or

^a Lawrence. Sect. II. Chap. VIII.

returning to the ignorance of their ancestors." ^a Indolence, apathy, and negligence, take the place under a despotic government, of activity and industry, and thus develop the more feeble characters of the lymphatic and sanguineous temperaments, in the same circumstances in which an opposite form of administration might have favoured the activity of the one, and almost wholly removed the other.

The English cannot be supposed by any impartial judge, to be either in natural or physical qualities, or in mental power and energy, so superior to other nations, as to owe to that alone the position they hold. They have the advantage it is true, of uniting considerable soundness of judgment and depth of thought, with activity and cheerfulness of character; but it is to their situation — defended by the bulwarks of the ocean, to their national institutions, and the nature of their religion, we must ascribe the origin and spring of those circumstances, which have led to such results. The Lord de Coucy remarked to Charles the Vth. that the English are never weaker nor easier overcome, than in their own country. True as this perhaps is in the majority of cases, as may be gathered from the annals of history, it acquires additional force in our case, from the confidence we place in our situation, and must have a powerful operation on the character of the people. On the other hand, the combination of wisdom in the legislative and power in the executive departments, — the freedom given to all men to maintain their own opinions and pursue that line of conduct which inclination or circumstances may point out, except it be subversive of the public good, — the personal responsibility which our reli-

^a Fourier's description of Egypt.

gion inculcates, and more than all, the abundance which fertility of soil and the advantages of commerce have put into our hands—amply sufficient for the necessities of all, the luxuries of the few, and the comforts of the many,—have all combined to foster the good and repress the evil in the temper and condition of the people at large; and have no doubt produced the improvement in the whole, by silently though surely working on the mind of each, through a succession of years. In such a condition, and with such an amount of national prosperity, it is, with justice, matter of surprise to foreigners, to find the English “destroying themselves in the very bosom of happiness, and committing suicide without a cause.” Were it confined to this country, we might be inclined to rank it as a national peculiarity, and refer it to some defect in the mental constitution; but when, on the contrary, we find it now nearly as prevalent in France and Italy; and when we compare this statement with the fact, that in former days it was seldom perpetrated, and then only as an act of heroism by persons whose education placed them above the rank of the vulgar, I think we shall find greater reason to attempt its explanation on the principle of the spread of knowledge—such as it must ever be in the present imperfect state of things—“of good and evil;” and the tendency, perhaps more prevalent in England than elsewhere, to brood over the evil, combined with an acute perception of the misery arising from the one, and the advantage to be derived from attaining the other,—feelings, which may hurry forward the sanguine as well as the melancholic, to that fatal step, whereby they plunge themselves into a future state,—there to seek what they cannot find in this. This condition is one which is often classed under the effects of the

melancholic temperament, but as we have already stated, is more properly a morbid condition of the mind approaching to monomania, than united with any particular form or structure of parts.

It may be stated with great safety as the result of observation, that in a despotic government, where the laws are based on the uncontrolled will of one man, and the customs of the country are formed either on these laws or on usage in connexion with them, and traceable to the habits and manners of that individual, the character of the people is more formed or altered by these agents than in free states, where innovations rather originate in the freedom of thought and action among the whole people, and are more indicative of what their character is, than the causes of it. The tendency in warm climates, is to the establishment of a despotic form of government; to this the inhabitants are disposed by their timidity, which makes them fear the power of an ambitious tyrant,—their indolence, which is gratified by the whole power being vested in the hands of one, with whose acts they have no right, and therefore no call to interfere,

"Felices Arabes, Medique, Eoaque tellus,"

"Quam sub perpetuis tenuerunt fata tyrannis;"^a and also by the exposed and defenceless condition of the country, as in the plains of the Indus and Ganges, and the South of Asia in general; which, bordering on the warlike tribes to the north, is open to the devastations of barbarians whose physical force must, from their colder habitation and their mode of life, be far greater than that of the effeminate inhabitants of the southern districts. At the same time, the very extent of these plains,—the mag-

^a Lucan. Liber VII.

nitude of the portions into which the country is divided by solitary ranges of mountains and large rivers, renders necessary the establishment of large empires, and is incompatible with the existence of numerous smaller states; which, incapable of self-defence, must be perpetually at war, and in the end can only be united together by the acknowledged superiority of one, and the subjugation of the rest.^a And thus, "in Asia they have always had large empires, in Europe these could never subsist;" ^b while "Africa is in a climate like that of the South of Asia, and is in the same servitude."^c While possessed of great sensibility, they are very deficient in mental energy, and will rather yield to the tyranny of custom or the will of a superior, than exert themselves to oppose it; and the combination of these causes is such, that under their operation, an apathy nearly allied to that of the lymphatic temperament, has been produced. They conceive perfect rest to be the state of greatest bliss,—their rewards and punishments in a future state, are synonymous with rest and labour, and their deity is "the Immovable." To uphold a despotic empire there, is not a matter of great difficulty; but in Japan, where "the people are of a stubborn and perverse temper," the strictest laws are required to maintain subordination, as well as the severest punishments for any transgression; and yet, owing to the national peculiarities to which we have already alluded, this form of government has not the effect of developing such features among them; while in Hindostan where this character is already formed,

^a Montague's Spirit of Laws. B. XVII.

^b Ibid. Chap. II.

^c Ibid. Chap. VII.

the laws are mild, the punishments few, and these neither severe nor rigorously executed.

The reverse of this holds good among the inhabitants of temperate climates, where the nervous and bilious temperaments are more usual. Permanent characters of any sort, cannot be impressed upon them by any concatenation of circumstances or external agency; their natural inclinations always predominating, and giving a colouring to all their actions, are, if modified at all, only so for the time being, in consequence of the position in which they may be placed. The shock of a revolution in Paris is got over in the course of a few months, and the light heartedness, and buoyancy of spirits of the Frenchman, remains unaffected by the occurrence. In England, disaffection and revolutionary principles rise or fall in proportion to the idleness, the want of employment, and the consequent starvation of the working classes, or the prevalence of peace and plenty throughout the land; but a confidence in their innate powers, — a slight feeling of pride in consequence, and a predominance of good over bad qualities, are the general features of the English; and apart from the prejudices of rank, station, and party, the people are pretty well able to discriminate between what is really for their good, and what is likely to be productive of evil.

A species of approximation in character, in these two nations, has been effected by the influence that the fair sex has in each gained over the other; but differing, in as much as in the one, the respect is more paid to the charms of person, and in the other, to those of mind. It is a law of nature, which custom can never abrogate, that the "twain shall be one flesh;" and, in whatever way it be departed from, whether in the debased condition

of the females among savages, the number of wives tolerated by the polygamy of Eastern nations, or the equally unnatural elevation to which they were raised in Europe by the chivalrous spirit introduced at the time of the crusades, the effects of the infringement of this law are evidently marked; and this it is, that is leading the French nation to such a pitch of immorality, — their overlooking or despising the bond of union that ought to subsist between persons placed in the relation of man and wife, not merely in name, or as a matter of mutual agreement, but as of right. It would be a curious and profitable investigation, to trace in different nations, the approach to the proper balance in the reciprocal influence of the sexes upon each other, which has always succeeded improvement in knowledge, and been followed by a corresponding improvement in their social and physical condition; but we have not space at present to enter upon it: suffice it to say, that such is invariably acknowledged to be the fact, and the result has been a softening down of the asperity of character in some, an elevation of feeling in others, and in all, a greater degree of polish and civilization than could otherwise have been attained.

Before leaving this part of the subject, I would instance, as proof stronger perhaps than any we have yet adduced of the power of habit when combined with religion, although in this case operating in a way somewhat peculiar, the division into *castes* of the native tribes of India; where it is well known that such a deviation is produced in each from the others, that natives can with considerable certainty decide, merely from external characters, to which any individual before them ought to belong.

Education exerts an influence on individuals, fully more marked, and much more permanent, than that we have noticed among nations; but I fear, that with the exception of general principles, we cannot, without the aid of experience and practical results, of which we are not at present in possession, lay down any distinct physical changes, as likely to result from peculiar moral treatment or external circumstances. With the knowledge of the subject we have already acquired, it will not excite surprise, if we do not find in the day-labourer in the country, the same activity of the mental and nervous portions of the frame, as in the sedentary mechanician in the city, although in nearly the same rank of life, or even born of the same parents: it is also to be anticipated that the master, whether he have raised himself to that position by his own talent, or have inherited it from the more propitious aspect of fortune, will display a more thinking habit of mind, and greater ingenuity of contrivance, when such qualities are necessary for the post he holds, and are every day called into exercise, than the artisan, whose perfection is to obey with exactness the commands of his superior: for while the latter has by habit gained a more perfect command of the mechanical branches of his profession, the other understands better how to adapt the means to the end, and discover wherein the piece of mechanism is imperfect or ill-suited to accomplish that end. It is thus that the petty artist is the more correct copyist, and some of the greatest masters in painting, who have exhibited the greatest boldness and command of the pencil, have united with this excellence, much imperfection in the minor parts of their profession.

The ideas of a man who has just emerged from his apartments in the University, where he has been poring for

some years over the abstruse branches of philosophy, and who has acquired his knowledge of the world from books instead of men, will be very much altered in the course of a short time, when mingling in society. No longer the speculative philosopher, he either applies his previously acquired knowledge to some practical use, or he employs, in following the gaieties of fashion or the frivolities of town or court, those talents, which might have proved highly beneficial to mankind. The child who has been early brought into society and taught to act his part there, acquires a self-possession and readiness, that often give him an advantage over one with more natural genius, who is backward and sheepish from the novelty of the circumstances in which he is placed. It is a common remark, that a man may be known by the company he keeps; and this is true, whether he have, in making the selection, been guided by his own natural inclinations, or been accidentally thrown into the society in which he is found:—in the one case, the bent of the man's own mind is seen; in the other, a habit of acting is forced upon him. Persons may thus be brought to find enjoyment in sensual pleasures, who were formed for the more rational enjoyments of mind; and, on the contrary, one who has been the centre of mischief at school, may become at College, the gravest of divines, or the most scientific of philosophers. Muscular exertion will produce an enlargement of that part of the system; while mental excitement, and depression of the frame by hard study and sedentary occupations, will of necessity cause an increase of the nervous. Laziness and inactivity often develope in one who has not that tendency naturally, the characters of the lymphatic temperament; and, when originally present, these may on the other hand,

be successfully combated by suitable exercise. Thus, in any given case, we are unable to say decidedly, in how far the present condition of the person is produced by habit, or has received its original stimulus from natural structure or conformation of parts.

An object of much greater practical importance however is, to ascertain what are likely to be the consequences as well in a moral as in a physical point of view, arising from varieties of temperament. To this subject we have already alluded slightly in describing these varieties; and though much yet remains to be said, we must confine our attention to the leading features in each. The nervous temperament often leads a man to avoid society; he comes prominently forward where he can display the powers of his mind, or where he can command esteem and obedience; but there is no point in his character which makes him agreeable as a companion; — haughty and domineering, or excessively shy and reserved, he avoids those situations in which he is placed on an equality with others, and which from his susceptibility, soon become irksome and painful. If so gifted by nature, he seeks in the retirement of his closet the gratification of a mind unfettered by his corporeal organs; but apart from these endowments, he is a mere nonentity, — weak, nervous, and effeminate, and mutually shunning and shunned by society, he becomes a misanthrope or melancholic. I am inclined to agree with most writers on this subject, that when an extraordinary development of this form is met with, it is more dependent on the circumstances in life in which an individual is placed, than upon original constitution. That it cannot be produced by these alone, may I think be inferred from the fact, that similar circumstances do not in all,

produce similar forms of body or constitution of mind; at the same time, in its purest form, and to this we at present refer, it is "rarement naturel ou primitif, mais le plus souvent acquis et dépendant d'une vie sédentaire et trop inactive, de l'habitude de plaisir, de l'exaltation des idées, entretenue par la lecture des ouvrages d'imagination." ^a "It is rarely met with in champaign countries, neither in small villages do we find many examples; but unfortunately for the physical world, we meet with men of this temperament at every step in great cities, where the inhabitants, closely packed together, seem contending for the air they respire." ^b An excitement of the nervous system by mental occupation, whether in studying the more refined branches of philosophy, or in reading works of imagination, acting on a system naturally predisposed to it, alike tend to the development of this temperament, although of course producing different varieties of the same form. An individual of this class, stimulated by a desire for the pleasures of imagination, may be led to cultivate female society, and there, if free from the acerbities that too often characterise it, he will be a welcome guest; and perhaps, in an attention to this, and the giving a due direction to the mind by turning it to those studies which combine the exercise of the physical powers with the mental, may be found the best means of preventing the morbid excess of this temperament, and of producing that combination with the muscular and sanguineous, which most certainly averts the evils that must arise from its predominance. Too frequently are parents dazzled by the brightness of the genius of their child; and, giving way to what they believe to be his natural bent,

^a Dict. de Sciences Médicales.

^b Lignac ut supra.

allow him to become, if he have strength of constitution sufficient to carry him through, a prey to disease, or a useless member of society, in the hope, that he may hand down his name to posterity as a genius, or a philosopher.

But, in combination with other temperaments, this will have the effect of elevating a man to the highest pitch of moral pre-eminence; neither subject to have his judgment biassed by the excitement of passion, nor insensible to his own dignity, and the respect due from others, as well as that due to them; having in himself the best safeguard against temptation — a consciousness of the danger of yielding to it, he pursues with undeviating steadfastness, and a degree of acumen that insure his success, the paths of science and philosophical research: or, if thrown into a situation, where political wisdom is more requisite, he brings the same talents into play, and exhibits to the world the consummate statesman, or the able general. In the history of the Romish church, ever so celebrated for the policy and intelligence of the heads of its councils, we may see very plainly depicted, the effects of this temperament, and the modifications it is likely to undergo. There we meet with those who, giving themselves up to a life of seclusion, and devoting themselves to religious austerities, have become but too frequently dreaming fanatics, or gloomy hypocrites; others, who, mingling more in society and having their prejudices removed by intermingling with their fellows, have yet followed out with unremitting zeal their ambitious projects, and have used the gaieties of fashion but as a cloak to conceal them: such, for example, were Pope Sixtus the Vth. and the Cardinal Richelieu; who, if we may be permitted to judge from the accounts of their cotemporaries, appear to have belonged to that mingling of the nervous and muscular,

which we have already pointed out, as that most favourable for the display of great talents. There are those also, who, actuated by religious zeal, finding that they were of an ardent temperament, have given themselves up to excessive study and seclusion from the world, with the view of exciting the mental and depressing the animal part of their frame; such was St. Jerome, who, it is said, carried with him into the desert, the same polish and love of society, which had distinguished him at the court of Rome.

No remark so frequently repeated is more true, than that children, who display great natural acuteness, seldom in after-life come up to the high expectations which their friends were led to form of them. That such should be the case we cannot be surprised, where the perseverance and assiduity of the muscular form are absent, which can alone open to an individual the paths of literature or of glory. In youth the brightness of genius is greatly aided by the liveliness of the sanguineous character, which, predominating at this period of life, is apt to give an erroneous impression of the powers of the mind. When continued to manhood, this again, forms the social character: the lively sallies and the sense of enjoyment from mingling in agreeable company, which characterise it, make their possessor, alike loving and beloved; but unfortunately, those qualities which dazzle at first sight, too frequently vanish on a closer inspection; — deep-rooted friendship is rarely the lot of the sanguine man, — fickle and inconstant, he disgusts and is disgusted with his most intimate companions; the object attained, his felicity is cloyed; and, ever anxious to discover new sources of pleasure, he soon seeks to avoid those from which he had once anticipated the greatest happiness; “En vain

celui que la nature a doué du tempérament sanguin, voudra renoncé aux voluptés, avoir des goûts fixes et durables; atteindre, par des méditations profondes, aux plus abstraits vérités; dominé par ses dispositions physiques, il sera incessamment ramené aux plaisirs qu'il fait, à l'inconstance qui fait son partage, plus propre aux productions brillantes de l'esprit qu'aux sublimes conceptions de génie." ^a In this case too, there is a necessity that the steadiness of the bilious temperament should in some degree enter into the character, to make it such as to procure the lasting happiness of the individual himself, as well as of those with whom he may be connected.

No temperament varies more than the sanguine, during the different periods of life; nor is this to be wondered at, when we consider the ever-changing nature of the sanguineous system, as it advances from the frequent, small and unsteady pulse of infancy, to the full and bounding current of youth; or declines, from the slower and more steady pulsations of manhood, to its few and feeble vibrations in extreme old age. But while this would indicate, that persons are more liable to be influenced by it at one age than another, and that the period of its greatest activity is in youth or childhood, let us not come to the conclusion, that its agency is confined within any such limits; for we see many arrived at the age of manhood, whose lively manner and florid aspect are still sufficiently striking; and even at an advanced age these characters may be distinctly traced, in the difference between two old bon-vivants, the one of whom is lazy and inactive, the other gay and merry, — the one buoyant in spirits, and comparatively light and agile in body, the other alike heavy

^a Richerand Nouveaux Elémens ut supra.

in mind and person, his system overloaded with obesity and corpulence. The individual belonging to this temperament, is frequently the slave to violent emotions, and excitement of passions; his attachments are not lasting, but neither are his disgusts; he sickens at, and turns from an object to-day, which he may earnestly desire to possess to-morrow; and in nothing is he more distinguished, than in his susceptibility to the impressions of love.

In proportion to the sanguineous development, so does this passion become more predominant, till under the burning sun of the tropics it often forms the sole object of a man's existence. There, tyrant custom has prevailed to give proud man the exclusive privilege of gratifying his lusts, by dividing his affections among many; while the female portion of the race, though having the same feelings and passions, must be immured in cells, under the guardianship of mutes and eunuchs, — the stronger enslaving, and finding pleasure in the subjection of the weaker sex. But on proceeding to the north, "The burning and torturing jealousies of the seraglio and the harem, which have reigned so long in Asia and in Africa, and which in the southern parts of Europe have scarcely given way to the differences of religion and civil establishment, are found, with an abatement of heat in the climate, to be more easily changed—in one latitude, into a temporary passion which engrosses the mind without enfeebling it, and excites to romantic achievements; and, by a further progress to the north, —into a spirit of gallantry, which employs the wit and the fancy more than the heart, which prefers intrigue to enjoyment, and substitutes affectation and vanity, where sentiment and desire have failed. As it departs from the sun, the same passion is further composed into a habit of domestic

connexion, or frozen into a state of insensibility, in which the sexes at freedom, scarcely choose to unite their society." ^a In the lively light-hearted Frenchman, licentiousness and debauchery have unquestionably proceeded to a much greater length than among the more staid and sober Britons; and in the soft breathings of the sons of song in Italy, when compared with the more sentimental and intellectual verses of the Northern muse, although inspired by the same all-absorbing theme of love, the difference is such as fully to bear out the above conclusion.

I feel more at a loss to account for the peculiar distribution, if I may so call it, of the passion of jealousy. If we contrast its existence to such an excess in warm climates, and the vast precautions that are there taken to secure the sole enjoyment of the lovely object, with the utter indifference of some northern nations in reference to a subject considered of so much importance by others, we might be inclined to conclude that it also bore a ratio to the existence of the sanguineous temperament; but I am inclined to think, that like the other more durable passions, it is more prevalent among individuals belonging to the nervous; dependent no doubt at the same time, on the institutions and customs of the country. For we see its fullest manifestation in the Spaniard, the Turk and the Chinese; while it has scarce an existence among the French, the Italians and the Negroes in general; in all of whom a sanguine form, to a great extent, prevails.

The bilious or muscular temperament presents features peculiarly its own. No other has the steady perseverance and unabated zeal in the prosecution of an object, which characterise this, — in none is observed the same com-

^a Fergusson's Essay on Civil Society.

parative physical and mental power; — here are not the coruscations of a brilliant fancy, nor the discoveries in science belonging to original genius, — here are not the poetical imagination, and the versatility of the sanguine disposition; — all is sober scientific research; but to this, when in conjunction with mental or nervous energy, the solution of the abstruse problems of philosophy, and the perfecting of the inventions of others, are mainly owing; the wordy diction of science takes the place of the sweets of poetry, and every thing betokens the man formed for labour and study. A good constitution enables him to undergo fatigues that would prove fatal to others, and a development of the muscular system leads him to find pleasure in calling into exercise, those physical powers with which nature has endowed him, co-operating with his hands, in the prosecution of the object to which his mind is at the same time directed. The firmness too of the nervous system gives a steadiness of thought, and power of application, which displays itself in correctness of judgment, and clearness of apprehension, not met with in the other forms. With this, there is a sternness and severity of manner, frequently very disagreeable, a coldness and apathy with reference to the vital interests of others, and a permanence of dislike, and durability of attachment, which may be said to be the complete converse of the sanguine man.

In its purest form, the individuals belonging to this variety seem destined to labour for the good and well-being of their fellow-creatures, without themselves much participating in the benefit; insensible to many of the finer feelings of our nature, unfitted for shining in society or partaking in the pleasures of communion with their fellows, the bilious man is seen labouring assiduously

in his closet, diving into the depths of science, and bringing thence treasures that have escaped the more superficial gaze of others; or working with his hands at some laborious employment, following perhaps the same routine which generations before him have adopted, without taxing his mind to discover any thing new. Yet he is not altogether insensible to the influence of passion; and when once excited, working himself into a frenzy, he loves and hates, with a violence and constancy peculiar to his own temperament; his impetuosity sees no obstacles, but to be overcome; and a confidence in his own power, only stimulates him the more to proceed, in proportion to the difficulties or dangers encountered in combating them. Nothing can be better suited for correcting the evils of this temperament, than mingling in society; and care in diverting the attention from mere physical occupation, and directing it to objects in which the mind bears a share, is certain to be rewarded with future eminence in the profession, whatever that may be, to which the individual devotes himself; but this must be done in youth, otherwise the physical inclinations gaining the ascendancy, will lead to the development of the external organs, and make a man superior only in animal powers — a mere Athlete, without mental abilities to carry him forward in his career through life.

Like the nervous, the lymphatic temperament is dependent for its full manifestation, more on a chain of circumstances, than on original constitution. How often is it exhibited in luxurious females of a certain age, in the higher ranks of society; who, if they bear not the name of mother, too frequently have no inclination and feel no call, to exert either mind or body, to maintain that state of activity which is necessary to preserve all parts of

the frame in their due proportion. In men, who have passed the prime of life, and whose circumstances are such that they are not under the necessity of seeking by active employment subsistence for themselves or their families, while their natural bent leads them to indulge in the pleasures of the table, it generally attains its fullest development. The individual of this character, if not a useful member of society, is at least an innocuous one, and while the common proverb of "laugh and grow fat" shews how an easy, affable, and unassuming disposition leads to this result, at the same time, a tendency to corpulence would seem to have a reciprocal influence in producing such a disposition. In children, the habit has not proceeded to such an extent as to give rise to decided symptoms in external form; but in the indolent disposition of the dunce — uninfluenced by a spirit of emulation or a desire to excel, it is sufficiently marked to lead parents and guardians to fear the consequences; however, as in the other forms, timely measures, in operating contrary to the natural inclinations, frequently succeed to a certain extent, in averting the evil; and when a due stimulus is given, to follow out any species of active employment to which the individual may be more inclined than another, the lymphatic tendency may sometimes be converted into one, at least approaching to the muscular.

That the nervous temperament should be opposed to this, is a natural conclusion, but one I believe, not fully borne out by facts. Thus in the inhabitants of Holland and Germany, while, according to the opinion of many, the lymphatic is the prevailing form, instances are numerous, among the latter in particular, of individuals having much of the nervous combined with it, or at least minds

peculiarly given to deep and constant thought; so much so indeed as to have led us, at a former part of this essay, to assign them rather to the nervous and bilious temperaments. Activity is generally wanting in their character, and their conversation is seldom animated, but a constant habit of thought seems to prevail, even while occupied with the every-day occurrences of life, producing what is termed absence of mind, and not unfrequently amounting to apparent stupidity; consequently, promptitude of decision is rarely to be met with, and along with these characters there is also an evident tendency to obesity. But where this combination with mental energy is perceived in sufficient time, it may be taken advantage of, to prevent the habit of laziness and sloth which generally sooner or later supervenes, and, by producing activity of mind, subsequently to induce a similar condition of body also.

With reference to the liability to disease, it may be stated with safety, that none is so capable of withstanding its ravages as the muscular form; combining as it necessarily does, a certain degree of tone in the vascular system without plethora, and an activity of the lymphatic and secreting vessels without obesity, the system at large is not predisposed to inflammatory disorders; neither is it liable to scrofulous maladies or chronic complaints: If attacked by fever, there is sufficient stamina in the constitution to throw it off in the first stages, or to endure the conflict for a long period without severe debility ensuing; at the same time the athletic form, as it is well known, is not, until reduced by disease or low diet, the best adapted for surgical operations. The sanguine temperament is, on the other hand, from its plethora, liable to inflammatory affections, fevers, and acute diseases of every description; the florid complexion,

and red hair, so indicative of this form, are known to be frequently characteristic of a scrofulous diathesis and general weakness of the organs; and the excitability of the whole frame is such, that the individual suffers much from attacks of any sort; but though antiphlogistic remedies must ever be had recourse to in these inflammatory complaints, they ought to be employed with caution, because the constitution cannot bear much reduction.

Nervous disorders are those most to be apprehended in that temperament, spasmodic and hysterical affections being most common among females, and headaches, neuralgic pains, and a tendency to inflammation of the brain, being frequently met with among both sexes, and sometimes ending even in mania. In fevers this symptom is more to be dreaded, and more frequently fatal, than any other; and antispasmodics and sedatives are generally indicated in the various diseases to which individuals of this class are exposed. In the lymphatic temperament again, all diseases are apt to assume a chronic form; there is no great power of resistance, but neither is there, fortunately, any great susceptibility to them, and they do not seem to lay hold of it with much force. Stimulants may be employed not only with safety but with advantage, and in all cases where admissible, free exercise ought to be had recourse to. Anasarca and dropsy often result from the overloaded state of the secreting system, and may be most successfully combated by reducing the diet to a small quantity of simple and nutritious aliment.

Of diet in general, it may be remarked, that this form as well as the muscular, invariably bears its diminution better than the sanguineous and nervous. But in the employment of regimen as well as remedies, we must ever have respect in our treatment, to the peculiar liabi-

lities of the constitution, and seek to combat these in the various types of the same disease, occurring in different individuals, by measures adapted to the character and constitution of the patient.

The curious fact of the existence of numerous diseases which, in ordinary circumstances, are not found to attack the same constitution twice, is one, of which no satisfactory explanation has as yet been given; however, the extraordinary liability of some persons to infection would lead to the belief, that in the individual himself, rather than in the nature of the malady, lies the provision against repeated attacks, or the susceptibility to them; but what alteration in structure precedes or follows these effects, does not as yet appear. At the same time, other effects frequently result from them, which are much more easily discernible; such as the occasional manifestation of nervous excitability in the course of a tedious illness, by which the rest of the frame is much reduced; or the tendency to obesity that frequently ensues, after the removal of a violent inflammation of some of the more important organs of the body. It is too well known to be overlooked, that during convalescence, there is a much greater danger of relapse from the liability to inflammation, than at a subsequent period: this is caused as well by the invariable absorption of the muscular and adipose tissues, as by the delicate condition of the organ which has been the seat of the affection; for the immunity from relapse, is generally in an equal ratio to the strength of the individual. These temporary or permanent modifications of temperament and constitution might be further evidenced, in the increased plethora after apoplectic shocks, and numerous other similar instances, which point out very distinctly, the influence diseases may have

in this way: but our information is not sufficiently extensive to be put into a tangible form.

Equally scanty is that, on the operation of drugs upon different constitutions; and though it be a subject of the greatest importance to the medical man, as on it must mainly depend the right adaptation of remedies, we have little else than bare theory to offer, and must therefore limit our remarks to a few well known facts. Stimulants are most natural to the muscular and lymphatic forms, while sedatives hold the same position with reference to the sanguineous and nervous; for in these, excessive or violent action is the more usual abnormal condition of the organs, as torpitude is that of the others. Of one fact we are quite certain, that the fondness for intoxicating liquors almost invariably bears a ratio to the coldness of the climate. The vine may flourish in Spain, in Italy and in Portugal; but it is in the countries not blessed with its existence, that the juice of the grape is most sought after, and there that it is drunk to excess,—ardent spirits and malt liquors being invariably produced by the ingenuity of the inhabitants, to satisfy, in its absence, the natural craving for such a stimulus: Nay, among the Tartar tribes, the gifts of nature are so perverted, that an intoxicating beverage is made from the milk of their cattle, which might be used for purposes so much more beneficial. With what avidity have European liquors been sought after, and with what pernicious rapidity have they spread over the American continent! Of the truth of this, all writers seem to have been aware: it is observed by Montesquieu, that “Drunkenness predominates throughout the world, in proportion to the coldness and humidity of the climate. Go from the Equator to the North Pole, and you will find this vice increasing with

the degree of latitude: Go again, from the Equator to the South Pole, and you will find the same vice travelling south, exactly in the same proportion." ^a Some have attributed it to the coldness of the climate requiring a supply of internal heat to maintain the vital actions; others have supposed that the languor of of the circulation called for some additional stimulus. M. Cabanis says, "Dans les pays froids, surtout dans ceux de ces pays, où l'on fait un grand usage d'alimens gras, on boit, impunément de liqueurs spiriteuses." ^b But although our hypothesis be so far borne out by fact, it would require considerable minuteness of detail, to ascertain with exactness, the differences that prevail in this respect, among nations throughout the world, and the bearing that these have upon the temperament of each, before we could venture to assign any reason for its being used in moderation by some, and carried to excess by others, in the same latitude.

Of the pernicious effects resulting from habitual excess, there can be but one opinion; nevertheless, there are not wanting authors who justify the practice in cold countries, and who are even inclined to attribute some of the virtues of the inhabitants to this cause. Cabanis says, "Les liqueurs spiritueuses paraissent utiles dans les pays froids." ^c "Perhaps the greater use of these liquors may account in general for the greater openness and frankness of northern nations, and also for the great degree of hospitality practised among them;..... the moderate use of them in cold countries, appears natural, and well

^a Montesquieu's Spirit of Laws. Book XIV. Chap. X.

^b Cabanis' Rapports. Mem. VIII. Sect. XII.

^c Cabanis ut supra.

adapted to counteract the effects of the climate." ^a Undoubtedly in the existence of the various forms of wines and spirits, we may trace a wise appointment, for the fulfilling certain ends which may be attained by the use of such stimuli. The idea so universally prevalent, that an individual is better prepared for the display of genius and sentiment, when fired by such extraneous means, cannot be supposed to be altogether without foundation. Shakespeare thus refers to its power, in language perhaps approaching to the burlesque; "A good sherris sack hath a twofold operation in it; it ascends me into the brain, dries me there all the foolish, dull, and crudy vapours which environ it; makes it apprehensive, quick, forgetive, full of nimble, fiery, and delectable shapes; which delivered over to the voice (the tongue), which is the birth, becomes excellent wit."

Sedatives would appear, on the other hand, to be intended for temperaments the very opposite of these. In violent inflammations the value of these remedies is not less, than of stimulants in those of an opposite nature; and in allaying nervous irritability, they must continually be had recourse to, in the practice of medicine. We might therefore anticipate, that they would be more necessary for those, in whom a predisposition existed to excitement from either of these causes; and accordingly, we find that they are in constant use among all tropical nations, and more particularly those in whom the nervous form prevails; whether, as among the Turks and Chinese, recourse be had to opium, or to the betel-nut and similar drugs, among others belonging to the same class. Their action is particularly directed to the nervous

^a Falconer on Mankind. B. V. Chap. II.

system; and through the intimate union that subsists between this and the sanguineous, they also exert a powerful influence over the functions of the bloodvessels throughout the body; we are therefore justified in anticipating, that in a nervous or sanguineous diathesis they will be more beneficial as well as more requisite, where the excitement and violence of passion are so great, than in the apathetic frame of the lymphatic, or the slow and energetic character of the bilious temperament.

A remarkable, but I believe, well established fact in regard to persons of a nervous temperament is, that the primary effect of sedatives — the degree of excitement produced before their hypnotic power is manifested, is much more marked in them than in others; and that consequently, they require, and will bear with impunity, considerably larger doses. It is this interval of exquisite sensation, prolonged by habitual use, that excites the desire for the renewal of the stimulus; and the pleasurable feelings thus communicated, have given rise to the idea that opium is resorted to by the Turks, solely as a provocative to passion, in the absence of wine, which the Great Founder of their religion has denied them. But this nation does not stand alone, — in Egypt, in the East, and in China, it is employed very extensively; and in the Celestial Empire, it is well known that opium is as strictly prohibited, as wine is in Turkey; but is nevertheless, from the natural craving of the people for it, smuggled into that country in much larger quantity, than wine at present is, or ever can be, in the other. Great changes however, are now being everywhere produced by the intercourse of nations; and the connexion of the Turks with European powers, as well as the contempt with which an opium-eater is regarded, may in the

end, enable them so far to forego their natural inclinations, as to substitute stimuli for narcotics.

Tea in its effects bears some correspondence to opium, when taken in very small quantity, producing in nervous persons an excitement somewhat similar, but certainly without stimulating to passion; and so far from being hypnotic, it has quite an opposite tendency; but yet persons in rising from a sleepless couch in consequence, are nearly as much refreshed as if they had had their usual amount of rest. Whether an extract, or an immense quantity of it, would produce sedative effects, I am not prepared to say; but its action is directed to the nervous system, and analogy would lead us to conclude that it might. Whatever cause may have given rise to the extensive employment of its infusion in this country, where stimulants were and still are in such general use, and are so much more consonant with the character of the people—such as we have already shewn it to be, we cannot look upon its cultivation in China, the great quantities drunk there at all hours of the day, and the strength of the infusion they make, as the result of a mere fortuitous occurrence; but as occasioned by the tendency among them to seek after such drugs; which leads them to have recourse to opium, only to produce more powerfully the effects they have experienced from the use of this plant.

Coffee ought probably to be ranged among the stimuli; and as such, is more peculiarly the beverage of northern nations. To this is probably owing the importance it has acquired among the Germans; who are, from their temperament, in want of stimulants, and it would appear, only restrained by their sense of propriety and reasoning powers, from employing intoxicating liquors

so freely as they might otherwise be induced to do; although to these also, the lower classes in particular, are much addicted.

Tobacco belongs to the narcotic class of drugs, and as such, we are rather surprised to find it gain so much ground in Britain and Germany, as well as other European nations, who bear no analogy to the pure nervous, and still less to the sanguineous type in their general character; while in the East it is used with great moderation, and other substances are generally preferred for smoking, or at least combined with it, for the purpose as it were, of diluting or rendering its effects less perceptible. I am therefore inclined to view it, either as a custom which a few years more may change or eradicate, or as dependent upon, and conjoined with the love of conviviality, which prevails in a nation, in proportion to the pleasure they derive from drinking alcoholic liquors. An opinion I believe prevails among smokers, that tobacco operates in a direction the reverse of ardent spirits, and has the power of preventing to a certain extent, or at least of diminishing intoxication, and thus enabling them to keep up their revelries for a longer period than they otherwise could do; whatever truth there may be in this, it is a well known fact, that the pipe and the bottle are but too frequent companions, and convey a mutual stimulus, — each leading to the more free use of the other; and where this is refrained from, that coffee, or some other beverage supplies its place. Perhaps too, the moist atmosphere may induce the inhabitants of some parts of Germany to have recourse to tobacco as a sialogogue, with the intention of relieving their bodies of the surcharge of moisture; and

imitation may lead to its adoption in other places where no such indication is afforded.

Of the employment of other drugs we cannot at present speak, although no doubt the usages of different nations vary much in this respect, as may be seen on comparing the very large doses of medicine, found necessary, and habitually given in England, with those of the Continent; and I have no doubt that we should find, were we to enquire more minutely into the subject, a close correspondence between the medical practice of individual nations, and their general character. Indeed, in so far as the science of medicine is based on physiological principles and removed from charlatanism, must this correspondence be the more exact. Similar remarks would apply with equal force to peculiarities of diet, in which the reciprocal influence of natural disposition is still more strikingly marked; as for example, in the flimsy and trifling cookery of the French, the soups and sauces of the Germans, the solid food of the English, and many other such instances, in which we may see national development leading to such results, or these acting as causes in the production of other features.

Habits, such as the foregoing, must doubtless exert an influence in modifying the general features of the nations by whom they are used, and have probably given rise to some of their peculiar institutions and customs, especially where, as in the case of tobacco, we cannot exactly trace the harmony between that and the rest of their character; but it is utterly impossible, with no more than the data from which we have to form our deductions, to define more minutely what these may be:

and further into detail time permits us not to enter. Much useful information might however be gained, by instituting a comparison between the temperament of particular nations and their general habits, and also by ascertaining the results of differences in different tribes. — But I must refrain, and can only plead in apology, the great lack of materials, and my unwillingness to lengthen this essay by the addition of hypotheses not fully borne out by fact, — speculations of such a character being more suited to form the ground-work of a separate treatise, than to be brought in at the close of an Inaugural Essay on Temperament.

In conclusion I trust, if these pages do not bear the marks of the original genius of a nervous temperament, that my time has not been altogether thrown away, in making the compilation which I have attempted from various authors, and bringing together facts bearing on a subject to which but little attention has hitherto been directed; and that its faults and inaccuracies in arrangement and reasoning, will be attributed in part to my having had no precursor in the same path, whose progress might have guided, or deviations preserved me, in pursuing so difficult a course.

