The sthenics : the chord invisible / by Sir James K. Fowler.

THE STHENICS

SIR JAMES K. FOWLER

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THE STHENICS

THE CHORD INVISIBLE

BY

SIR JAMES K. FOWLER

K.C.V.O., C.M.G., M.A., M.D., ETC.

σθενος = Strength

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CHAPTER I

"THE PROPER STUDY OF MANKIND IS MAN" (POPE)

ALL the learned professions are governed by a standard of conduct and by certain rules or conventions, called "etiquette"; some of these are disliked by the public, judging from their conversation, and few are understood.

The maintenance of a high standard is wholly to the advantage of both parties concerned and, briefly, etiquette is the method of procedure under given conditions which experience has shown to be most conducive to the avoidance of friction and misunderstanding.

One of these rules is to refrain, either in speech or writing, from anything which may

savour of advertisement with a view to personal advantage. But to those who have retired from active work or, as more often happens, from whom active work has retired, a latitude is permitted which during their earlier years would not have been accorded. Authorship is then more or less restricted to works intended for the profession; not that a lawyer or a doctor may not write a novel or express his thoughts in verse, or a dean or headmaster indulge in journalism, but he will do so at his peril, for neither the brotherhood to which he belongs nor the public to whom he addresses his fancies believe that any man can serve two masters.

This book is not addressed solely to those who follow, or have followed, my own calling, possibly neither those within nor without that pale may read it, but no one can deprive an author of the pleasure derived from recording some things which he has observed, even though it should prove that

others of whose works he may not have been aware have previously observed and recorded them in terms which were either better chosen or more true to life. Its main object is to submit that every civilised community contains a certain number of men who are, as regards the various manifestations of the activities of their nervous system, more highly sensitized than others. That this if true of some men is also true of some women is highly probable, but the number of men must be very limited, no matter what may have been their opportunities, who can have acquired such an understanding of the mind of woman as would be necessary for an undertaking of the kind.

Lest it should be thought that those whose characteristics are to be described are merely either the " neurotics " or " neurasthenics," or " highly strung " or " bundles of nerves " or men of " the artistic temperament," it may be well at the outset to state that, whilst all

those belonging to the groups enumerated can easily be distinguished either by a characteristic facies or appearance or a manner which enables the trained observer within a few minutes to place them in their class, a study much closer and more prolonged than this and a knowledge far deeper is required to recognise and unravel the very diverse and usually complex characters of those whom one has in mind.

CHAPTER II

THE FUNCTIONS OF THE BODY

A KNOWLEDGE of the rudiments of physiology, the science which is concerned with the manner in which living things carry on the processes necessary to their continued existence, is an acquisition not in itself undesirable, and in order to follow the argument contained in these pages almost a necessity.

At one period the various organs of the body were regarded as more or less separate entities, as is still indeed the case with those who are apt to dwell in conversation upon the condition of their "liver" or who inform one that they "never stand any nonsense from their stomach."

It is now known that various organs having no obvious channels through which their secretions could reach the blood stream, which were thought to be either unimportant or possibly relics of some long pre-existent stage of development, are really engaged in the formation of secretions which profoundly modify the activity either of other organs or of the body as a whole. These internal secretions are invisible links between the activities of the more obvious organs and are possibly of special interest in this enquiry. Their products are known to science as "hormones" [1] and act as messengers speeding through the body to fulfil the functions for which they severally exist. No organ therefore of the body is a self-contained unit, each is dependent upon another or others for something which is vital to its healthy action. Some are essential to life itself, whilst the function of others can be replaced by adjustments.

[1] ὁρμάω, I announce.

Moreover, an organ having a duct through which it pours a secretion which can be measured, weighed and analysed, may also secrete a hormone which no man has yet either seen or separated in a test tube and the function of which is either uncertain or altogether unknown.

CHAPTER III

THE NERVOUS SYSTEM

UNTIL about sixty years ago it was believed that the larger brain, the "cerebrum," functioned as a whole; it was then shown that by observing the results of electrical stimulation of certain areas of the surface or cortex that each area was definitely related to a certain movement, and the area as a whole was named the "motor area of the cortex."

Later it was discovered that the problem of the functions of even these parts of the brain was not quite as simple as at first appeared, and that there are few or no places where only one set of nerve-units are situated, and that every locality has links with others by means of connecting fibres.

"There are areas of the brain concerned with the reception of various sensations, *e.g.* vision, hearing, taste, smell, and to these the name sensory areas is given, and it is with these we are here chiefly concerned. These in like manner are in close connection one with another. Imagine the smell of an orange; such an abstract idea of an isolated sensation is impossible, we cannot think of the smell of an orange apart from the other characteristics of the fruit, the smell recalls the taste, the shape, the colour, the act of peeling it, fingering it, cutting it, eating it, and so forth. One sensation due to the activity of one area, such as the olfactory area, calls into play the activity of other sensory areas and of the motor areas and of the links between the sensory and motor areas."[1]

[1] *Handbook of Physiology*, Halliburton, p. 729.

CHAPTER IV

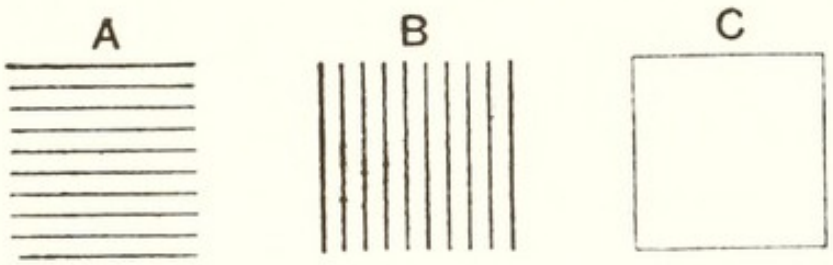
VISION

PHRASES in common use, such as " Seeing is believing " or " I suppose I can believe my eyes," indicate a trust in a finality attaching to what is seen which is in the vast majority of cases justified, but in certain morbid conditions leads to conclusions which have no real foundation in fact, and which even in normal circumstances may be illusions.

If, for example, the figures A, B, and C be drawn on a cardboard and shown to an observer and he is asked which is the taller, A or B, he will almost certainly say " A." Similarly, if asked which of the three covers the smallest area ? He will reply " C."

As they are all of exactly the same size it is

clear that it is not safe under all circumstances to rely upon the judgment of one's eyes. Similarly, if shown a line divided into two equal parts, one of which is subdivided, he almost certainly concludes that the subdivided portion is longer than the other, because it presents points upon which the eye can dwell.



Visual judgments cannot therefore always be relied on. A certain area of the brain in connection with the retina, having always been accustomed to associate an impression with the presence of a corresponding object in front of the eye, associates all such impressions with the presence of definite objects and as coming from without. Whereas the stimulus may come from other areas of the

brain; in other words, a stimulus from within is wrongly interpreted as implying the presence of a material object, when no such object exists.

Those who can recall memories of fifty or more years and who were at that period at one or other of the large General Hospitals of London as resident medical officers, will remember the grave anxiety attending the care of patients suffering from *delirium tremens*, a condition due to two factors, one being excess of alcohol, the other absence of an adequate quantity of food. It is the delirium of exhaustion and disappears almost as soon as the patient begins to take a sufficient amount of food. Such a hospital, at that time, was rarely without one or more cases of the kind, now a single case in a year may be the total.

This change is due to the altered habits of the hospital class in relation to alcohol and to the proof which research has afforded that

the so-called stimulant is really a sedative. It puts out of mind for a time the worries of life. The anxiety attending the care of these patients was due to their tendency to commit suicide ; to accomplish this they were capable of the most extreme cunning in devising reasons for securing the temporary absence of an attendant thrown off his guard by the apparent reasonableness of a request which led him to leave the room.

To those who have seen a man in such a condition sitting up in bed busily engaged in picking up with his right hand sovereigns lying on the coverlet and transferring them to a purse held open in his left, a ghost presents no difficulty. Consider for a moment what this implies. He sees the coin, he recognises it by its colour, shape, size, the impression on its surface, and when picked up it answers to his expectations as regards feel and weight. None are rejected ; the open purse is the proper depository for such

desirable possessions. The supply is apparently unlimited, as he continues the accumulation of wealth for long periods at a time. To him all these objects are real. The areas of his brain in which are stored memories such as are necessary for the conclusions just enumerated, are being stimulated by messages coming from within and having their origin in nerve cells temporarily functioning in an abnormal manner, and are erroneously concluded to correspond with the realities of saner moments.

In certain mental states, due it may be to an unstable nervous system or to surroundings of a temporary nature inducing suppressed excitement, illusions differing in kind but identical in origin may lead to experiences which have all the attributes of reality and command the belief of the individual in their truth.

It may be, as I have often thought, that there are few men, no matter how sane and

sober-minded, who would if placed in surroundings sufficiently adverse, rise superior to the tendency to confuse the phantoms of the imagination with the sober dictates of quiet thought.

CHAPTER V

HEARING

THE explanation just given of the steps by which conclusions connected with vision may although unreal have the appearance of reality, applies with equal force to the illusions associated with the sense of hearing.

One of the most common symptoms of certain forms of insanity is the hearing of voices: voices which may urge the subject to the commission of acts from which in health he would recoil. Similarly, emotional conditions may in persons otherwise sane be attended with illusions of hearing which would certainly not justify a statement that the individual was insane in a legal sense.

Such states are by no means uncommon in young girls of a neurotic type, and may lead them to make statements which are devoid of foundation. So well is this known that in sexual cases a statement by such a person is never accepted in the absence of independent testimony.

Rarely in the course of history a person of this type appears dominated by a high purpose imposed as it is believed from On High. Of such was Joan of Arc. After having lived for some months, during the war, in the " Place " in Rouen which bears her name, and passed almost daily the memorial tablet which indicates the site of her execution, I became more interested in the story of her life. The extracts which follow, having reference to her " Voices," are taken from the records of her six public examinations, as given in *Jeanne d'Arc, Maid of Orleans, Deliverer of France.* Edited by T. Douglas Murray (1903).

"I was thirteen when I had a Voice from God for my help and guidance. The first time I heard this Voice I was very much frightened: it was mid-day in the Summer in my father's garden. I had not fasted the day before. I heard the Voice to my right, towards the church; rarely do I hear it without its being accompanied by a light. The light comes from the same side as the Voice. Generally it is a green light. Since I came into France I have often heard this Voice." (p. 10.)

"I believe it was sent me from God: When I heard it for the third time I recognised that it was the Voice of an Angel. This Voice has always guarded me well and I have always understood it; it instructed me to be good and to go often to church. It told me that it was necessary for me to come into France. It said to me two or three times a week: 'You must go into France.' The voice said to me: 'Go into France!' I could stay no longer. It said to me: 'Go, raise the siege which is being made before the City of Orleans.'"

The Voice was not heard by others; it was a subjective sensation arising from impulses reaching the parts of the brain where aural impressions are normally received and interpreted as having come from without.

Paul when approaching Damascus suddenly saw a great light and heard a Voice. Those with him also saw the light, but did not hear the Voice. Later, when in Jerusalem, he was, when in the Temple, in a trance.

When in man those areas of the brain concerned in the reception of sound waves are in an abnormal condition, ordinary sound such as whistling may acquire such an intensity as to be almost unbearable, a condition to which the term "hyperacusis" is applied. This, however, is essentially different from that just described; it is an intensification of a normal impulse, not a confusion of what is subjective with what is objective.

CHAPTER VI

SIGHT, SMELL, AND TASTE

As in the course of evolution the higher faculties of the mind come into being, the senses which, in an earlier stage, are essential for the protection of the individual and the continuity of the species tend to become less highly developed. We have just been considering the sense of sight which, although of high importance for our well-being, is not essential owing to the sympathy and active help which are evoked in others by a knowledge that it has been lost. The extent of vision, *i.e.* the distance from the observer at which an object can be seen, is, of course, far greater in some animals than in man. In

some birds it is very remarkable. The Shrike or Butcher Bird is used by those whose ordinary occupation may be that of a cobbler, but who also follow that of catching wild hawks, to let them know when a hawk is in sight. They sit in a small hut situated on a plain over which in the course of the migration the hawks are sure to pass. The Shrike is tethered near the hut and is able to see an approaching hawk which, to the human eye, is not yet even a speck. At once it either indicates by cries and excitement that it is a falcon and therefore much to be feared, or by a much milder display of interest that it is merely a kestrel and hardly worth troubling about. It then retires to its own little shelter for protection or not as the circumstances require.

Those who have experienced the joys and sorrows of deer stalking will not need to be told that judiciously and within certain limits one may show oneself to a stag, because he

does not rely chiefly upon sight for protection, but no such liberties are permissible as regards "giving him your wind." Once you have done that it is "all up"—possibly for the day.

It may be that the higher development of the sense of smell particularly seen in some dogs, is the explanation of the homing instinct in those animals, and that localities may have characteristic odours of which we have no conception and guide them to their homes even when far distant. The sight of some familiar landmark then may after many weary miles bring the long journey to an end.

That a negro has a characteristic smell is known to most Europeans, but that they themselves emit an odour which the negro may dislike is not so widely appreciated. A Chinaman can be smelt by a European, but the latter may be astonished to learn that he emits a scent which is not specially agreeable to the Chinaman.

In some of the individuals with whom this book is concerned—the hypersensitive—there is a condition of the lining membrane of the nose and throat and bronchial tubes which renders them specially sensitive to influences which by others pass unperceived. Hence, in some of those who are susceptible, come hay fever and asthma, often hereditary ailments.

CHAPTER VII

TACTILE SENSIBILITY, TOUCH, PAIN

THE sequence of tactile impressions increasing in intensity is contact—pressure—pain. The nerves of the skin are the protectors of the body from any agent which is likely to do harm. Pain begins to be experienced in the skin when the object applied to it is affecting it to an extent that might be injurious. Immediately the central nervous system receives such an impulse, consciousness becomes aware of the condition of pain and, if possible, instantly by reflex action the part is withdrawn from danger.

What then are we to think of those who deny the reality of pain? The possibility of pain is essential to life; without sensation—

and pain is, as we have seen, only a major degree of sensation—without sensation, life would be impossible. It is difficult to treat such a statement seriously. Why did the dog howl when someone trod upon his foot?

"There is a faith-healer of Deal
Who says that all pain is unreal.
When I sit on a pin and it enters my skin,
I dislike what I fancy I feel."

Should sensation, and necessarily with it pain, disappear from the surface of the earth, all vertebrate animal life would within a very brief period follow it.

Only those who have in their own persons suffered from intensely severe pain really know what pain is.

The suggestion that before treating a patient it is well to have some knowledge of what he is suffering from, is admitted as a general proposition but disregarded in practice.

The public are but little interested in

diagnosis but great authorities on treatment. With a diagnosis of "chill-on-the-liver" they are easily satisfied, and "Congestion" is an adequate diagnosis for many disorders of the lungs.

It was so in Shakespeare's time and will probably so continue to the end. "There are some fools whom knaves alone can serve."

It is, however, a grave mistake to deny or minimise the great benefit which thousands of persons suffering from *functional* disorders have received from treatment of which the administration of drugs formed no part. So long as the diagnosis is correct and the case is really one of functional disorder all may go well, but should it be one of grave and acute disease, *e.g.* appendicitis, a tragedy of an appalling character may follow.

The neurotic, the introspective, the neurasthenic and such-like persons can rarely be treated with success by what may be termed ordinary methods, certainly not by being

told that it is "all imagination" and that there is "really nothing the matter" with them. In such cases the usefulness of the physician may be limited in some degree at least by his personality. If such cases do not interest him he is rarely of much service to them. They require a means of cure to which they can refer their improved health. "I was ill. I did this. I am well." Their habit of "introspection"—of looking inwards—of analysing and perpetually speaking of their symptoms must, if they are to be cured, be replaced by a sane outlook on the world, and to effect this is often no easy matter. Work is the great panacea.

Having in the early part of the war been in charge of the medical side, of what eventually became a military hospital with thousands of beds, I feel able to speak with some knowledge of such cases. One department I named "The Miracle Department," and in it many such cures were effected chiefly by suggestion

and the use of a galvanic battery of moderate intensity, with a threat, if need be, of one of much greater power, which had really no objective existence. Such cures are obtained by the ascendency of a strong will and wide experience over one that is, at least, temporarily weak. My share of the work was to find the suitable cases, the cure was effected by my colleague, a great authority on nervous disease.

If such treatment is to be successful only two persons must be present in the room, the patient and the physician; every additional presence acts as a deterrent factor.

Such cures were common in the early stages of the war, but when those who had stood out to the very end of their resisting power and had for weary months resisted "the fear of showing fear," and at last succumbed, there was, so to speak, nothing left of their nervous system and other methods became necessary.

CHAPTER VIII

VISIONS

"WHERE there is no vision the people perish."

It is not suggested that only those who belong to the order of "The Sthenics" or "Hypersensitives" have the capacity for "vision." The power, that is, of suddenly bringing to a focus all the factors which are concerned in a given problem and visualising its solution.

Having many years ago come to London for a term or two on my way to Cambridge and to the Church, and having in a short period passed through an intermediate stage during which I was clearly destined for the

Bar, I can recall the circumstances and the exact place in a certain room in the residential chambers of King's College, London, when it suddenly flashed through my mind that I would become a student of medicine. I have ever since been interested in "Vision" and "Visions." No family ties bound me to that profession, of which I knew only one member, as indeed all must know, although the same is not true of the Bar or the Church.

In order to illustrate what I have in mind, I propose to give the story of the sudden realisation by Dr. William Budd, of Clifton, a very distinguished consulting physician attached to the Bristol General Hospital, of the fact that tuberculosis or consumption is a disease due to a specific organism now known as the "Bacillus tuberculosis," and that it had, therefore, certain analogies with typhoid fever, a disease which Dr. Budd was also the first to prove to be similarly due to a specific organism and not as it was then

believed to the fortuitous association of filth such as is present whenever putrefactive changes are in progress.[1]

This idea first came into his mind in 1856. In 1866 he sent a communication to Dr. (later Sir) George Paget, Regius Professor of Physic in the University of Cambridge, requesting him to take charge of it until asked to break the seal and make it public. A request to this effect was received in 1867 and the communication was first published in the *Lancet* of 12th October, 1867 (p. 451).

Dr. Budd's description of his "Vision" is as follows:

> "The idea that phthisis is a self-propagated zymotic disease, and that all the leading phenomena of its distribution may be explained by supposing that it is disseminated through society by specific germs contained in the tuberculous matter cast off by persons already suffering from

[1] *Pulmonary Tuberculosis*, by J. K. F., p. 13.

the disease, first came into my mind, *unbidden, so to speak*, while I was walking on the Observatory hill at Clifton, in the second week of August, 1856. The close analogy in many quite fundamental points between this disease and typhoid fever had often impressed itself on me with very great force while I was engaged in the study of the latter, and in the preparation of the papers which I have published on it. *I now saw with a clearness which had never occurred to me before*, that, with the exception of the qualifications necessary for their application to a chronic disease—for the most part of slow evolution and indefinite duration—the leading conclusions to which I have been led respecting the propagation of the fever, might be applied with the same strictness to phthisis also.

This idea had no sooner taken possession of my mind than considerations of great force and in overwhelming number crowded upon me in illustration of it.

In the course of the same evening I drew

up some notes on the subject, and before the end of the month my views upon it had taken, in outline, the exact shape which they now have. The long interval which has occurred between the summer of 1856 and the present date has been occupied in collecting data bearing on the various questions raised by this new theory—in accumulating evidence of various kinds, and in examining and carefully weighing difficulties. During the whole of this long time the subject has scarcely ever been absent from my mind. The result has been only to confirm me more and more in the truth of my first conclusions. I earnestly hope that they will not be lightly rejected. At any rate, I can say that they have not been brought forward in haste or without due deliberation. I have, in fact, considerably exceeded the ten years which, with a fine sense of what is due to such an enterprise, the Roman poet prescribed as the time to be given to every composition intended by the writer to endure."

The principal conclusions to which he had been led are first set out under five separate headings.

Of these it may be said that in the light of our knowledge of to-day none require change, all are sound. All were then original and all are now commonplace. The sources of the evidence on which these conclusions are based are then given and indicate the wide field covered by his observations. No part of the civilised world had escaped his search for facts upon which to form his conclusions. In discussing the incidence of the disease among the native American Indians, when America was first discovered and at the date of writing, and similarly amongst the natives of the South Sea Islands then and now, and the negro race in Africa, he wrote as follows :

> " The contrast between original entire immunity and present extreme fatality is very striking and can only be rationally

explained by the importation of a new and specific morbific germ."

After the Vision, the second mark of genius came into play, " the infinite capacity for taking pains," and for more than the ten years all the available data were collected in the attempt to convert " Vision " into proof.

CHAPTER IX

THE CHARACTERISTICS OF THE STHENICS

We are now in a position to consider the characteristics which it is suggested permit the differentiation of those we have thus named from others.

Possibly it will be easier to bring out these points by a process of exclusion.

The foolish and the dull find no place: the faddist and the crank are absent: the introspective and the neurotic remain in their own class: the neurasthenic is excluded by the name; those upon whose minds and bodies rust has formed must drop out, even if at one time they may have seemed to be within. A gourmet may possibly be met

with but a gourmand rarely, if ever. One would not look for them amongst those whose opinion was sought as to the merits of a vintage. Those who are " doing themselves well " without knowing that they are really " doing themselves ill," would probably be so engaged elsewhere. They are more likely to be spare than stout. An example of a bald head, a champagne-pink complexion, a large watch chain and a prominent " lower chest " would probably be looked for in vain. They are more likely to be found amongst those who are playing than amongst those who are looking on at the game, but are not usually prepared to submit to the long practice which is needed for distinction in athletics in its various forms.

Their positive characteristics are not so easy to define.

Each one will be the result of a different heredity, and necessarily each will differ in

some respect from all the others. Great variety in physique, mentality, ability and temperament will be met with. The task is to show that in spite of this, they present in common some qualities or mental characteristics by which they may be identified. Perhaps the most obvious is the manifestation of vitality to an unusual degree; an interest in many subjects, and a capacity for sharing in the interests of others; a fertile imagination, which leads to the evolution of many schemes of which, perhaps, a few only come to maturity. Their clearness of vision leads them to see the thing as it will appear when complete, before it is begun, and to overlook the difficulties which lie in waiting between inception and completion, and the necessity of securing the co-operation of many interests.

In early life it may be obvious that they possess ability which may lead to distinction, and somewhat later these hopes are partially

realised ; usually, however, performance falls somewhat short of promise, some obstacle within prevents the attainment of the degree of success which was expected. There may be something lacking in the character which prevents that complete confidence of others being obtained, which is necessary before the highest goal can be reached. High attainment, tempered by relative failure, may persist throughout life, and the former may so overshadow the latter that it is not apparent. The element of failure is either not recognised or, if so, is soon forgotten.

Sound judgment, that greatest of faculties, greater for the ordinary purposes of life than ability and from which it may be almost entirely separate, is lacking, and this is apt to mar the whole. They may have a high standard of efficiency—for others, and efficiency is not generally popular. The interest of The Cause must come before that of the individual ; and they are inclined to be ruth-

less in order to attain the end in view. To their friends they appear to be lacking in the power of concentrating upon the matter in hand, the reason being that whilst others are pondering over the difficulties involved they have, so to speak, seen right through it and out the other side and have begun to think of what is to be done next.

Plans thus lightly conceived are apt to be soon forgotten. When in great positions, they are rarely able to attach to themselves a body of workers who are their devoted slaves. They are essentially solitary workers and most suited for one-man jobs. Vitality and a capacity for work, with attainments beyond those of ordinary men, inspire admiration, possibly esteem but not necessarily affection. They are not good judges of character and are apt to reject men of great ability who might detract from the personal glory attaching to some achievement.

If such a person should become attached to them in some capacity, he is likely soon to be discouraged by the lack of appreciation shown of the value of his services. They tend, when in an official position, to be inconsiderate in their conduct towards subordinates, and, although having it may be all the outward marks of a gentleman, owing to the absence of this one quality, which is the very basis of all that goes to the making of that complex personality, are not so regarded by their subordinates. Socially they are always interesting, often brilliant and attractive, especially in the company of children and young people or of women, who possibly may lack beauty but possess the quality of charm. Their presence acts as a stimulant to others to whom they are able to impart some of their stock of vitality. Their memory may be prodigious, and the variety of subjects upon which they are able to speak with a full knowledge is one of the

factors which go to the making of a personality to which all are drawn. A group which attained to much social distinction in the last generation was almost certainly composed of persons of this nature.

It is possible that the chief factor which has placed the English people in the position they now occupy in the world, is their unerring instinct as to the importance of "character" in their public men. A man may speak to them with the tongues of men and of angels and in a period of great stress they may follow him, but it will not be for long.

If he proves to be lacking in this quality and their standard is very high, then confidence is soon withdrawn. No man can possess character of this kind who has throughout his life some consideration of self-interest at the back of his mind.

CHAPTER X

PHYSICAL CHARACTERS

Amongst the Sthenics certain physical features may be recognised as not uncommon. The hypersensitiveness of the skin may entail a feeling of heat or cold to an extreme degree. Ordinary sensibility may manifest itself in ways that are extremely rare. For example, I have been told by a sufferer that a slight abrasion at the bottom of the spine, over the bone which is known as the sacrum, produced by the friction of a truss, persisted as a highly sensitive spot for more than five years, and probably owing to a connection through the posterior spinal branches with the nerves which supply the bladder, even a

slight touch over this area was sufficient to produce a desire to empty that organ. The degree of general cutaneous (skin) sensibility may be extreme and may be especially marked in the feet and along the outer margins of the fingers.

Hypersensitiveness of the mucous membranes may lead to paroxysmal sneezing, to hay fever and to asthma : Sir William Jenner, a great physician, once said that he had never known a fool to suffer from asthma : these persons are rarely fools. They do not when ill make "good patients." They rebel against the restriction of their activities and are loth to place themselves in the hands of their advisers and accord them their complete confidence.

After an operation, possibly only those of a certain kind, they are apt to manifest a condition the exact nature of which it is difficult to define. Restlessness is extreme, the limbs are thrown about from side to side,

the back is arched and sudden contractions of the diaphragm may lead to the production of loud noises from the inrush of air by the mouth. There may be great distension of the abdomen with nausea. The mind is not in a condition of ordinary delirium but is not in one of complete consciousness. Such a state may last for some time and may then pass off. During its continuance it may require several people to restrain the patient. An operation followed for a time by the presence of persistent irritation may lead to a manifestation of this peculiar state. I have heard of a man, probably of this class, who, whilst having ordinary massage for an affection of a shoulder, suddenly called upon the masseur to stop, and appeared to be in intense agony and possibly not entirely conscious. When asked later what his sensations had been, he replied that the sensation attending the ordinary movement of rubbing had suddenly been intensified a hundredfold or

more, and had spread from the shoulder over almost his entire body and had, after a time, passed off. It is possible that it was manifestations of this nature which first led to the belief that Napoleon was subject to epileptic attacks.

When two men of this group come into relation one with another, if their characters are mutually agreeable and friendship results, it may be far closer than is possible without the chord invisible. Such a friendship may survive shocks which would sunder a visible link, and when severed by death may leave a void which even time will not fill. If, on the other hand, contact results in antagonism, it will be strong and unbending. Sthenics must have been concerned in all the great friendships and the great quarrels of history.

The hypersensitive are subject to spasms originating in some source of irritation and involving, it may be, a limb and part of the trunk. I have known a series of such

spasms at short intervals to cover a period of twenty minutes, each accompanied by a loud noise due to the sudden contraction of the diaphragm necessitating a rush of air through the glottis taken, so to speak, unawares and with the vocal cords insufficiently separated. One such case was due to the end of the nail of the second toe having by pressure formed a small corn on the adjacent surface of the great toe; when the cause was pointed out and a pledget of lamb's wool worn between the toes the spasms ceased.

CHAPTER XI

NAPOLEON AND EPILEPSY

THERE are two obvious manifestations of epilepsy, the major and the minor. The former is the only one known to the laity and is accompanied by a convulsion and other phenomena, which together constitute the epileptic fit. This manifestation, although far from uniform in its features, is such that once seen it is easily recognised. Its duration is limited to about two minutes. After the fit is over the patient tends to fall asleep; alternatively, but rarely, he may go into a condition of wild excitement attended by strong and very dangerous homicidal impulses.

The minor manifestation is a sudden dreamy state during which the patient mumbles some unintelligible sounds, fumbles with his hands and is obviously not fully conscious. It passes off in a varying period of which a duration of two minutes would be long. The whole incident may be so quiet as not to have attracted the attention of an unobservant person; this could never have been the case with a fit.

No man of his time created greater interest, was seen by more people, was more closely observed or more often the subject of discussion than Napoleon.

It is certain that if he had been subject to epileptic fits the fact would have been known to thousands, and could not possibly have been concealed. Yet no single witness can be found who states that he has seen him in a fit.

If there be, as I am contending, a section of mankind of which the individuals in

relation to their attainments, wide as the poles asunder, are yet connected by an invisible cord, it is certain that Napoleon must have been one of them. Everything in his life and character suggests it, no fact is opposed to it.

Epilepsy is not a manifestation of a highly developed nervous system, it is a condition of degeneration.

It is, however, true that the epileptic may belong to a family, other members of which have shown that they possess qualities of great distinction or have been insane. It may be worth while to set out and to review the evidence for and against the belief that Napoleon was an epileptic. This has been collected and critically analysed by Dr. Edwin Andrews [1] of Chicago.

The main facts and statements brought forward to prove the case for epilepsy are

[1] *Vide* the *Journal of the American Medical Association*, vol. xxv, 1895, p. 1081, and vol. xxvi, 1896, p. 655.

as follows, taking them in chronological order :

> "M. de Norwins, in his *Histoire de Napoleon*, Paris, 1838, vol. i, p. 11, says that when the young Napoleon was in the military school, a mere boy, he broke the rules and was subjected to a very humiliating punishment. The effect was to bring on a violent nervous disturbance, so alarming that the punishment was discontinued by his superior officer. This vague description is totally insufficient to establish a diagnosis of epilepsy, and may be dismissed."

It is, however, precisely the kind of evidence which might be expected of the occurrence in an exceptional individual of attacks such as those already described and easily mistaken for epilepsy.

> "After attaining imperial power we find, as early as 1804, a rumour, credited even by some members of his court, that he was subject to epilepsy. In that year

a court lady, whose name is concealed, possibly Madame de Remasat, kept a diary of the emperor's journey to Magonza. She stated that on September 10 Napoleon 'suffered from his nervous complaint, or epilepsy, to which he was subject.' She adds that Josephine called assistance, and that 'after many hours of suffering the attack was calmed.' This extract from the anonymous diary is inserted in the *Memoirs of Napoleon* by Constant, the chief valet de chambre. Constant appears to have been a faithful and honest writer. Whether the authoress of the diary was we do not know. She rather vaguely calls the attack 'his nervous complaint, or epilepsy,' but the statement that it was calmed 'after many hours of suffering' does not correctly describe a true epilepsy. The emperor forbade Josephine to speak of it."

This is good evidence of the occurrence of nervous attacks, but not of epilepsy. There is no suffering during an epileptic fit and

afterwards the patient sleeps. Moreover, he is unconscious that he has had a fit. No one can calm an epileptic.

> " On another occasion the chief valet, Constant, says he heard distressing sounds and complaints coming from the imperial chamber. Going in he found Napoleon lying on his bed with his mouth wide open, from which issued inarticulate sounds, while one hand was clasped upon his stomach. Constant with some difficulty aroused him, and the emperor asked, 'What is the matter?' He then related a terrible dream in which he thought a bear was sitting on his chest and trying to eat out his heart. Epileptics do not lie with the mouth open. The description of Constant indicates a severe attack of nightmare or incubus."

It may have been, as often happens, that a physical pain—due perhaps to the gastric disease—led the subconscious mind to the subject of a nightmare.

"Baron de Talleyrand, the emperor's minister of foreign affairs, asserts that he and Count Remasat, the chief chamberlain, witnessed together one of his attacks. The Baron states that he accompanied his majesty on a journey to Strassburg. That on one occasion Napoleon entered Josephine's chamber, but came hastily out again, seized Talleyrand by the arm, drew him into an adjacent room and confusedly ordered the door to be shut. He then fell like a dead body and had contortions which Talleyrand describes as follows: 'He groaned, frothed at the mouth (*il gémissait et bavait*), he rolled and rubbed, and had some sort of convulsions, which ceased in about a quarter of an hour. A little afterwards he began to speak, and in half an hour was on the road to Carlsruhe.'

"This is as good a description of true epilepsy as a non-professional man could be expected to make, except the phrase 'he rolled,' a motion which seldom occurs in epilepsy. This, however, might be the

inadvertent error of an excited observer. On the whole, if Talleyrand did not misrepresent, it was a true epileptic seizure. On the other hand, we must remember that the emperor and Talleyrand came gradually to hate each other with the greatest intensity, though the pressure of political necessity and the possession of too many state and Napoleonic secrets between them compelled the two men to continue to act in concert.

"Talleyrand, like most of the diplomats of Europe at that time, was a colossal fabricator of incorrect statements, and his keen enmity towards the emperor may have led him in his later years to take a hint from the current rumours of epilepsy, and give them the support of a definite but fictitious story."

My commentary on this occurrence is that everything is wrong except the frothing at the mouth.

Epileptics do not groan, roll, or rub; a fit does not last a quarter of an hour. Not

knowing that they have had a fit they express no wish as to what should be said about it. Had the attack been a real epileptic seizure, in half an hour he might have been on the road to Carlsruhe, but if so he would probably have been asleep.

As Dr. Andrews points out, not a single medical man in attendance at any time upon Napoleon ever saw him in an epileptic fit. Whilst he was at St. Helena there is no mention of them, and such an occurrence would certainly have been reported by the Governor. It is equally true that no record of his having had whilst there any seizure of a nervous character, but it is to be remembered that Napoleon was then an extinct volcano and little likely to have been subject to manifestations which only occur when the emotions manifest themselves in force. Constant, his chief valet, states definitely in his memoirs, "The Emperor was never the subject of epileptic attacks."

De Bourrienne, his private secretary, in his memoirs states :

> " It has been said over and over again that he was subject to repeated attacks of epilepsy, but during the eleven years that I was almost constantly with him I never observed any symptoms which in the least degree denoted that malady."

The above evidence is sufficient to dispose of the belief that Napoleon was an epileptic, but it also goes far to establish the fact that even when a youth he was subject at times of violent excitement to attacks which exactly resemble those which I have met with in persons belonging to the order of The Sthenics or Hypersensitives.

Lord Curzon's biographer in an attempt to explain the complexity of his character writes as follows : [1]

> " What gave to his personality its

[1] *Curzon.* By Lord Ronaldshay. Vol. iii, pp. 384, 389.

peculiar interest was its amazing contradictions and perversities.

What more perplexing paradox could be imagined than that presented by the pomposity and simplicity, the aloofness and the sociability, the broadmindedness and the intolerance, the generosity and the pettiness, the exuberant affections and the implacable hates, the contemptuous arrogance and the strange humbleness of heart of this incalculable man.

Among his many and diverse activities there was not one in which he was not liable at any moment to astonish and confound by the display of some startling inconsistency."

"What then is the explanation of these strange vagaries—these abrupt and startling contradictions? The answer to me seems to be implicit in the pages of his biography. George Curzon by his highly strung nervous system was influenced to a quite unusual extent by his environment. He could no more help responding to

stimulus from without than the seismograph can help recording the smallest tremor in the earth's surface.

The more sensitive the instrument the more immediate and complete its response, and there can be little doubt, surely, that in this extraordinary sensitiveness to his surroundings, psychical as well as physical, which it is impossible wholly to dissociate from the nervous affection of the spine from which he suffered throughout his life, is to be found the cause of so much that was baffling in his complex and effervescent personality."

His biographer rightly describes the affection of the spine from which he suffered as "nervous." Suffice it to say that it was found to have no physical basis, and is to be regarded as a manifestation of his temperament and not as a factor contributory to it.

My belief is that the solution of this problem is that given in this book.

If the Sthenics or the Hypersensitives form a definite and recognisable group in mankind, it is certain that George Nathaniel Curzon was one of them.

The sensitiveness to environment referred to in the summary emanated from within and was a manifestation of the Ego, and is the key to the solution of the problem in this as in all similar complex personalities.

I first came into contact with Lord Curzon on the Board of a Trust devoted to the advancement of research, of which we were both Trustees and I was also the Honorary Secretary.

At the first meeting, all the Trustees being present, he subjected me before the business began to a heckling by means of continuous questions asked in a tone and manner that is certainly unusual under such circumstances.

It ended by his saying in rapid utterance : " Well, you seem to know so much about it that I shan't ask you any more questions ! "

This story is not told to glorify my learning, as I had merely been giving a few extracts from the *A.B.C. of Science*, a book which ought to be written and published if only for the benefit of cabinet ministers. It is an illustration of the manner in which in India and at the Foreign Office he had followed with such success, and which can be recommended with confidence to all engaged in the pursuit of the gentle art of making enemies. I had many opportunities subsequently of observing his extraordinary industry. Letters which every other man in a similar position, whom I have met, would have handed for reply to his secretary, he wrote with his own hand. It was curious to note that by long practice and frequent use the personal pronoun, first person singular, had lost any " twiddle " it may at one time have possessed at either end and was now done in a single downward dash on the paper. When important questions as regards either policy

or individuals were under consideration, his judgment in my estimation at the time was invariably at fault, and I cannot recall a single instance in which the future proved him to have been right. In a letter in which the rest of mankind would have used some such phrase as "We discussed" or "It was decided," he wrote "which I instigated." Rather an unpleasant word and not often used except in relation to crime or to policy judged to be nefarious in character.

In India Lord Curzon came into conflict with Lord Kitchener. No one could be with Lord Kitchener for even a short period without being aware that he was one of those men who carry about with them something which can only be described as an atmosphere, and is rarely found except in men whose lives are devoted to high purposes. His life has been written by one who knew him well and I have re-read with care everything therein contained bearing on this subject. It does

not appear, certainly not at the outset, that there was any personal factor in the difference of opinion between the Commander-in-Chief and the Viceroy. The matter concerned was what is now always referred to as "The Dual Control" of the Army.

It is perhaps wiser to present it in the words of a Secretary of State:

> "In India alone as it is believed among all military organisations the Commander-in-Chief is subject to having his military proposals checked and criticised by another expert of less standing and reputation than himself, who after reviewing them has the privilege of submitting the result to the final court of appeal in India, the Governor-General in Council, where he votes on an equality with the Commander-in-Chief, and finally conveys to his own colleague the orders of the Government."

Could it have been determined beforehand, having regard to what is contained in this book, what attitude he would adopt toward a

proposal to abolish this anomaly in the position he then occupied, that of Viceroy of India !

To me it seems that only one answer is possible : he would oppose it. It tended, if adopted, to diminish the influence of the Viceroy in relation to the Army. Lord Kitchener had in view the improvement of the Indian Army as a fighting machine. In the end the views of Lord Kitchener in substance prevailed.

A famous general of the Indian Army who fought during the Great War in France, Flanders and the Dardanelles, is stated to have held that " But for Lord Kitchener's work India could never possibly have given the great help she has to the Empire during the War."

Lord Kitchener was undoubtedly a man of exceptional " vision," who preferred to work alone, or nearly so, but it would require much stronger evidence than is

available before one would venture to include him amongst " The Sthenics."

The following estimation of his character by one who must have had ample opportunities for forming an opinion is, if correct, decidedly opposed to such a conclusion.

> " I confess I have been very much puzzled as to the opinion of Kitchener which is so prevalent both in India and at home.
>
> " It seems so often to be assumed that he is overbearing, self-seeking and difficult to deal with. One can only speak of people as one finds them, and all I can say is that I find him very broadminded, very ready to see both sides of a question, and perfectly easy to deal with. Of course he has strong opinions and no doubt is inclined to speak of them, but so far I have found him perfectly ready to look at them from different points of view." [1]

[1] Lord Minto to Lord Morley, 1st February, 1906: vide *Life of Lord Kitchener,* by Sir George Arthur, p. 224, note.

If a number of men, competent to judge, were invited to name the possessors of the two greatest intellects of the last fifty years, not a few would, I believe, name Lord Haldane and Lord Moulton.

Lord Haldane came of a long-lived stock and inherited with other members of his family the framework of a great intellect which he filled in with the finest material, but no one who knew him well would, I think, describe him as a man of overflowing vitality. His mind was subtle and not easily fathomed. When in office—the War Office—he succeeded in attaching to himself every man in high position there who was brought into contact with him. This can only be done by a man who is too great to be thinking of himself.

The opinion which those at the War Office formed of Lord Haldane was expressed in a presentation copy of his despatches brought by Lord Haig to Lord Haldane's house and

handed to Lord Haldane. In this he had written :

> " To Viscount Haldane of Cloan, the greatest Secretary of State for War England has ever had. In grateful remembrance of his successful efforts in organising the Military Forces for a war on the Continent, notwithstanding much opposition from the Army Council and the half-hearted support of his political friends."

Lord Haldane was misjudged when men's minds were not in a normal condition. History will do justice to his great abilities and to the great services which he rendered to his country. No one would, I venture to think, include him amongst The Sthenics. Some incidents in his visit to Berlin in 1912 illustrate his character. The object was to discuss and if possible arrive at an agreement with Germany on what was known as the " Two keels to one " basis.

The story as he told it to me of what

happened after luncheon at Potsdam, when the brandy was very old and the cigars were of the best, is that the Emperor said, "Now, Lord Haldane, we will go into my room and you and Tirpitz can talk business." When they arrived there he said, "Lord Haldane, you sit there and Tirpitz will sit there and I shall sit here." "But that, Sir," said Lord Haldane, "will be 'Two keels to one.'" In a short time Von Tirpitz found himself suffering from an unexpected silence.

When the talk was over the following conversation between the Emperor and Lord Haldane took place:

W. What would you like to do to-morrow, Lord Haldane? There are manœuvres near here. Would you like to ride with me?

H. Sir, there is not a horse in the Mark of Brandenburg over which I would venture to put my leg.

W. Is there anything you would like to do?

H. Yes, Sir, I should like to see how you mobilise the — Division.

W. Well, you shall, but you must not ask any questions you ought not to ask.

The result was that Lord Haldane spent the next two days in the offices of the Imperial General Staff and was shown every paper that he asked to see. The members of the I.G.S. who were engaged in this proceeding suffered a good deal from the heat that afternoon, but that did not prevent Lord Haldane from learning much that was of great interest to him and of which he doubtless made every legitimate use. This is not exactly what would have been the action of a "vain old man fooled by the Germans." That he gave to his colleagues in the Cabinet a full and accurate account of the visit is not open to doubt by any unbiassed mind.

There were two parties in Germany at that time, each endeavouring to gain the

Emperor over to its side—the Imperial General Staff who, as I heard Lord Haldane say on a subsequent occasion, were "always in favour of war," and the more cautious Foreign Office officials who were not so confident of the result.

Had this country, immediately on Lord Haldane's return, begun to make preparations for war conceived upon a scale which after experience showed to be necessary, there is not much doubt which of those two parties would at once have got the upper hand.

Lord Moulton was a man whose attainments covered a very wide field. He was, though a lawyer, actually capable of giving an address on advanced bacteriology to men whose lives were spent in that pursuit. But for certain defects in character there is no position to which he might not have attained. I can find no reason for including him amongst The Sthenics.

The *Life of Sir Edward Marshall Hall*,

K.C.,[1] is a record, both as regards character and career, typical of a "Sthenic." For many years I knew him fairly well.

His store of vitality was unending, and enabled him to surmount domestic tragedy and professional disaster; to acquire a practice, to lose it and to regain it. He had many interests and was able to share the interests of others. It has been said that the conversation of a barrister is marked by "a tendency to explain the obvious and dilate upon the evident," but this was not true of Marshall Hall; he poured out words with great rapidity, chiefly bearing on his cases or his acquisitions, and the dominance of the Ego was unmistakable. As a young man, like many others, he had a leaning towards the Church, a great interest in medicine, and finally chose the Bar. He failed to obtain the object of his ambition, although in a limited sphere of practice he was eminent.

[1] By Edward Marjoribanks.

He may be said to have almost claimed ignorance of the law, a defect in a mind not given to take the impartial view, which was not likely to lead to the Bench. He was deficient in a sense of humour and his lack of judgment was profound. "The élan with which he swept down upon a doubtful jury, brushing aside their prejudices and persuading them against their will, sometimes possibly against their better judgment, into accepting his own sanguine view of his client's innocence, won many a day, which a more timorous, if not less skilful advocate must have given up for lost." [1] Whether he ever succeeded by such methods in convincing the prisoner as well as the jury cannot be known, but the following story, which was told me by Sir Charles Hall, K.C., shows that it can be done.

Sir Charles had been engaged at Yarmouth during the morning in defending a man

[1] *Op. cit.* Introduction by Lord Birkenhead.

charged with stealing some bloaters and had obtained an acquittal. After the Court had risen in the afternoon he went for a walk with a friend. Hearing some footsteps pattering behind, after a time he looked round and recognised his client. "Oh, oh! that's you, is it? You must be careful, you had a very narrow squeak this morning." "I'm very much obliged to you, Sir, for what you did for me. D'ye know, Sir, when you was a-talking I'm blest if I knew whether I took them there bloaters or not."

Assuming that what has been stated in this book as to their characteristics is accurate, would anyone suggest that Lord Haig should be included amongst the Sthenics?

It is not therefore merely a matter of selecting all the men of greatest distinction and then affixing to them a label.

CONCLUSION

THE objection has already been met that men such as those who have been mentioned almost necessarily possess a certain complexity of character which may possibly be explained on these lines, but to do so serves no useful purpose. It may be answered that only those whose lives have made history or those who have attained to high positions and whose lives have been written are available for the purpose, but this does not prove that as a class they are not numerous. The vitality of " the Bounder " and " the Pusher " may be a vulgar vitality, but what is observed is nevertheless the real man. It is not a pose ; he has not been consciously a lifelong actor. From time to time in the realm of finance an

individual of this temperament like a falling star crosses the sky and sinks into the abyss, leaving behind him a trail of disaster and suffering. It may be useful to be able to recognise such at an early period of their career and label them before they have any opportunity of injuring others.

The question remains to be answered, How is this display of energy, so great at times as to suggest disease, to be explained? What is it that in the University Boat Race, when more than one man in each boat may be "blind to the world" after Barnes Bridge, enables them to continue rowing to the end? If it be a cerebral force one would expect clearness of mind to go with it.

We have already alluded to those individuals, usually women, who are described as a "bundle of nerves." But every human being is in a sense employing during every moment of his life "bundles of nerves."

There are two main systems of nerves within the body.

(*a*) The Central, consisting of the brain and spinal cord and the nerve roots and trunks which are attached to it. The central nervous system is concerned with the function amongst many others of carrying to their destination impulses originating in the brain or spinal cord, which lead to the contraction of muscles and in conveying to the centre sensations of various kinds which keep it informed as to what is going on within and without.

(*b*) The Sympathetic or Automatic system of nerves, also widely distributed throughout the body, deals with involuntary messages and controls those parts of the body which are automatic and not under the control of the will.

Any person in health can decide that he will raise his right hand, but he cannot decide how he will digest his dinner, which also requires muscular contractions.

There is a very close relation between

this nervous system and a number of glands already referred to whose existence has long been known but whose functions —of infinite importance to the well-being of the individual—have only quite recently been in part discovered.

The ductless glands and the sympathetic system of nerves are in very close association. The nerves stimulate the glands to secrete, and the secretions thus produced reinforce the nerve centres.

Comparatively recent research in bio-chemistry points to the suprarenal glands as the organs which may be chiefly concerned in the rare manifestations already described. They are two small bodies shaped rather like a cocked-hat, one seated on the upper border of each kidney. It has long been known that in tuberculous disease of these bodies—Addison's disease—there is profound muscular weakness accompanied by bronzing of the skin and other symptoms.

The first advance in knowledge was made when it was shown that the function of the outer part—the cortex, differed from that of the central portion—the medulla, and it is from the medulla that the extract now known as adrenin, or adrenalin, is derived.

One of its chief functions is to increase the pressure of the blood in the vessels. Nowadays everyone knows all about blood-pressure, and a very large number, under the impression that it is the name of a disease, believe themselves to be suffering from it. They may be interested to learn that in 1874 my revered master, Sir George Johnson, taught so little else that I was then tired of blood-pressure.

It has been shown that in times of great emotion and excitement the amount of adrenal secretion poured into the blood is very greatly increased and that it acts as a stimulant to the muscular system. It may indirectly paralyse the contraction of the

stomach and intestines and lead to their distension and also to sickness.

In a work by a distinguished professor of physiology in an American university [1] the effects of adrenin when injected into the body and when produced in conditions of great excitement and fatigue are stated thus:

> "Adrenin in extraordinarily minute amounts affects the structures innervated by the sympathetic nerves precisely as if they were receiving nervous impulses. For example, when adrenin is injected into the blood, it will cause pupils to dilate, hairs to stand erect, blood vessels to be constricted, the activities of the alimentary canal to be inhibited and sugar to be liberated from the liver. These effects are not produced by the action of the substance on the central nervous system, but by direct action on the organ itself." (p. 34.)

[1] *Bodily Changes in Pain, Hunger, Fear and Rage*, by W. B. Cannon, M.D., etc., Professor of Physiology in Harvard University, p. 193.

The effects of adrenin when secreted under conditions of great excitement are seen to be similar.

> " Our enquiry thus far has revealed that the adrenin secreted in times of stress has all the effects in the body that are produced by injected adrenin.
>
> It co-operates with sympathetic nerve impulses in calling forth stored carbohydrate from the liver, thus flooding the blood with sugar ; it helps in distributing the blood to the heart, lungs, central nervous system and limbs, while taking it away from the inhibited organs of the abdomen ; it quickly abolishes the effects of muscular fatigue and it renders the blood more rapidly coagulable.
>
> These remarkable facts are furthermore associated with some of the most primitive experiences in life in higher organisms, experiences common to all, both man and beast, the elemental experiences of pain and fear and rage that come suddenly in critical emergencies."

This then, it is suggested, is the bio-chemical basis for the attacks from which The Sthenics or Hypersensitives suffer under certain conditions, a great pouring out of adrenin. When there is no available outlet for this, such as is afforded by physical exertion, an explosion follows.

Whether the thesis stated at the beginning of this book has been proved must be left to the reader to decide.

'Not all who seem to fail
Have failed indeed.
Not all who fail
Have therefore toiled in vain.'

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