SPURZHEIM'S
LECTURES ON PHRENOLOGY.

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Brighton

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LECTURES ON PHRENOLOGY.

EDITED (WITH NOTES AND AN INTRODUCTION) BY

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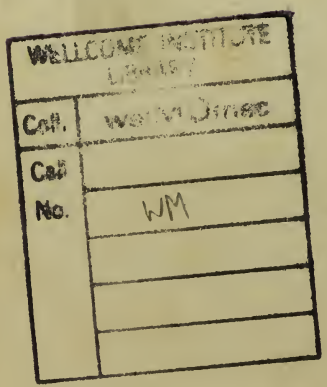

INTRODUCTION.

NO apology is needed in giving a new edition of these Lectures to the public; for although first published some fifty years ago, they are still orthodox in respect to the current doctrines of phrenology, and only require a few notes to bring them into harmony with the present position of the science. Such notes have been added where they seemed to be needful; and a small number of corrections have been made where inaccuracies had crept into the text; otherwise, with two exceptions, the Lectures are as delivered and published by Dr. Spurzheim. These exceptions relate to the organs of Sublimity and Continuity, or Concentrativeness; both of which organs were discovered subsequent to Spurzheim's time; in fact, discovered or adopted by George Combe,* and in consequence recognized by the "orthodox."

It may surprise some persons to learn that there are sects of phrenologists, just as there are sects of Christians; but it is so. The two chief sects are what we may be allowed to designate the Combites and the post-Combites. The former take their stand on Combe, and they do not budge beyond him. What he wrote, that they accept as gospel; what he did not write, even though it may be in accordance with what he wrote, they reject as uncanonical. It is just as though they accepted Aristotle, or Bacon, or any other, as the exponent of science, and refused to accept any fact or inference not contained within the covers of their respective works.

It is out of deference to the prejudices of this school that we have refrained from including in the text of these Lectures, or as notes thereto, any definition of the organs of Human Nature, Agreeableness, and Conjugality, not included

* Although Combe did not divide Sublimity off from Ideality, he surmised that it was a distinct organ.

(because not then discovered) in the System of Phrenology by Combe. Considering it inadvisable, however, to send out a book on phrenology, designed for instruction in the science, not edited up to the present standpoint, we have decided to include a definition of those organs in this Introduction.

The organs in question are the result of the investigations of the brothers O. S. and L. N. Fowler, of New York, who for the last fifty years have worked so assiduously in the field of phrenology, and to whom, more than to any other two living men, is due the fact that the science still holds its ground. Space will not permit of our going into the history of the discovery of the organs; suffice it to give their locality and definition, and let those who doubt investigate.

Of Conjugality (marked A in the busts) Mr. L. N. Fowler gives the following definition in the *Self-Instructor:* "Monogamy, union for life, first love, the pairing instinct, attachment to one conjugal partner, reality and exclusiveness of love. Perverted action—a broken heart, jealousy, envy towards love rivals. Located between Amativeness and Adhesiveness, and adapted to parents living with and educating all their own children in the same family." "It is a faculty not confined to man alone. Some birds—as doves, eagles, geese, robins, and others—remain faithful to one mate. Some quadrupeds, too, show this peculiarity, especially several species of monkeys. Other animals associate promiscuously."

The organ of Human Nature, or Intuition (C), is situated above Comparison, and gives prominence to the central portion of the forehead at the point where the hair begins to grow. "Though regarded as 'probable' by some writers on the science, it is tolerably well established. It is adapted to the perception of human character and motives, and gives intuitive discernment of the springs of action. Those in whom it is large take delight in studying human nature, and have a kind of natural sagacity in dealing with men. It forms a prominent quality in the mental constitution of those who excel in the portrayal of character, and is a marked feature in the forehead of Shakespeare, as whom, perhaps, no man ever had such a knowledge of the human heart" *(Manual of Phrenology).*

Agreeableness (D) is situated on each side of Human

Nature, above Causality and below Imitation. Mr. Fowler *(Self-Instructor)* says persons with it large are "particularly winning and fascinating in manners and conversation, and delight even opponents." "It is difficult, at first sight, to regard the power of making one's-self agreeable to others as a primitive faculty of the mind, because there are so many ways of ingratiating one's-self into the favour and good-will of others, that the power seems to depend on a number of faculties rather than on one. Perhaps the name is not the happiest, and yet it seems to hit the more common mode in which the organ manifests itself, that is, in making the person with it large adapt himself agreeably to those with whom he comes in contact. . . . It cannot, perhaps, be better described, than as the disposition to introduce one's-self pleasantly and acceptably to others, to smooth the asperities of life, and to hide what is rugged and ungainly" *(Manual of Phrenology)*.

The concluding Lectures are of especial value, as pointing out the application of phrenology to education, and its importance as a system of mental philosophy.

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LECTURES ON PHRENOLOGY.

Lecture I.

It gives me particular pleasure to appear once more before the English public, and to witness the progress of my favourite science; to see, from your numbers, that the prejudices which formerly prevailed against it have greatly subsided. I have to speak to you of phrenology, a term derived, as you all know, from two Greek words φρην mind, and λογος discourse or doctrine, hence it means the doctrine of the mind. As men are not endowed with the knowledge of the essential nature of mind itself, I cannot speak to you of the mind; we can, however, observe its manifestations and the conditions under which these manifestations take place. Phrenology, then, is the doctrine of the manifestations of the mind and of the relations which these manifestations bear to certain bodily conditions. Do you feel some interest in this science? If you do not, you will not study it sufficiently to know its value. There are many persons who begin by asking—Is it useful? I am of opinion that it is impossible to understand the application of any thing without understanding the thing itself; and here let me observe that the knowledge of phrenology is the knowledge of the most important part of man—of his consciousness, his passions, his feelings, and his intellectual part; and I think we must say with many others, that of all studies man is the most important study. It is generally understood that phrenology is useful to medical men, because the moral part of man, which includes his affections and passions, has a great influence upon his corporeal part and is a great cause of many diseases, and, without a knowledge of such cause, he must find great difficulty in curing diseases. Indeed, those medical men who have to treat insane persons, find a knowledge of phrenology quite indispensable; for how can they treat the derangements of the functions of the mind without understanding first their healthy condition? To know how to manage the one, it is first necessary to know the other. All those who have studied philosophy will recollect that they

can make but little application of any branch of it to practical life.* If phrenology were not applicable to life, you would take but very little interest in it. What I have to find fault with in men who profess to be studying philosophy, is their nomenclature; for it is not exact, and the consequence is, that they discourse for hours and never agree; and I think this also shows that their knowledge is not exact, and therefore their nomenclature is inexact. Medical men are interested in knowing phrenology, so also are those who have to join institutions of any kind, which ought to be founded upon the nature of man. The systems of education also should be founded upon the knowledge of the moral nature of man.

I might say that the arts individually are interested in phrenology, but the arts of sculpture and painting, especially historical and portrait painting, are particularly interested in it. Some painters pay great attention to the shape and appearance of the face, and they ask, is not this a good likeness? But they omit entirely the shape of the head, which to me appears of as much importance as the other. Now take an example, here is the likeness of a person. (Holding up a painting on pasteboard, so divided that the head might be separated from the face.) Now I will let the same face remain, and change the figure of the head (painted on another piece of paper). Would you not say that it was quite another man? You see that I have allowed the face to remain, but I have altered the configuration of the skull. In poetry, too, it is useful; and artists of imitation should follow poets: for when you use expressions to speak of the different moral powers, you would not wish to contradict yourself by describing a form or configuration inconsistent with the attribute you wished to describe. You would not say that a man had a villainously high forehead, although you might describe him with "a forehead villainously low." Here are two skulls, one high and large, the other small and very low. (Exhibiting them to the meeting.) Would you not say this (the smallest) represented the ignoble sentiments? Which form would you say was the most desirable, merely by intuition, so to speak, without knowing anything of the organisation? There is not a doubt which you would choose. What I have said may suffice to show, in a general way, the usefulness of phrenology.

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* In regard to so-called philosophy, those who give themselves to the study of it have not yet got away from that state of mind which caused the ancient philosophers to regard the application of their principles to practical affairs as a degradation; thus the man who first applied conic sections to mensuration was looked upon as having demeaned philosophy.

Permit me to say a few words, to request your indulgence to the inaccuracies I may make in my pretension to use your language; and it shall be my desire to give you plain and simple facts; to compare them, to reduce, as correctly as possible, the facts to principles, and then draw inferences from them. Now as to facts, I consider there can be no differences of opinion as regards them, between us and our opponents; but as to inferences, I shall propose some. But every one must judge for himself as to inferences. The same facts exist, but the inferences drawn from them are many. I shall draw inferences, and I hope I shall to-day have the opportunity of verifying their propositions. Now I shall enter into a few general considerations on phrenology, admitted by all to be incontrovertible; and shall next come to such as are disputed.

There is an ancient doctrine that there is an influence between the mind and body; but every person does not know the meaning of the term temperament.

The ancients admitted that the temperament of the body could give rise to individual feelings; that a man of a bilious temperament is disposed to anger; that such a man might have good penetration and a sound judgment, but not a good memory. That, on the other hand, a man of the sanguineous temperament, having fair hair, a fair skin, blue eyes, and a florid countenance, having proofs of a strong activity in the circulation of the blood, that such a person might have great liveliness, great sensibility, a very good memory, but not deep judgment. Various other sentiments were ascribed by them to the influence of the temperaments. The influence of the whole constitution, or of what has been called temperament, must be admitted to extend to phrenology, but with some restrictions. It is certain that the individual systems of digestion, nutrition, circulation, and respiration, have a great influence on the power and activity of the whole body. In phrenology we do not admit that the whole constitution of the body produces the determinate feelings; but we admit the influence of the whole constitution, as far as the different degrees of activity depend upon the temperament. If we see a man of a lymphatic temperament, without activity in the external senses, the motion of the muscles being very slow; and if we see another man of the same general temperament, with greater activity of the muscular power and the external senses, we conclude that there is a greater degree of activity in the brain of one than of the other. This is important for you to recollect, and I hope you will not forget, that although the constitution does not produce the determinate feelings, yet it has a very great influence on the different

degrees of activity. So that when you examine the peculiarities of the head, you must always bear this in mind. In illustration of this proposition, I will refer you to the muscular power. The muscular power does not depend upon the constitution, but the greater activity of that power is influenced by it: hence, we see that it is less active in the lymphatic than in the bilious constitution.

A doctrine which is commonly maintained, and which is to be found in all physiological books, from the most ancient times to our own days, is, that the viscera have a great influence on the feelings, and everybody knows the expressions—a bad heart, a good head, and so on. The ancients

THACKERAY: Showing a good degree of the Lymphatic (or Vital) Temperament.

ascribed certain feelings to certain viscera; they placed joy and grief in the heart, anger in the liver, hatred in the spleen, and so on. But this manner of proceeding is not physiological, and it seems strange that such opinions should have continued, since physiologists know that these several parts have particular functions; and if we speak of organs, we know that they have functions. If we go into the study of nature, we find that animals have ears, and many of the mammiferous animals have larger hearts than man, more perfect organs, larger livers, and larger lungs, but you cannot ascribe moral feelings to them. It seems to me that this doctrine has been propagated on this account—when man is

the subject of certain passions he feels certain affections about the viscera. Whenever a man is much elated by feeling the circulation is somewhat decayed, the heart palpitates, and there is oppression of the respiration, and pain in the head and other parts ; and it is probable that these sensations, produced in individual organs by excitements or depressions of mind, induced the ancients to think that these organs were the seat of their sensations. Would you draw this inference after what I have said on the functions of these parts? We know, by physiology, that the different parts have a great communication, and that derangement in the function of one causes derangement in the functions of others. There is a great communication between the brain and different parts of the body, and everyone has experienced, that after having taken

LINCOLN : Showing a high degree of the Bilious (or Motive) Temperament.

too much food or drink into his stomach, he cannot reflect ; he goes to bed, and in the morning his mind is stronger, and he can then reflect. Yet you could not say that a man thinks by the stomach! Oh, no, it is by the brain that we think. In animals, we see the same viscera and the various kinds of temperaments, but without any manifestations of mind : but have you ever seen any being showing mental powers without any brain ? Throughout all nature, if you admit the existence of some intelligence, there you will find brain.

I think you will admit that, and I will come now to the more perfect class of animals—to man.

I shall be able to show you that a person having a very small brain does not and cannot display much mental power

Have you ever seen an individual brain so small as this? (Showing a very small brain to the audience.) Would you expect that such a development of brain could manifest superior talents? Here is another of just the same size, and these models were taken from two persons who were complete idiots; the one died at the age of 19, at Cork, the other at 25, at Amsterdam. Many observations prove that the brain, when very small, is not sufficient to show great talents; and, on the other hand, you will never find that those men who excel in mental powers have very small brains. Lord Bacon had not such a brain as that idiot, as you may now see (showing a mask and forehead supposed to be Bacon's), that he had an immense organisation of brain. Moreover, if we come nearer, if we come to the feelings, we observe certainly a difference in the feelings of women and the feelings of men. Females often say to us, that we do not feel like them; and we reply that they do not think like us. The powers of both sexes, however, are greatly modified by circumstances. Now, if we look to the configuration of the heads of each sex, we find that the heads of men are thicker on the sides than the heads of females, and longer from the ear to the top of the forehead; whilst the heads of females are flatter on the sides, and there is a larger portion of brain from the ear to the occiput than in males. Seeing these great differences, we admit the influence of the brain on the manifestations of the mind; and admitting this influence it has been attempted to ascertain how far the development of particular parts of the brain gives rise to particular feelings.

I shall not speak long on the objections to these propositions, as, by doing so, I should anticipate my subject. I am in the habit of saying that never do any manifestations of mind take place without brain. Is this true? What objection is made to the second part of the proposition? They say that the brain has been injured, and parts of it even removed, and yet the manifestations of mind continue. This objection is made in a very general way; but they have not determined, they have not ascertained, whether the same parts of the brain have been taken away on both sides, and whether the functions assigned by phrenologists to these parts have been then destroyed; the brain being double, would admit of the removal of a part, on one side, without destroying the function of the other. We may lose one eye, and yet see with the other; we may lose one ear, and yet not be deaf. The question to be answered is, whether the function ascribed by phrenologists to a part of the brain, will continue when that part is removed on both sides of the brain? and unless this can be answered in

the affirmative, the objection is not forcible. In hydrocephalic heads, the water is either in the interior of the brain, in the ventricles, or it is external to the brain. When it is within the ventricles, I shall be able to show you that the celebral mass may become very much distended without having its functions destroyed. I had the opportunity of seeing this extraordinary case at Guy's Hospital very lately. (The cast of an immense head was shown.) The head measures thirty-three inches and a half in circumference; it contained nine pints of water, but the brain was situated at the bottom of the skull, and weighed two pounds fourteen ounces and a half. The patient was about thirty years old when he died, and he could write and speak sensibly. Hydrocephalic heads have brains, but you will seldom find the brain at the bottom and the water on the top.

I will now just mention a metaphysical objection which has been made to phrenology; it is said, how can you speak of the influence of bodily conditions on the mind, since the mind does not know them? We may answer, that the mind certainly, in this sense, has no knowledge of them. The eye sees; it is the organ of vision: there are two optic nerves in the brain, yet the impression made on the mind is single; there are two nerves of smell, yet the effect is the same; and I should like to know whether the mind has any knowledge of the instruments which it makes use of. So we admit that the mind does not know the individual parts of the brain, but they are to the mind as the eye and the ear—they are the instruments of the mind.

Well, shall we draw some general inferences, and say, since no manifestations of mind take place without brain, since idiots having small brains cannot manifest the mental powers; and since men of great talents have larger heads than idiots, cannot we measure the powers of the mind by the size of the head, and cannot this be done by phrenology? In speaking of different individuals of different capacities, you must not judge of them by the absolute size of the head. Here, for example, is the head of a turtle, it can scarcely contain an ounce of brain; here is the head of the horse, you see that it can contain more brain than the turtle, and therefore has more capacities; but here is the head of a poodle, a little dog, and shall we not allow that the poodle, in proportion to the size of his brain, shows more powers than the horse? You cannot then, by the absolute size of the brain, judge of the qualifications of mind. You often see that smaller people of the sanguineous temperament can fight larger men of the lymphatic temperament, although the muscles of the latter are much larger, yet they

are not so active ; you must admit, then, that the constitution has considerable influence. You see this in the muscular power, you see it in the five senses, and you may see it in the brain : hence it would be impossible to judge of the mental qualifications from the absolute size of the brain. Besides, all elephants and whales have, if this doctrine were admitted, larger capacities than men, because their brains are larger.

Physiologists who have studied this subject have adopted another opinion : they have adopted this—that in order to arrive at the knowledge of individuals' powers of mind, it is necessary to consider the head in proportion to the size of the body. There must certainly be a proportion between the head and the body to produce a fine form ; but if we draw a small body, we must not make the head too small. Here is a model of the head of the *Venus de Medicis*, which is of too diminutive a size ; for if you remove the hair, the scalp, and the bone, there remains but a very little room for the brain ; and if you find, in soeiety, an individual with such a head, you will find that he has little sense. You will observe that large persons have sometimes small heads, and very little men the largest heads ; therefore this inference cannot be held.

Camper drew a line from the ear to the upper lip, and another from the top of the forehead to the upper lip, and

Grades of Intelligence. Showing Camper's Facial Angle.

these two lines formed an angle which he called the facial angle, and he thought he could measure the faculties by this angle. The statue of Apollo, measured in this way, would present an obtuse angle, whilst the head of a negro would afford an acute angle ; but the objection to this is the prominence of the jaw-bones of the negro, for in them they are

more prominent than in Europeans, and would interfere in the accuracy of the angle. Size must be considered in the examination of the head. It is really curious to see that the ancient artists gave different configurations to the head for different talents. If you look at the busts of the gladiators, and to the bust of Socrates, your attention is immediately drawn to the different configurations. In the one, the head is more developed before the ear ; in the others, the greatest portion of brain is situated behind it. On the next evening I shall proceed to speak of the head more particularly.

Lecture II.

You will perhaps forgive me for bringing again before your notice some points which I mentioned on the former evening, but as they are important I am anxious they should be well understood. I spoke of the constitution of the body, or the temperament, and its influence on the manifestations of the mind ; but that in phrenology we admit the influence of the temperaments only as far as they affect the degree of activity of the intellectual powers, not as giving origin to them. I have only spoken of the brain in a general way—that it is the organ of the manifestations of the mind. I hope you do not think that I admit the brain to be the organ of the mind from the few proofs I have already adduced ; many more will hereafter be brought before you. However, let it be understood that in phrenology we consider the brain not only as necessary to the existence of the intellectual faculties, but also that its degree of development exercises a considerable influence on the manifestations of the mind. You will recollect what I said on this subject, that the brain, as to its absolute size, is not sufficient to measure the talents. You cannot go from one individual to another, and say, your head is larger than your neighbour's, hence you have more talents. Nor is the proportionate size of the brain to that of the body indicative of the strength of the intellect ; and I also said that the measurement of the forehead with the face failed in its object, for we cannot by it indicate the different degrees of talent.

I shall proceed now to another principle in phrenology, namely, that there is a plurality of mental powers, and that every faculty is manifested by a peculiar organic apparatus.

The doctrine of the plurality of powers is very ancient. I do not know any system of philosophy which has been satisfied with one single power of the mind ; all the founders of such systems have thought it necessary to admit several

powers. All of you know that the understanding and the will are commonly spoken of in treating of the mind; hence we find two general powers at least. Have philosophers been satisfied with the understanding and the will? No. They have subdivided these into memory, judgment, imagination, the association of ideas, &c.; therefore, I repeat, that the idea of the plurality of the mental powers is not new, but as ancient as philosophy. Physiologists have also, in observing the functions of various organs of the body, assigned certain feelings to these organs, and to the brain they have assigned some as well as to the rest. Even so early as in the twelfth century, and particularly in the fifteenth, we find individual powers not only ascribed to the brain, but marked upon the head, according to the prevailing doctrine of the schools—as common sense, memory, and so on. My object is here to mention that the doctrine of the plurality of the powers of the mind had been adopted by ancient philosophers, but no determinate powers had been assigned by them.

How shall we proceed now to ascertain the functions of the several parts? I am sure that every one who reflects upon the mental manifestations must feel convinced that it is impossible to ascribe them all to one power of the mind. Do you think that one person is capable of doing everything with the same degree of perfection? The mind requires the medium of the external senses by which to hold communication with the external world; there are eyes to see, ears to hear. Now we see that sometimes individuals are deprived of one or more of these senses, yet the others remain; a man may become blind, yet he will continue to hear, and may we not from these occurrences infer that there is a division of the senses? We see also that the mind, in like manner, is sometimes deprived of certain of its manifestations, and yet the others remain; a man may, for instance, be insane on some points and yet remain in full exercise of the intellect on all other subjects;* hence, I think, that we must allow, not only a plurality of powers, but also that these powers are dependent on a plurality of organic parts. Shall we turn to the dissection of the brain to explain its functions? we certainly know more of the structure of the brain than was formerly known: can we learn the functions of the brain by that dissection? I have

* The development of the various faculties in children, too, exemplifies in a striking manner the plurality of powers. The infant early begins to observe, but it is some time before it learns to distinguish the difference between objects and persons. But soon it begins to notice differences of form and size, and even colour, but this later. It is some time before it takes cognisance of numbers; and all know how much various intelligence a child displays before it learns to talk. If the mind were all one organ there could not be this difference.

seen many individuals extremely anxious to know the structure of the brain; but a knowledge of that alone cannot teach the cerebral functions. Can anatomy show the functions of any part? Look at the olfactory nerve; can you recognise its function? You may see the optic nerve as it passes to the eye; you may see its figure, its colour, its density, but can you learn from this observation that it is destined to receive the impressions of light? Look again at the muscular fibre: you may observe its vascularity, its colour, but can you learn from these qualities that the muscle is contractile? No; it is to physiology we must look for the knowledge of functions, however accurate our knowledge of structure may be. Anatomy is useful to physiology, but anatomy without physiology is dead. Anatomy can no more show the functions of the brain than it can those of other parts of the body; these can only be arrived at by a careful observation of nature. Anatomy, however, can never be in contradiction with physiology. If I could show that the structure of the brain is in contradiction to the functions ascribed to it by physiologists, then I would say phrenology is altogether destroyed. You will recollect in the last of the hydrocephalic heads which I showed to you on the last evening there was an immense development of skull, but it was distended by water, and the brain lay at the bottom. In some other cases the brain is distended like a bladder, the water being within the ventricles. Now, if anatomy could not show that the structure of the brain admitted of such a change, there would be great imperfection in our knowledge; but when anatomy does show that such a change can take place, anatomy will be in harmony with physiology. To arrive at a knowledge of the functions of the brain we must observe them during life, as well as the functions of other parts of the body.

Persons have proposed to mutilate the different parts of the brain to obtain a knowledge of the offices of these parts, and in former times the same means have been resorted to. Many poor animals have been tormented without ascertaining this point. Particular parts of the brain have been cut away and other parts of the brain injured, to observe the effects of these injuries on the feelings of the animals; and this method of investigation has been extensively employed in France, and is to this day. Among other experiments, they have pricked the *corpora striata*, which are bands of fibres passing to the anterior parts of the brain, and they have observed that the animal has run forward; they have injured in the same way the *cerebellum* or the little brain, and the animal has run backward; so by destroying particular parts they have found that

the motions of animals have been destroyed.* I grant this, as far as the facts go: but shall we draw this inference and say that these parts of the brain have no other functions? I cannot be satisfied with such an inference. My manner of judging as to the truth of any physiological doctrine is this: if I see anatomy in harmony with physiology, and anatomy and physiology with pathology, and pathology with the former sciences, and that they all harmonise with each other, then I admit the doctrine to be true; but if I find anatomy at variance with physiology or pathology, then I cannot admit it to be true. You must always value facts although you may not completely understand their import; but you must distinguish between facts and inferences. You must have observed that voluntary motion is destroyed when serious injury is done to the head, but you would not infer that the whole brain is destined to give the power of voluntary motion.

I come now to another mode which we have recourse to for ascertaining the functions of the several parts, namely, the size. Here I must request you to attend to the distinction between the means we employ to ascertain the nature of the cerebral functions and the causes which produce the different degrees of activity of the primitive functions. I repeat, that it is an essential thing in phrenology to understand these two sorts of ideas, for if any man confounds them, he can never become a good practical phrenologist. We employ the size of the cerebral parts as means to ascertain the nature of their functions, but different degrees of activity cannot be measured by the size alone. A muscle is destined to voluntary motion, and we may observe the muscles when in action; but do the different degrees of voluntary motion depend upon the size of the muscles alone? Can we be satisfied with saying that? If this were true, we should find that large muscles have more strength than small ones, and that the large are more active than the small; but daily experience teaches us the contrary. The same may be said of the brain; the size is sufficient to determine the nature of the function of the brain, but the size is not the only condition which contributes to the activity of the brain. The study of determining the nature of a function is more easy than it is to determine the degree of activity of a

* We have seen the same method pursued, with somewhat different implements, in our own day, with the result that quite a different set of theories has been started. Dr. Ferrier and his school have put animals to extreme torture by uncovering their brains and electrising the parts, and the various resulting contortions of pain have been set down as indicating the "centres" of various powers. And this is called science, while Dr. Spurzheim's method of watching natural developments is termed "unscientific." Men formerly used the word "heretical" as some now use the word unscientific: it designates the thing they do not like.

function. We speak first of the nature, and then of the degree of a function; and the second is more difficult than the first. Bodily constitution, exercise of the individual parts destined to certain offices, will produce a greater degree of activity in them; we see this every day. We must also consider the mutual influence of the powers; one power is excited by another, and one part prevented from performing its office by injury done to another. Every one who practises phrenology is too much inclined to measure the different degrees of activity by the size alone, and I therefore never forget to insist so much on its inaccuracy in my lectures; hence I hope you will not impute to me errors committed in this way.

Is the size of heads different? Look, in a general way, to

Different Shapes of Heads. 1—Alexander VI. 2—Zeno, the Stoic. 3—Oberlin. 4—Philip II. of Spain.

the heads of persons and you will be astonished to see what a difference there is between them; and it is only surprising how this difference has been overlooked. Yet you will hear some anatomists now say, "Oh, all brains are alike!" We know each other by the shape of the face—no two are to be found alike, yet the parts are essentially the same; and if people wore masks to conceal their faces, I am sure they would soon know each other by the shape of their heads. There are small heads and large heads, narrow heads and broad heads, short ones and long ones. Look at these casts, you will see all the shapes I have mentioned (showing several casts); every one of them is different. By habit, or experience, you would soon be able to distinguish heads by less

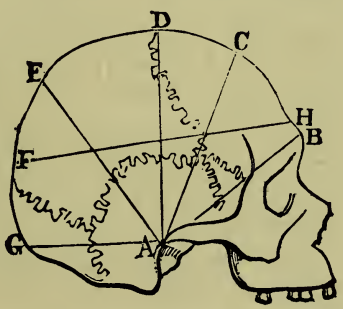
striking differences of formation than in those I have shown you, and you would be able to apply that knowledge to practical purposes. (See the outlines on page 13.)

How, in a general way, do you proceed to ascertain the size of the head? Proceed in this way: you draw a line from the external opening of the ear to the middle of that part where, in children, the fontanel is observed; or, to those who are not acquainted with anatomy, I may say, the middle of the head, and continue it to the opposite ear. This line divides the head into two regions, the one towards the forehead being called the frontal region, and the other towards the occiput, or back part of the head, being called the occipital region. Be now attentive to individuals and you will find the greatest difference in the size of the two regions; you will find some who have almost all the brain in the frontal, and others also have the greatest portion of brain in the occipital region. These are facts; what use we can make of them remains to be shown. In looking at individuals, be attentive to the direction in which the brain is most elevated. Draw lines from the ear to the centre of the elevated parts, and see which radii are the longest. I mention this for the following reason: in anatomy we shall find that the different cerebral parts are concentrated more or less toward the middle of the base of the brain; speaking to anatomists, I should say, we must look at the occipital foramen, and as we know that the brain begins a little in front of the occipital hole, and as the ear is in a line with that point, so in measuring from the ear, we come as near as possible to the centre; and from this point the different parts of the brain take different directions. Hence, in a head of this kind (showing a cast), the longest radius goes over the back part, and we know by it that the occipital region contains more brain than the frontal. Here are others (showing some casts) which have more brain in the frontal than in the occipital region. At the same time observe in what portion of the transverse line the head is most prominent. You must become accustomed to the degrees of elevation of the head, and you will discover great differences; some are flat at the top and broad at the sides, others flat on the sides and expanded on the upper part. Divide the head again into two regions, by carrying a line horizontally from the middle of the forehead to the upper edge of the occipital bone, and you will find that in many individuals the greatest portion of brain will be situated below this line toward the base of the skull, which may be called the basilar region; whilst in others the greatest quantity of brain will be found above this line toward the top of the head, and which may be called the syncipital

region. Here are specimens, in some of which you see that the greatest portion of brain is situated above this line, and in others below it. In looking at heads generally you will find that in the greatest number the occipital and basilar regions are very large—much larger than the syncipital and frontal regions.

I wish to make one general observation on this point ; look to the elevation in proportion to the breadth : see these heads (showing two casts) ; this is certainly narrower on the sides than the other, but it is higher, so that this may be said to be less broad than high ; the other, on the contrary, is much broader than it is high. You must be convinced that in every individual some such differences exist, and therefore that there are modifications of the mental powers.

You may ask me what is the reason for such difference—what is the cause rather ? This question is physiological and



The Skull. Showing the proportion of the parts.

philosophical. I might, for example, examine the influence of the brain, in its form and size, during the period of development and its influence on the skull ; and that it does influence the shape of the skull there can be no doubt. We might also mention the effect of artificial pressure, but it would be tedious to go into all the particulars here. With respect to artificial pressure, I have only here three skulls of Caribs, but each of them is flat on the forehead and very much elongated behind. I have been informed that there are some tribes in whom the posterior part of the head is flattened instead of the front part, and that these depressions and flattenings of the head are produced by such artificial pressure. Our information is not so precise on this point as it should be ; I am not satisfied with these few observations ; I wish it may prove possible to prevent the development of certain parts of the brain ; certainly if this could be done it would be

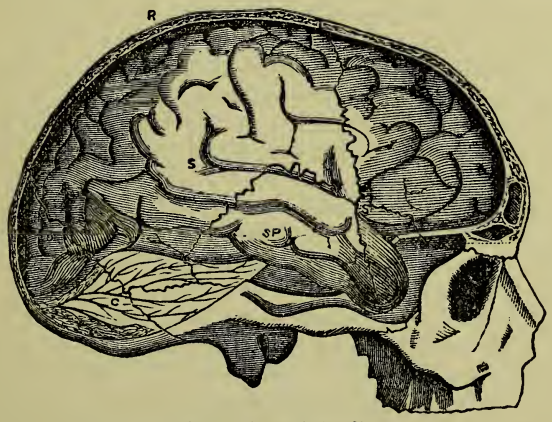
a great benefit to mankind. It is necessary to ascertain whether the children among the Caribs have such depressed foreheads, or whether their foreheads are like those of European children, and are flattened afterwards by artificial pressure ; and it would be satisfactory to know how the machinery is applied and how long it is continued. Some have informed me that the pressure is used from the age of six weeks to two years; but I have observed that persons who have been in that country circulate very vague reports. Besides, it is well known that the heads of children undergo great changes, and that certain changes continue to take place even until a person reaches twenty years of age, and if they continue the pressure only two years, would that be sufficient to prevent any future development? Then, again, if there be pressure applied to the forehead, I should like to know how the apparatus is applied without producing counter pressure. I find the anterior part of the head much depressed, and I find the posterior part very much developed ; now if a string were tied all round the head it must prevent the development all round. I cannot conceive of there being pressure without there being counter pressure.

Those who have the opportunity of examining such brains might render great service to phrenology by attending to these particulars. I suppose that it is possible by determinate pressure to prevent the development of the brain in that direction. Would they find the development of the internal parts prevented, or would they be found only pushed on one side ?

We admit the influence of different causes in producing this effect; and certainly the brain has a great influence on the configuration of the head, but it is not the only cause. Those who wish to enter into this point must study it attentively for themselves ; it would not suit you to proceed further at present with this branch of the subject.

Now we come to another point: is it possible, seeing the different developments in different individuals, that they are greater in certain parts than in others ? Is it possible to discover the cerebral functions attached to the different developments ? It is certain that the size of the brain contained in the skull is not the same as that of the whole head. You must be aware that the hair is greater in quantity in some individuals than in others, that the skin is thicker in some than in others ; and, therefore, when you wish to arrive at the real size of the brain you must make these allowances and observation soon sets us right. How is the size then to be ascertained ? By the sight or by the touch: our object is to

ascertain the size of the cerebral parts, whether by touch or by inspection. I could tell from mere inspection whether the skin was thick or thin, and an anatomist could do the same. Moreover, there are muscles on both sides of the head, and these muscles are very different in size in different persons, and you judge of the size of the muscles there by looking at the size of the muscles of the face. If you see a man with a muscular face and a chubby cheek you may conclude that the temporal muscles, for so they are called, are also large; if the muscles of the cheek be thin, you draw the inference that these muscles are thin also. It is therefore of importance in the study of phrenology to attend to this circumstance. In all sciences certain individuals will experience difficulties, and so they will in acquiring a knowledge of



The Brain and Skull.

phrenology, as well as in mathematics or in chemistry; but by observation and perseverance many difficulties may be removed.

The general form of the brain is always similar to the general form of the skull. Now if you will look at these brains and skulls you will see that it is so. (The Doctor showed many brains and skulls in which the correspondence was perfect.) This is the way in which we ascertain that the development of the brain is in proportion to the configuration of the head. In speaking of these similarities you must not think that we are attentive to minute differences or of mere lines,* they would be useless; no, we look to generalities, and we see that they correspond.

* A line is an expression much used on the Continent; it means in measure about one-twelfth of an inch.

Some persons have said that you cannot discover the size of the brain from the configuration of the skull, because there is no parallelism between the two tables of the cranium. Any anatomist must know that in opening skulls there is no parallelism between any two tables, but does he not find that the brain corresponds to the general size of the skull? Those who have made this objection have never, I am sure, looked to nature. Differences of form always indicate differences in the development of the several parts of the brain. I am certain that it is possible to ascertain the development of the parts of the brain from the external configuration of the skull from the birth of children to the time at which the brain begins to diminish and shrink in age; the brain becomes more perfect in its organisation, as other parts of the body; it is still in the middle period of life, and in old age the brain diminishes in size as the muscles and other soft parts of the body decrease. From the period of birth, then, to the period when the brain begins to diminish, when the individual begins to complain of a defect in his intellectual powers, when the memory goes away, and the other powers go away, it is certain that, till then, the brain does bear a correct proportion to the configuration of the head; but after this period the brain shrinks, while the external circumference remains the same. In children the skull is very thin, and does not become considerably thicker until after about fifteen years of age; at thirty it is of the common size, and remains so until the decline of life, but in old persons it becomes frequently thicker, although the natural form is retained. The bones of the head are often also very much thickened in chronic insanity. The thickest I ever saw is this, the skull is one inch and a half thick; the person died at the age of sixty-five, and was idiotic for ten years previously to her death. Is it necessary to ascertain the function of the brain to make our observations in old age and in the diseased state? The important thing is to make our observations on persons who are in healthy activity, and in whom the functions are all healthy; and in such persons, up to the middle age, and even beyond it, we can with certainty tell the shape of the brain by the configuration of the head. We are often asked by persons who have not studied the subject about the import of trifling sprouts of bone on the skull and little projections and depressions of bone. They mean nothing, they are irregularities of the bone only, we pay no attention to them, but to the greater development of different parts in various directions.

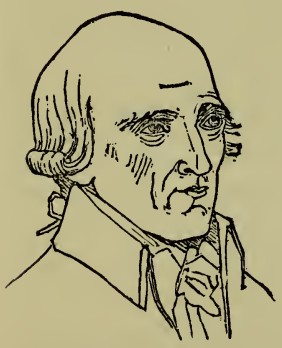
Lecture III.

(The Doctor repeated briefly what he had said in his preceding lecture on the antiquity of the doctrine which assigned to the mind a plurality of forms, and on the influence of the constitution, or temperament, in determining the degrees of activity of these powers; he also remarked, that exercise, and the mutual employment of the mental faculties, had the greatest influence in increasing their activity.)

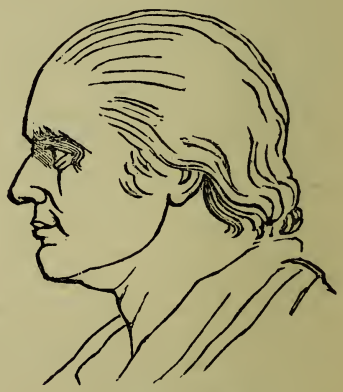
I shall now mention how we may distinguish the nature of the different functions by the external signs. When speaking of size, Ladies and Gentlemen, you will recollect what I said of the different dimensions; you must not attend merely to an elongation of the cerebral part, but regard also the breadths: the cerebral parts may be long and narrow, or short and broad; or they may be short and narrow, or long and broad. Experience shows that these differences of size exercise an influence on the manifestations of the mind; and I certainly prefer cerebral parts which are thick, to those which are merely narrow and elongated. Moreover, in considering the size, you must not confound protuberances with development; you must form a clear idea of what is called a protuberance in phrenology. Protuberances do exist, and we must see how they exist: if a given cerebral part be more developed than the neighbouring parts, then there is a corresponding protuberance of bone over that part. Yet recollect, that the development may remain equally full in that part, and the neighbouring parts being as well developed, the whole surface will be smooth, and you will not have a protuberance. (The distinctions between protruberances and development were then illustrated by referring to two casts.) The development of these parts is the same in both skulls, but the other surrounding cerebral parts are larger in the one than in the other; therefore, in judging of the influence of size on the manifestations of the mind, you must take this into account. The protuberance is more conspicuous in the first, because the neighbouring parts are all small. Look at these skulls, the one has a more marked protuberance than the other posteriorly; yet if you were to draw a line over the middle of the head, you would find more brain in the occipital region of that head on which the protuberance is least apparent, because there is a greater development of the surrounding parts. The finest

heads may have no protuberances whatever, and the smaller heads have certain parts larger, apparently, than the same part in the finest heads.*

These distinctions being admitted, we come now to the question—which are the fundamental powers? Can we ascertain these fundamental powers of the mind by the degree of the cerebral development? We admit that it is difficult, but, like other difficulties in phrenology, it must be overcome by an observation of nature. Can we discover them by reasoning? No, it is impossible. We must also admit, that the reasonings of the schools have, so far from accelerating, prevented the discovery of the functions of the brain. Men shut themselves up in their closets; they take partial views of a science, and they try to make nature bend to their opinions, but nature goes on unaltered. In all systems of philosophy, if you trace them from the most ancient times to the present, you will find that there is a peculiar tendency to generalize ideas, and the explanation given of the mental operations is also general; and here I must say that all general notions are vague. Go to the animal kingdom, and ask philosophers, why animals do various actions? their



WARREN HASTINGS.



HORNE TOOKE.

* The Doctor's meaning is not very clear. What he means is that it is necessary to judge of the actual as well as the relative size of an organ. Thus, if Philoprogenitiveness be large, and the surrounding organs small or moderate in development, the former will appear to be relatively larger than it would if the adjoining organs were of equal size. The same may be the case as regards the organs of the intellect. If a person has large perceptive organs and small reflective, the former will appear to be relatively larger than in the case of one who has perceptive equally large, but has also large reflective faculties. The annexed cuts will illustrate the point. In both Firmness is about equally large, but in Warren Hastings it seems to be much larger than in Horne Tooke, because of the smallness of the surrounding organs in the former and their largeness in the other.

answer is, by instinct. Ask, why some animals confine themselves to certain situations? and they will say, they do so by instinct. Other animals migrate; it is by instinct. Some make provision for the winter—by instinct; others sing and make no provision for winter—by instinct. Instinct, according to them, is the cause of all the various actions of animals; instinct explains everything. Will you be satisfied with such information, or with being told that one condition of the brain produces all these actions? If we see that a young duck, when hatched by a hen runs into the water, and that the birds which sing make no provision for the winter, and that other animals place sentinels to give the alarm on the approach of an enemy—do not these things show, at least, different instincts? If we cannot grant positive knowledge to the animal kingdom, we must grant that they have determinate instincts. Again, if I were to say to you I have an animal in my pocket, would you not ask, what animal? If I were to tell you it was a bird, would you not ask, what bird? and then you would go on to ask the genus, the species, and the variety. If I were to say I have a sensation, might you not ask, what sensation? If a person in writing natural history were to say, "the river runs down the mountain," or "the circulation of the blood exercises motion," would that explain to you the causes of the different motions? In natural history we all allow that it is necessary to specify our knowledge, and then we soon become able to understand each other; but if we were to speak in a general way, we should learn nothing. No one denies that intellect is necessary to enable a person to excel in the fine arts; but how does it happen that one man excels in painting, another as an artificer, another as a poet; and that the man who can make good poetry may be a bad mathematician, whilst the man who is a good mathematician cannot construct a musical instrument. I know that this is all explained by the use of the terms understanding and intellect; and what do you learn by that? I shall speak more of particulars, and as I proceed shall show why philosophers are more fond of general statements than particulars. I do not mean to say that the things mentioned by philosophers do not exist; there is understanding and there is intellect; but I do insist that we must specify the particular sorts of understanding, and then we shall find that particular understandings are attached to particular instruments, and that is the whole.

If you trace the senses of hearing and seeing, you will find a peculiar apparatus fitted for them; and physiologists have adopted this mode of investigation, and have found peculiar

organs destined to peculiar secretions. Dr. Gall and his predecessors have for a long time looked for the organs of certain powers of the mind, as memory, attention, &c. There is attention, but you will see that the attention of individuals is not equal: some capable of attention to some objects but not others; these views were too general. Gall looked for organs of attention, of judgment, and memory, but he never could succeed; and here we come to the great step at which errors have crept in, of which I shall hereafter give you my explanation. Not being able to compare the individual parts with the individual mental powers mentioned in philosophy, he compares the actions of men; and do we not observe that from childhood some persons show particular dispositions to certain pursuits, whether to mathematics, to poetry, to painting, to music, and so on? Do we not observe that persons are born mathematicians, as it were, and that they are born poets and musicians? It is universally admitted that all genius is born, and that those persons who excel in any departments of the sciences show talents for them before they receive education. This has been a very ancient doctrine; but then the ancients went too far, they said that all ideas are innate: we do not say this, we only maintain that individuals show particular dispositions—not that every idea is innate. Do we not find that children show the different feelings in different degrees? and what parent is there who has not observed differences in the dispositions of his offspring? or who that has taken an interest in the education of children, has not seen propensities to certain actions in them, some good and some bad? If they do not do bad things, it is because they are told not to do so. It must have been seen that individuals are more or less inclined to different actions. Then Dr. Gall observing certain persons having certain dispositions extremely active, he examined their heads, and if he distinguished in their heads individual cerebral parts larger than others, he concluded that such parts were destined to such actions, and this was the first idea—the very rudiments of phrenology, which was soon made public. The objections which have been made to this first part of the study of phrenology are still adhered to by our opponents. Dr. Gall's nomenclature is imperfect in some respects, but not in all; and it should be remembered, that experience has established many points which were at first conjectural, and refuted others. Dr. Gall spoke of an organ of Cunning, as he observed persons more cunning than others; and the same of Benevolence and Religion, and he still speaks of the organ of Religion. Other persons have dispositions to actions which are criminal. Dr.

Gall observed that some persons liked to steal, and he therefore spoke of an organ of Theft. He remarked that those individuals who exist by one sort of actions have particular parts developed. However, on reflection on the subject we must admit that there is no one power whatever which decides or constitutes the whole character; that there is no single power which produces the actions; but we shall find certain modifying powers, although in certain determinate characters there are some individual powers much stronger than others.

Now it is really the case, that certain lower feelings are very active in certain individuals, which feelings, if not combined with others, will produce the strongest proofs of their existence; and in animals, where the individual powers are not much combined, certain peculiarities of organization have been observed, and certain organs, as they are called, have been pointed out; names have been given to them according to the names given to the actions towards which they furnish the propensity. But I repeat, that the powers of individual parts never constitute the character in man, and that in speaking of character, we must compare the whole of the powers, for some exercise a great controlling influence over others, but we shall find in different persons certain powers much stronger than others; and it is the object of phrenology to point out such powers. It is the most difficult point in phrenology to point out these fundamental powers.

The Fundamental Powers.

The object of phrenology is to point out the fundamental powers, and to point out the formation of the brain necessary for the development of the mental powers. (After a repetition of the argument advanced at the close of the preceding paragraph, the Doctor proceeded.) I shall now examine the number and the nature of the fundamental powers. I shall speak of some powers which have never been considered as fundamental, and I shall attempt to show that some others are not fundamental which have been so considered. If I speak of an individual organ, how can I know that such a part is destined to a peculiar function—to a particular mental power? Merely from experience. We know that the eyes see, that the ears hear, and so on, from experience, and so of other parts of the body. Now I say, if we find in nature, that certain manifestations of feeling take place in certain species of animals and not in others, and if we find that certain powers are peculiar to mankind, not being found in other animals, and if we find that the same sort of manifestations go on differently in different individuals, do you not think that we shall find

some diversity in their heads? All mankind have the same powers, hence we can only speak of their modifications as far as they differ in degrees of activity. You well know, I dare say, that the English nation has the same powers as the French, or other nations, but these powers may be stronger in some nations than others, and hence these constitute what is called the National Character. Persons come to me who have not studied the subject much, and say, have I such an organ? have I such a power? I always say yes. That is true; that organ does exist; but the question should be put in a phrenological way—have I this or that organ small or large in proportion to the other organs? Females have the same organs as men, but we shall find several feelings stronger in them than in men. We must compare and see that the activity of one organ is proportionate to the degree of activity in different organs.

If we examine comparative anatomy and comparative physiology—if we compare man with animals, we shall observe the same things. There are some persons who do not like the comparing of man with animals, but we must admit man to be an animal to a certain extent. I say to those persons who do not like the comparison, give up eating and drinking, because animals do the same. Many feelings are common to man and to animals; in philosophy it is difficult to separate man from animals, but distinctions can be made in phrenology. Animals have sensations in common with man, and so far may be said to partake of mind, but there was a time when this was not at all allowed; it was said that instinct did every thing, and that they had no intellect. Animals have instincts and men have inclinations, if you will change the term. Instinct has been admitted to be an internal impulse to do something, giving a tendency to certain actions, and we shall find certain powers in man which impel him to act, and you may, if you please, call them inclinations, Do not animals distinguish things around them? Do they not distinguish their enemies from their friends—their masters from others who do not treat them kindly? So do men. We should compare man to a certain extent with animals, for the functions of the greater part of the brain are destined to animal feelings.

We may look also to what is called physiognomy, by which is meant the study of the mind by the countenance: it is a doctrine which is very ancient, but which has not yet been reduced to principles. If you ask persons, whether there is anything to be gained by physiognomy, some will say yes, and others no; but every one is in some measure a physiognomist, for every one forms an opinion of another from his first

appearance. If you turn to animals, you will see that they are also physiognomists, but in a less degree. If you say to a dog that you will punish him, and look at him in good humour, he will not think you are angry; but look at him as you would when angry, if you wish him to be silent, and without speaking at all, he is silent. A child knows, by the expression of the countenance of his parent, whether he is angry with him or pleased. We often say, when we mingle with society, that we like this man, or dislike the other; but if asked why? we say we do not know; there is something in his countenance. This sort of knowledge is only to be gained by the observation of nature, and I should be inclined to call it the natural language.

We never neglect pathological facts; if we find that individual functions become deranged, we often find uneasy sensations complained of in certain parts of the head: we have many facts showing this. I would not depend on these only, but taken in connection with all the other proofs, this ought not to be neglected. I give you these considerations now, in order that it may not be necessary for me to repeat them hereafter; these are given in a general way. It may be asked, on what authority do we entertain these opinions? Not on our own;—we disclaim that; we have no other authority than nature. If any person wishes to have self-conviction, he must observe nature for himself; there can be no self-conviction without self-consideration. Whatever differences of opinion may exist among phrenologists, they must be decided by an appeal to nature. If Dr. Gall chooses to say one thing, and I choose to say another, a third might say, I will see for myself. If the brain be necessary for the manifestations of the mind here, it is necessary in every other place. Nature makes no exceptions to satisfy our caprices. This is sufficient to show the great advantage of making collections. In going through nature, any one may see the great diversity of form, and he should, when noticing the individual forms, notice also the individual development of particular powers; and if he wish to have these proofs by him, he has only to take the casts from nature. Now, in this respect you have a great facility for studying phrenology here; you have a finer collection of casts belonging to Mr. Deville than I have ever seen in any other place.* A person may, with a small number of casts, learn

* Mr. Deville was a business man who had a place in the Strand, and devoted much time to the study and promulgation of phrenology when first introduced into England. He did much towards establishing the science by taking casts of heads in all classes of society, and of the same person at different times, to show the growth of faculties. His collection of casts thus became very great, as did also his collection of skulls, which he obtained from many sources. They are now scattered. Mr. Deville did much to popularise phrenology, both by his examinations and his writings.

to distinguish the different prominences, and most striking peculiarities; but if he wishes to become a sound phrenologist, he must multiply his opportunities, and if he find his observations confirmed, he may be satisfied that they are correct. There is no other way of arriving at a correct knowledge of any thing. Look into natural history, look at chemistry; the same experiments being repeated and attended with the same results, are set down at last as positive truths. So in phrenology; if we find the same manifestations connected with certain parts in different persons, sexes, and nations, then we set them down as truths.

With respect to many individual parts, I have been certain of their functions for a long time, and I could challenge any one to bring me an exception; but of some others I will not speak so decidedly. In speaking of the powers of the mind, I wish to arrive at the fundamental actions; this is difficult, as I have before mentioned; but when I speak of the fundamental powers, do not conceive that I mean to speak of their application; that is a point commonly misunderstood. I wish merely to speak of the powers themselves, without any application of their actions, whether good or bad? People often say to me, have I such organs? are they good or bad? I cannot say that the powers and organs are bad or good. Good and bad cannot be applied to the powers themselves, but only to their actions; we cannot say that the appetite for food, or the senses of seeing and hearing, are bad, but if we eat too much, that is bad; if we see things we ought not to see, and listen to things we ought not to hear, they are bad. My opinion is, that every thing, as it is arranged in nature, is good, and that the abuse of it is bad, and that there is no power of the mind that may not, by its improper application, produce abuses and disorders.

We must distinguish the powers themselves: and another great difficulty which I find here, is in the nomenclature, to give exact names to these powers. Philosophers have merely spoken of the general manifestations of the mind, and have given names to them; but we must be more particular, we must specify the powers, and hence we are obliged either to speak in circumlocution, or to give new names. Some people say that they do not like new names, but if I have an idea, must I not give it a sign? If the first man gives names to all things known to him, and if in future ages things are discovered not known before, must we not name them? I will not, however, dispute about names, only let us have the powers kept distinct; I am ready to change the names at any time, if any person will suggest better. I consider it very important

to have a good nomenclature; but let us have first clear ideas, and then let us try to find names to express our ideas.

In speaking of the individual parts, it is necessary to follow a certain order, but that is not of much importance, although some persons are attached more to the order in which things are arranged than to the things themselves. Beginning at the base and going upwards, we shall enumerate the individual organs. Dr. Gall has already spoken of the individual organs according to their local situations. Those who have got casts have remarked externally the different divisions of the superfices of the head. Many people think, that because the organs are marked on the surface of the skull, that they are really situated on the surface of the brain, immediately below the place marked; but the organ itself occupies the whole of that part of the brain situated below the marked place. These (pointing to a cast on which the organs were marked) are merely the indications where the individual organs lie. In the middle line of the head you see that the organs are all marked single, but they are double *; the hemispheres being separated by the falx, the portions of brain, the seat of the powers, being on each side, therefore they are double.

In the next lecture, I shall begin with the individual organs, and shall endeavour to make you understand my arrangement of them. I think the plan of speaking of the organs in numbers is objectionable on this account: two phrenologists might enumerate the organs in different ways, and would number them accordingly, as they began from the base of the brain or forehead; consequently, although they both acknowledge the existence of the different organs, they would number them differently, which would induce some persons to think they were talking of different organs, and that they have not agreed in the fundamental powers, merely because they have not numbered them alike. Phrenologists should never speak in numbers on this account, although it may be a little more convenient. Let them speak of the powers themselves, and then they will all agree.

I shall follow an arrangement founded upon a philosophic consideration of the fundamental powers. I do not believe that all the powers of the mind have judgment. The ancient philosophers have made a division of the mental operations; they have spoken of the heart and of the head, of understanding or intellect, and will; I speak of two sorts of powers of the mind, and I think they are essentially different from each other in their nature. I speak of certain powers, called, in English,

* The brain is really made up of two halves, each half being an exact counterpart of the other.

feelings, and of others called intellect, and we shall see that the feelings depend upon the brain as well as the intellectual powers. Modern philosophers admit no difference; they confound the feelings with the understanding, and, by so doing, commit a very great error. They exist perfectly distinct and separate, but they depend upon the brain. Every body will allow that the understanding depends upon the brain; but if you say that the feelings depend upon the brain, they object to it. Yet phrenologists may maintain, that it is infinitely more easy to prove that the brain is necessary to the feelings than that it is necessary to the intellect; and I am sure, that if any man will pay attention to the subject, before six months are at an end, he will be convinced that the feelings do depend upon the brain. Indeed we shall find, that the organs of the feelings are even larger than those of the intellect in the majority of persons, and hence we see the great care of the Creator in providing men with such feelings as induce them to take care of and protect themselves. What is the most frequent cause of our actions? Is it understanding? is it reason? No; the feelings are the motives of our actions with respect to ourselves and the beings around us; hence I shall speak of the organs of the feelings in a certain order; and then of the organs of the intellectual powers.

An essential thing to bear in mind respecting the feelings, is, that they are blind. No feeling judges; I dare say every one knows what I mean by saying that the feelings are blind. There is a difference between the feelings. Some powers of the mind give impulses merely, there are others which modify them. Such as give impulses are what are called in phrenology propensities, whilst other feelings are styled sentiments, by which the propensities are modified. More, there is an essential idea relative to the feelings. We cannot subject them to the senses. Try to explain what hunger is, what fear is, or what anger is, or what benevolence, or what veneration is; it is impossible to bring them before the mind; the feelings must be felt. We must observe and see the manifestations, and if we find that certain manifestations are permanent throughout mankind, we must admit such to be primary or fundamental, whether we feel them or not. I shall begin in my next lecture, with the first genus of powers, the propensities, the organs of which are situated at the back part of the head.

Lecture IV.

We come now to the consideration of the particular functions, and for this purpose we divide the brain into several parts. One part of the cerebral mass has received the name of Cerebellum, or little brain. Every anatomist knows that there is a part of the brain separated in a great measure from the rest; in some men it is much smaller than in others, and it is called Cerebellum, and the other part of the brain is called Cerebrum, or large brain. In comparative anatomy, whenever we speak of the brain in the lower animals, we speak also of the little brain. It exists in the four classes of the vertebrated animals.

The Organ of Amativeness.

If we examine the cerebellum of man at different periods of his life, we shall find that it does not bear the same proportions to the other parts of the brain. Children have the little brain exceedingly small in proportion to the other part of the brain. If you wish to ascertain this, examine the neck of the child between the two ears, and you will be sure that it is so, without being anatomists. If you examine that part of the head behind the ear, you will find a bony projection (the mastoid process of the temporal bone), and if you examine a little further up towards the middle of the back part of the head, you will discover other projections, the cervical spine and tuberosity of the occipital bone, well known to anatomists. We are often asked, what organs are these? They have nothing at all to do with the figure of the brain; they are merely bony prominences for the attachment of muscles. There is a space, however, between the ears occupied by the little brain, hence the larger the development of the skull in this region, leaving the parts I have just mentioned entirely out of the question, the greater will be the mass of cerebellum internally. Examine the heads of children, and you will find this part of the head very flat, very little developed, and that indicates that the cerebellum is very small; indeed the cerebellum is much smaller in children than in adults, in proportion to the other parts of the brain. If you examine adults, you will find a very great difference in the projection hereabouts; you will see very few people with such a neck as this man (showing a specimen in which the occiput was little developed). When

I show you this (showing a cast in which the occiput was largely developed), will you not admit that the cerebellum is

Showing Amativeness large.

Showing Amativeness small.

infinitely larger than in the other person ? You see that in the one the cerebellum is very little developed, consequently the space between the ears posteriorly is narrow, whilst in the other the cerebellum is very large and the ears are widely separated. Hence it is a fact, and we must always begin with facts, that the cerebellum is not proportionate to the rest of the brain in different periods of life and in different individuals, adults of the same age. You will find, in infancy, this part of the brain small ; it increases in size as the age increases ; and even in adults, when it is supposed to have reached its full development, you will find it in some very prominent, and in others very defective. Carry your examinations further into nature, and you will find that the heads of males are generally larger than the heads of females. It is said, the cerebrum of males is also larger, hence it must be the case with their cerebellum, but it is no such thing. The size of the cerebellum bears no determined proportion to the size of the head ; you may see a man with a very large head and but a small cerebellum ; whilst a woman, with a small brain, will have a larger cerebellum in proportion than the former. If you have opportunities of seeing different nations, you will find great varieties in the shape of the head, as regards this particular part ; and I hope that travellers who go into remote nations will not be content only to collect pebbles, and shells, and animals, but that they will attend to the mental development of the inhabitants, and observe the configurations of their heads, by which

they would do a great benefit to phrenology. Many pathological facts have been noticed which concur to point out the function of this part, and if any one will take the trouble to observe and reflect on it for himself, he will soon be convinced that the feelings to which this cerebral part gives rise, are such as are usually ascribed to the influence of cupid.*

I shall now speak of the function of the posterior part of the brain, of the posterior lobe, as it is termed by anatomists.

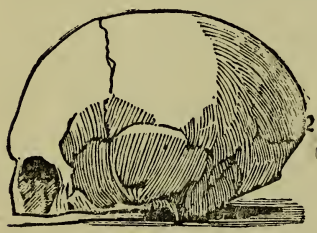
Philoprogenitiveness.

We shall find that nature has given a peculiar feeling to take care of offspring. Such a power has never hitherto, in philosophy, been considered as a primitive or fundamental power, but it is acknowledged to be so by phrenologists, although by other persons it has been ascribed to various causes. Some say that parents take care of their offspring from a sense of duty; but can you admit that cause to exist in animals? The degree of feeling shown by the mammiferous animals in taking care of their young ones is very great. Will you admit the operation of a moral cause in them? Certainly not. I would ask any mother, who is extremely attached to her children, whether she is so from reasoning or reflection, or whether she feels this by a strong impulse? whether she does so naturally? This degree of feeling I know is not always alike, it varies in individuals: some spoil their children by excessive fondness, whilst others just take so much care of them as is necessary, and no more. Some animals take little care of their young, others a great deal of care; with some animals the female takes the greatest care and the male does not take any; whilst among others the attention paid to the offspring is alike by the male and female. Do such differences occur without a cause?—can phrenology explain these causes? In the last lecture I called your attention to various reasons which must lead us to consider some of the manifestations as primitive or fundamental. Now if you find a particular manifestation in one species and not in another—if, for example, you see some animals who take little or no care of their offspring, whilst others will die to protect them—will you not admit that great differences exist? Look at the domestic female birds; try to take away any of their young ones, and see what they will do, whilst the male birds care nothing about them. Foxes of both sexes take care of their young, and will carry them in their mouths to a place of safety, whilst

* It will be observed that the very modest manner in which this organ was spoken of. was occasioned by the presence of ladies.

in dogs the male pays no attention whatever to them. However, it may be laid down as a rule, that the females are much more attached to the offspring than males; in circumstances of danger, the male will run away much sooner than the female. If we consider our own species, which parent takes most care of the offspring, the father or the mother? I believe that if mothers did not pay more attention than fathers, many children would die. Some women find the greatest delight in nursing their offspring. I asked a poor woman once, whether she took any pleasure in her children, and she said, "Sir, it is my only pleasure." We may observe how careful nature is in thus giving such feelings, and connecting pleasure with the execution of labour.

Now if you will examine the organization in animals, in women and in men, you will find a positive proportion between the cerebral part I speak of and these peculiar feelings. This is certain, and I can say with confidence, that if you see an individual who has the cerebral part here extremely large, you may depend upon it that such a person is fond of his offspring. (Casts were shown in which this organ was very large, and contrasted with others in which it was very small.) Now if you see an individual with the part contracted and flat, as it is here (showing a cast), such a person may take care of



Skull, showing Philoprogenitiveness large.

Skull, showing Philoprogenitiveness small.

children from duty, from the operation of a moral cause, I grant that, but it will be troublesome to him. There is a great difference between doing any thing from a mere sense of duty, and doing it from a natural inclination; the one is not so agreeable to the individual as the other. If you examine comparatively both sexes of our species, you may depend upon it then, this cerebral part is much more developed in women than in men. I stated from the beginning, that the heads of females are more elongated than those of men; if we come to particulars, we shall find that the anterior and middle lobes are more contracted, whilst the posterior are elongated. If you observe an individual who is fond of being with children, and that children like to come around him,—for they soon

learn to distinguish those who love them, or who take a pleasure in raising young animals,—you will be sure to find this part well developed, viz. the posterior lobe of the brain. If you know any person who has felt great grief at the loss of children, you may be sure that in such this part is large. I have never met with an exception. Multiply your observations, and you will find in different nations, that some nations are, in a general way, fonder of their offspring than others; the males of some nations are more fond of offspring than the males of other nations, and if you look to the heads of both sexes in such nations, you will find little difference between the development of this part in the female and male.

It is certain that some angry and cruel tribes are very fond of their children, and even among savage and fierce people, as the Caribs, who even devour their prisoners, yet the love of offspring is strong in them, and you will find this part of the head, the organ of this feeling, largely developed. (Some Carib skulls were then shown). We have also pathological facts in confirmation of our assertions. It has been observed, that persons who have had great development of this part have become deranged, and during their insanity the feeling of attachment to children has been remarkably prominent. Here is a cast of a poor woman who was separated from her children; she was insane, and was lodged in a poor-house; Mr. Deville saw her, and observed that this part of the head was very large, and also that the external surface of the head over this part felt very warm; and that is a thing which may frequently be observed, and this poor woman was continually talking of her children. I have said before that we prefer breadth to mere elongation, for when there is surrounding development, you find more activity, more intensity of any power, than when an organ is merely elongated.

We know there is great difference between activity and intensity of any power. You may observe persons very fond of music; they like continually to hear music, but they have not sufficient intensity of any power to become deep musicians; they remain shallow in their knowledge of music. Children have great activity of the muscles, but have they the power to lift great weights? Other persons are fond of reasoning on a subject; they reason and reason, and never arrive at a conclusion; they have not activity of mind enough to follow up the reasoning, and the larger in general you find this organ the better qualified is the person to concentrate the other powers on a given subject; when such people work, they work with great intensity, and with a comprehensive view of the subject.

Inhabitiveness.

We come now to another power, and there have been many discussions about this favourite power. There are some young animals who look as soon as born for certain habitations; a young duck, hatched under a hen, that has never seen the water, runs to the water. People say that animals go to certain places to feed by instinct, and that a young duck runs into the water by instinct, which acts as a propelling influence; but must they not have a peculiar instinct to run into water? The hen which has hatched the young ducks, calls to them by peculiar expressions, and runs after them to keep them from the water, yet the young ducks go on. If you go further into nature, you find that animals have a constant tendency to go into certain places, whatever you may do to prevent them; they like to feed and to remain in certain regions. Some persons say, how is it possible to form this feeling into a fundamental or primitive feeling? Let us make a few general observations on this subject. Circumstances are, in some systems of philosophy, considered the basis of a power; it is said, look at a man of talent who is lazy, he finds himself in misery, and then he begins to work. In short, it has been said, that external circumstances are the causes of the individual powers, but in phrenology, we contend that circumstances never produce the powers; they may excite, but they can never produce them. In nature, circumstances may favour the action of a power, but the power itself exists independently of the circumstances. I should like to know whether I am hungry because food is put on the table before me, or whether I am hungry from an internal cause. I am sure that if misery would produce talents, they would not be so scarce. If one man has a talent for music, and another for mathematics, and a third for mechanical arts, give them equal opportunities, and you will find that each will excel according to the talent which he possesses; now, how can you explain this by a reference to circumstances? In phrenology, we admit the influence of circumstances; it is a fundamental consideration in education, that they very much improve the powers, and excite the powers, and therefore education is most useful; we know that opposition does a great deal of good, but the power must be there to improve by it.

With regard to the choice of situations, we see that some animals choose very high mountains, others choose the plains; some birds choose the trees, some the rocks or the ground. The chamois and the wild goat love the mountains, and it is

said they do so because they find their food there, but they come lower down to feed. The ptarmigan, a bird found on the hills of Scotland, inhabits the highest and most barren parts of the mountain, but comes lower down to feed. There are other animals which live on the land, yet like to take their food in the water to eat it, and then come to the land again. The young of those birds which build their nests in the upper parts of trees, will, when let loose from a cage in which they may have been hatched, fly to the tops of the trees. We see the most determinate action here; it is the feeling which dictates the choice of habitation, and therefore I have spoken of the internal power or propensity of inhabitiveness, or the disposition which induces individuals to live in certain situations. Some birds prefer always the lower part, or trunks of trees, as the nightingale, and the blackbird; others prefer living in the tops of trees. The hen likes to live on dry land, and the duck on the water, and we find a great difference in the organisation of ducks and hens. In the chamois, which lives always on the most elevated ground he can reach, except when feeding, we find the upper part of the brain higher and much more developed than in the roe which lives in the valleys, and in all animals fond of physical elevations, we find this development. Even among rats, some are better pleased with the higher parts of the house; this is the case with the old English or blue rat, whilst the Norwegian rat, or brown rat, is most fond of the lower part of the house; however, since the Norwegian rats have been imported, they have nearly destroyed the ancient inhabitants; and we find a considerable difference in the organisation of their heads. In man, the question is whether there is any such feeling which influences him as can be regarded as fundamental. Phrenologists do not quite agree on this point, and I shall take the opportunity of mentioning such differences as occur among phrenologists; because, although they may differ in opinion, they can never differ long on the essential points; they have only to refer to nature, we must hear what she says: Suppose now that some phrenologists should ascribe the love of offspring to the tender feelings in general, or say that persons who are fond of their children are kind to others, and feel a general sympathy for others; and that other phrenologists should ascribe the feeling to a particular organ, how are we to decide? You must go to nature. I would say, how comes it, if the love of offspring produces a general sympathy, that the Caribs, a very fine nation, who kill and eat each other, have not the finer feelings, because such people are passionately fond of their offspring? How is it that people of very rough manners to others yet love

their offspring? We must go to nature, I repeat, and we shall have our differences removed, and the same with respect to this, No. 3 (No. 4 according to the modern numbering), the part placed above the love of offspring.

Some phrenologists have ascribed to this part concentration of the mind, and they wished to call it Concentrativeness, or the power which maintains two or more powers in activity, when directed to a certain object.* This is the proposition, can it be supported? This is the question, is it true? We must go to nature. I would first ask any one who would be inclined to speak of concentrativeness as a power, is it a fundamental power? I am of opinion, that in order to be able to consider any power as fundamental, that it be such as can act of itself; but concentrativeness cannot act of itself. All the powers which I shall mention as fundamental powers, are such as can act singly. As regards concentration, you cannot conceive that a power can be operative without being able to act except in combination with other powers, such is the case with concentration. Besides, if you examine the heads of men who are capable of great concentration of mind, you will find this part large in some and small in others. Concentration of the mind, then, may take place without this development.

To return to the power I was speaking of: we find that some

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* Since Spurzheim's time, it has been fully established that the upper part of the space formerly allotted to Inhabitiveness or Love of Home, is occupied by the organ of Continuity or Concentrativeness. Its function is to give continuousness and protractedness to mental action. "Some persons," says Combe, "can detain their feelings and ideas in their minds, giving them the quality of continuity, while others cannot do this. The mind of the latter may be compared to the surface of a mirror, on which each feeling and thought appears like the shadow of a moving object, making a momentary impression, and passing away. They experience great difficulty in detaining their emotions and ideas, so as to examine and compare them, and, in consequence, are little capable of taking systematic views of any subject, and of concentrating their powers to bear on one point. I have observed this organ to be large in the former, and small in the latter." "It is difficult to get the real essence of this power of mind, (*Manual of Phrenology*) partly because we have not yet observed it sufficiently to thoroughly analyze it, and partly, for the same reason, because thought has not dwelt upon t with sufficient definiteness to give it a name. But so far as we at present know, the function of the organ in question is to give sufficient protractedness to mental action to make it effective. We know that persons with this faculty small are liable to be flighty and superficial, to lack connectedness of thought and permanency of feeling, and to pass lightly from one idea or emotion to another, while those with it large exhibit great application and consecutiveness of mind. They dwell on a thing for a long time, complete one mental process before they begin another, and show patience in carrying out a chain of thought or reasoning. When very large it gives prolixity and tediousness, a disposition to pore too long over losses or bereavements, and an inability to change from one thing to another with sufficient rapidity. Its deficiency causes a person to begin many tasks and finish few, to pass from one thing to another too quickly, to know a little about many things, but few well. The mind is restless, for ever desirous of change, either in regard to occupation, study, or amusement."

individuals are much attached to their home, their native place, and such people have this portion of the brain more developed than others. Some are miserable if they cannot return home; they may like to go abroad to see things, but they are sure to return again; and others cannot conceive how any person can like to go from home; such are sure to have the development here. There are some wandering tribes of mankind who are never still, continually shifting from one place to another, attached to none; travellers are invited to observe whether in these there is a manifest defect in the development of this part. Some animals migrate, others never leave the neighbourhood in which they are brought up, and it is important to see whether such beings have this particular part much developed.

I will give you an idea to reflect on respecting this power, which is, whether it is a modified action of this power which leads some men to pursue agriculture? I put it rather as a question than an opinion; seeing that in nature certain beings are disposed to certain actions, whether, as she has given a disposition to hunt, as among savages, and among others to lay up provisions for the winter, to others a disposition to the arts and sciences, and others an attachment to places, perhaps to pursuits connected with these places. Is not agriculture essential to mankind, and is there anything which will point out a power which induces men to cultivate the country? We see that some children have great pleasure in sowing seeds, and they appear to take much pleasure in cultivating them. I hope that those who have studied phrenology will pay some attention to this point, to see whether there is not a disposition to live in certain places, as well as to show a love of offspring. With respect to the feeling of inhabitation being fundamental, I think I am almost sure of it. We may observe among animals peculiar attachment to certain places, and we see it in man. Men who have lived in cities and enjoyed every luxury which opulence could afford, have left them, and gone back to end their days among their native mountains.

Lecture V.

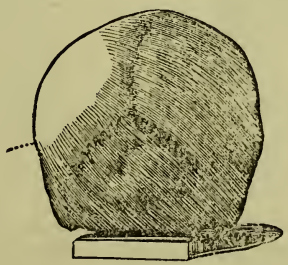
ADHESIVENESS OR FRIENDSHIP.

I come now to a power which has never hitherto been considered as fundamental: it is that manifestation or power which brings together so as to constitute society. Philosophers have assigned many causes for the formation of societies, and we see that society itself is an institution of the Creator. Beings have been disposed to live in society from the beginning, and the reasons assigned for it have hitherto entirely failed. None of the powers commonly ascribed to society can be explained by it. If society was the cause of determinate powers, should not all beings living in society manifest similar powers? But this is not the case; we find very opposite powers manifested by beings living in society. If you examine nature, you will find that some animals like to live alone, others in flocks. What is the cause of their living in flocks? Philosophers, who reason in their closets, say, that animals congregate to defend themselves, and that weakness is the cause of their association, and that among mankind interest brings us together, and that there are no other reasons. But is it true that weak animals live only in society? Look at dogs, hares, and rabbits. Bring hares and rabbits together, the hares will soon make the rabbits run, and the rabbits will live together, whilst the hares will remain alone. Have you ever seen large herds of foxes, or large flocks of magpies? The fox and the magpie live alone, whilst the elephants, which you will not be disposed to call weak animals, like to live in large companies. You will never find that animals, being weak, associate together to defend themselves; there is an organization that gives the power of bringing them together. If you reflect a little more upon society, you will find that beings live together in pairs, male and female. The rooks live together in great numbers; many build their nests on the same tree, but they live together in pairs on the different branches. We find that mankind, although living in large numbers together, live together in pairs throughout their whole life. Thus we see that society is an arrangement of nature. I have already taken the liberty of saying, that man does not like to be compared with animals; he is too proud, and he thinks that everything he does is merely the result of his understanding. Understanding is given to man, but many

feelings are also combined with the understanding, and feelings of which the intellect may approve. There is great regularity in the events of nature, and many things happen in man which the understanding approves.

Let us reflect upon society at large, and on the modifications of the feeling which gives rise to it, and first of that one which is called Friendship.

Among mankind, every one must have observed, that some individuals never show any attachment to others; and again, there are persons who are so attached to each other, that if you separate them they are never happy. In a peculiar modification we observe the influence of this feeling among animals, especially among dogs; not only do they become much attached to each other, but they become also attached to man, and they have given many very striking proofs of this feeling. It is more active in some individuals than in others, and it is more active in females, generally speaking, than in males. I fear I have sometimes offended females by comparing them with animals, but I merely mean to say, that



Friendship large.

as following the manifestations of nature, we must observe that certain feelings, or propensities, are more active in females than in the other sex; and very wisely is it provided that it should be so, as I have before explained.

Is this feeling attached to any organization? We say yes, in the most positive way. Nature has given a part of the brain in order to attach beings to each other, and the situation of it is here, posteriorly, on both sides of Inhabitiveness, just hereabout (placing the hand on that part of the skull). If you find this cerebral part large, you may depend on it that such individuals are very fond of attaching themselves to beings around them. This feeling induces beings to become attached to persons, as the preceding does to places. I say that this feeling is found in animals; will you then call it a moral feeling? We see it in beings not at all famous for their moral actions. There are certain communities very much attached

to each other. We find that criminals form great attachments to each other, and some have killed themselves rather than betray their companions, whilst others do mischief to their friends, and even have killed them. The more you reflect on this feeling, the more you will see that it is of an inferior kind. Let us see examples. I have already said that this feeling is stronger in women than in men, and if we compare this part of the head, which is marked No. 4,* in both sexes, we shall find that it is much more developed in females. (Specimens were then shown; casts taken from the heads of persons known to be very fond of each other.) Dogs form great attachment to their masters. Perhaps they may become the property of others, who may treat them even better than their former masters, yet they will run away from them to their first masters; and in dogs this part of the head is much developed. Here is the cast of an individual who murdered his friend—Patch, of your country; look at his head and see whether this part is not very defective. In proportion to the development of this part, you may be always sure that this feeling will be found more or less active; it never fails to be so, as far as I have observed.†

COMBATIVENESS.

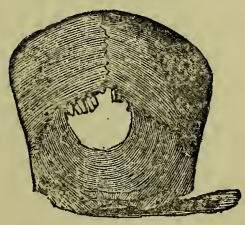
Let us now proceed to the consideration of another question. What is the reason why animals fight? Is there a fundamental power in nature to cause some individuals to be very pugnacious? In different species of animals, we see that some are very timid and fearful, whilst others like to fight—take a pleasure in fighting. Indeed some animals have derived their names from the manifestation of their pugnacity, as the fighting cock, and many others; we see that they are amused by fighting, and if we let them alone, they will attack each other. In mankind we observe many amused by seeing others fight. What is the cause of this? We find that nature has given a peculiar instinct to certain beings, which provokes them to fight. If we look to nature, we find some species of animals more disposed to fight than others, and some individuals of the same species more disposed to fight than others. What is the cause of this? Bodily strength, say some; but do we not see that some animals attack and fight others larger and stronger than themselves; the dunghill cock has stronger muscles than the fighting cock, yet we find that the latter overcomes the former. You may observe among the

* Adhesiveness or Friendship is numbered 3 in the more modern busts.

† When the organ is large it gives great breadth to the head on each side of Philoprogenitiveness.

dogs in the streets, that little dogs will often attack great dogs, and the great dogs will run away. I will not deny the influence of muscles; I consider the muscles to be very important, but they are merely as instruments. There is something else, both in man and in animals, which disposes them to fight. You will see some men who are little qualified for it to all appearance, yet display great courage, and who are every minute ready to fight. You will see little boys attack great ones, and the great ones will run away, or will give up their playthings to them; but let the great boys try to take away any thing from the others, and you will see what they will do. You will always find such boys broad here (immediately behind the top of the ear). Here are the casts of two men of your country, known as men of personal courage—Shenton and Curtis—and you will observe that they are very broad here (pointing to the organ of Combativeness).

Combativeness large.



Combativeness small.

The broader the head is in this part, the more personal courage are they found to possess. I have here two skulls of the Chinese, the one of the Tartar tribe, and the other of the genuine Chinese, and the second is narrower than the first. Whenever a tribe fancies to make an invasion into the territory of another tribe, if they have their heads broad here, although they may be less in point of number, you may be sure that they will become the masters. There are facts of that kind recorded in history, showing that considerable nations have been overcome by others less in number, and of less physical force.

Here is the skull of Robert Bruce, and you may observe that it is very broad hereabout.* This is the cast of the skull of an Hindoo. I have seen fifteen or sixteen skulls of Hindoos, and they have all been narrow here. I do not mean to say that all Hindoos are so, but those who have the opportunity of observing, would render great service to phrenology if they

* A line continued horizontally from the top of the ear backwards about an inch reaches the centre of Combativeness.

were to regard this more particularly. It would be necessary, when persons bring skulls from different nations, to give more details with them, as to the character and the habits of such nations. We know that although the Hindoos are, generally speaking, a very timid race of men, yet there are some tribes among them which possess great personal courage. Hence it would not do to form an estimate of any people by a few skulls, unaccompanied by any description ; or say, this is the skull of an Hindoo, or of a Chinese, speaking of a nation when a tribe ought only to be mentioned. It seems that the ancient artists had some knowledge of the office of this part of the brain, for they have given great development of it to the gladiators, as well as the other lower propensities. It is certainly curious that they should have given to such men more brain posteriorly than anteriorly. You will see that those persons who are distinguished for personal courage, are broad in this part of the head, and this is a part of the brain common to man and animals. You have many more shy horses in this country than there are in France ; on the other hand, you will see a greater number of vicious horses in Paris than in London, *cæteris paribus*. You will distinguish in the horses in France a greater breadth between the ears than you will in the shy horses of London. The broader the horse's head is hereabout, the more personal courage is he found to possess. If you look at the fighting cocks, and compare them with the dunghill cocks, you will see that the former are much broader in this part of the head. (Three specimens of the heads of the fighting and dunghill, or Malay cocks, were then shown.) So then, it is quite certain, that there is a distinct organization for this power. Some animals are not only courageous to defend themselves, but they appear to take a pleasure in their individual combats.

DESTRUCTIVENESS.

I come now to another feeling which has been disputed, and which has done much harm to phrenology, because phrenologists themselves have called it the organ of murder.* But how is murder committed? Let us first ascertain the facts, and then see how we can explain them. In a general way, we must admit that destruction is an impulse founded by nature. Is violent death an institution of the Creator? Is there any such thing as destruction? If we only examine nature in a very slight way, we shall find that there are beings in the air, on the earth, and in the water, that kill each other.

* Dr. Gall originally gave the name of "Murder" to this organ.

There are tigers, and lions, and wolves, and foxes, and all these kill other beings; hence, then, there can be no doubt that in nature violent deaths occur. Some persons have attempted to explain this disposition in certain animals by saying, that tigers are furnished with large claws, lions and wolves with powerful teeth, &c., and that in consequence of their possessing these instruments by nature, they feel inclined to use them. But as to instruments, permit me here to make one general observation: do you think that the employment of instruments can produce a power? No more than circumstances can produce a power. Instruments! the very name points out what they are: they are subservient to other powers. They say man has invented the mechanical arts because he has hands; do you think this can be admitted? Look at an architect who is capable of building even a palace; let his mind be deranged, and see then if he can build a palace, yet his hands remain as before. Without instruments it would be impossible to act, but instruments cannot act of themselves; it would be a contradiction in nature to suppose that the instrument is the power, or that a power is given without an instrument. Give a claw to a sheep, and see if it would kill. Place a monkey in a cold room, by the fire, and let there be a plenty of fuel in the corner of the room; he will sit by the fire until it burns out, and will not put any fuel on it; yet he has the power, he has the instruments for doing so.

We consider the instruments as very important, but the power itself remains entire, and does not depend upon the instruments. We observe among animals, that there are some who kill only to satisfy their hunger, whilst there are others who kill a great deal more than is necessary. The pole-cat, for example, will continue to kill as long as it can reach fowls to kill, while the lion and tiger only kill such as are necessary, and have therefore been called generous animals. We are obliged to confess, then, that some animals kill others in order to live, as the lion, the tiger, the fox. On what does man live? Is there any species, any living being which kills so many others as man does? There are no other beings that destroy so many things as men do, from the oyster to the whale, or elephant. Man is a destructive being in that sense, and even the construction of his body, particularly his teeth and stomach, ranks him more among the omnivorous than the herbivorous animals, and I have stated, therefore, that there is a great propensity in man to kill. But there is a very great diversity in the degree of this feeling. There are some persons who have the greatest aversion to kill; if their existence depended on their destroying animals they

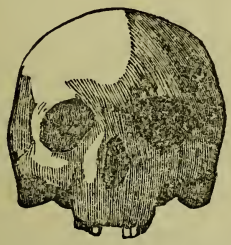
would die. There are some who have been brought up all their lives in the kitchen, who can never kill a fowl. We find also other persons who are quite ready for destruction; they kill anything that is required in a minute, and have not the least aversion to do so. I know many facts of this nature, but I shall only show you a few examples in which this feeling, when strong or weak, is shown by the external shape of the head.

I have no other object but to show you that the external parts correspond with the development of the fundamental powers. I do not wish you to adopt phrenology as truth from what I say; I rather wish to invite you to examination. If I speak of an organ of Destructiveness, I speak merely of a particular power, but not of its application; not that a man shall commit murder because the organ of Destructiveness is full. Some individuals take great pleasure in killing animals, and they have kept animals to have the gratification of killing their young ones. A merchant who lived at the Hague, in Holland, paid the butchers to allow him to kill the oxen. Some persons are very fond of seeing public exhibitions in which different animals are set to worry and destroy each other; and some are fond also of seeing public executions of criminals. Among insane persons, in whom the feelings generally act without the least restraint of the intellect, we find some who evince the greatest inclination to kill others. Some, who have a little consciousness remaining, desire that they may be prevented from destroying others.

You must admit these facts. Are they attributable to internal causes which induce beings to destroy? It is necessary that such an instinct should exist partially for the nourishment of some animals; many beings destroy others on that account. Can we not also observe, that in mankind there are persons who take great delight in frequenting the places where others are killed, and they take great diversion in killing others. We see sometimes this feeling very active even in children. We know that children are very busy; generally they are kept employed; and persons have said that children take pleasure in destroying, merely because they must have something to do. But how does it happen, that although children are so active, they act so differently? Some being well pleased with the destruction of animals and insects, whilst others will avoid doing so. If men be naturally disposed to follow their inclinations, and if education exercises a controlling power over them in some degree, we see the great advantage of directing the education to overcome these feelings which have shown themselves active. Unfortunately

we see men who, in spite of the restraints of education, do follow their natural inclinations; and see if this cerebral part be not much developed. [The part just above the ear, No. 7 in the bust, when large it causes a great swelling of the skull at this point.—ED.]

Let us begin with animals. If we observe animals in general, we shall find that all herbivorous animals have the brain small hereabout, above and behind the ear. But if you examine the heads of carnivorous animals, as the wolf—and this is the head of a wolf (showing one)—you will find that the greatest quantity of brain is situated just above the ear. If a naturalist were to see the heads of each of these species of animals, he would know from the shape of the head whether the animal belonged to the herbivorous or carnivorous kind. You see that the head of the wolf is much broader than the head of the roe. The chamois has this part narrow, whilst in the fox it is very broad. (Skulls of each of these animals



Destructiveness large.

Destructiveness small.

were shown.) Compare, again, the cat with the hare; the rabbit with the pole-cat, which you know is an animal fond of destruction. Again, look at the weasel and the quincajou; go through all nature, and you will find that the more brain hereabout, the more destructive will the animal be found. Look at men: Dr. Gall has observed several murderers, and he has found that their brains are very large hereabout; that is all, he has noticed the fact. If you find murderers who feel a pleasure in destroying, instead of those who do so to defend themselves or to escape detection, you will find that such persons have great development of brain in this part, above the ear. Here are casts of Stoffel and Keppel, men of this country. The one engaged his companion not to destroy the person they intended to rob; but the other would destroy, and would not spare the life of the individual, and you see that in one this cerebral part is much larger than in the other.

I have seen many individuals who have shown great

propensities to be, and who have actually been, dreadfully destructive. This is the cast I took of a woman's head in France. Her head is very large in this part; her name is Madalein Albert; she killed several relations. This is the cast of Bellingham who shot the minister, Mr. Perceval; he imagined that he had received great injustice, and he was determined to be revenged. Now, granting him to be a fool—as is believed he was—it is, however, singular, that this individual part should be so much enlarged, and was so very active. Some persons do good to others in their insanity; some pray for every one, and certain feelings are more active in proportion as certain parts of the brain are more developed. I have examined so many criminals that I can speak positively of the organ, and unfortunately the organization is too large hereabout. The organs of Courage and Destructiveness are very large in the head of Robert Bruce, and we know that he was a very bold and courageous man. There are nations who are inferior to others in point of the higher feelings, who, nevertheless, have this organ largely developed, as the Caribs, and it is ascertained that they are very ferocious and savage. If we compare the skulls of the Hindoos with the skulls of Caribs, we shall see the greatest difference in the development of this part. The head of the Hindoo is elongated and narrow on the sides, whilst the Carib's head is broad on the side; the latter nation has shown a much greater disposition to destroy.

Having multiplied my observations on animals and on man, I am quite sure that the inclination or disposition to destroy depends upon a particular cerebral part. Now, if you reflect upon the peculiar modifying powers—and the necessity of doing so you will admit—you must have observed that they exercise a very great influence in determining the character. You will see that I do not speak of an organ of murder; I do not say that this power is given to destroy other men, but to kill animals, which power or feeling is necessary. But we observe, unfortunately, that this feeling, notwithstanding the influence of education and the cultivation of the higher faculties, does break out and overpower them. I do not say that because any man is broad here, he will commit murder; far from it, but I wish to repeat this, that the feeling or inclination to destroy animals is found to be more active in individuals who are broad in this part of the head. This is observation, it is a fact, and that is what phrenology must be founded upon. Some beings take different modes of destroying than others: they like to amuse themselves with their prey first, and then kill; whilst other animals dart upon their

prey at once, and destroy it by a *coup de main ;* such animals will be always found broad here

We take the powers in a general way, and by no means speak of their applications. We can only speak of the tendency which certain powers give to particular actions, as they are observed in beings in which the feelings do not control each other, in animals destitute of intellect to exercise an influence upon them. But in man we must remember that there is a combination of higher powers happily blended with the lower propensities, and this combination exercises a mutual influence on each class. I have endeavoured already to explain this when speaking of the Love of Offspring, of Attachment to Places, and of Combativeness, which must also be taken into consideration when speaking of the feeling of Destructiveness ; and by reminding you of the combination of the powers, and their modifying effects, I shall close for this lecture.

Lecture VI.

I have spoken hitherto of the animal propensities, and there remain three to be considered.

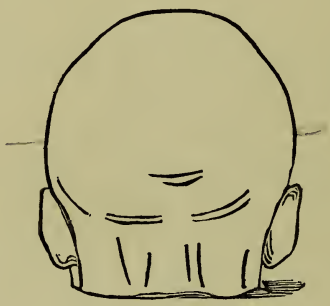
Secretiveness.

Among the different characteristics found in society, there is one distinguished by the name of cunning. It is not always that persons excel by judgment ; persons may be very cunning and have but little judgment. It is difficult for such persons to give direct answers to questions ; they will turn the point, if they can, by evasion, and in speaking with them you must insist upon the argument, to induce them to pay attention and to answer you ; they prefer to tell lies. Some individuals are exceedingly fond of intriguing, and they are fond of shifting ; they turn with the wind. If ever you have to defend an opinion they are ready to join you, and do as you do ; and if you alter your opinion, they alter theirs. Hence, observing this versatile disposition in some individuals, it was very natural to be attentive to the organization of the brain, to see whether it corresponded with the actions observed ; and we observe that a very intriguing fellow, who plays a double character, will often succeed well in the world. There are some individuals without great merit who know how to find their way through life ; they know how to play off to the greatest advantage ; whilst others never succeed, but fail in every thing they undertake.

Gall was attentive to the organization of such characters,

and he found that they were broad above the ear, above the organ of Destructiveness. This (showing a cast) was an individual of the character I have described; if you look at the configuration of his head, you will find that it is broad here, at the middle, and on the side of the head, above Destructiveness. This individual (showing a cast) belonged to a good family—a very respectable family; he spent a great deal of money, and then, to get more, he deceived all his friends. He borrowed large sums of money of one and then of another, but no one person thought he had borrowed of a second; he obtained a sum so large, and having spent it all, he could in the end pay nobody, and thus he was discovered.

Dr. Gall found very cunning individuals always very broad here, and he called it the organ of Cunning. If you examine cunning individuals, you will find that they are broad here, laterally. Individuals in different countries, who are cunning, you will find broad here. However, shall there be an organ



Secretiveness large.

of Cunning? I will give you my opinion. In order to be cunning, we must possess a certain quantity of intellect; and the feelings I have hitherto spoken of are without intellect, and blind, and I have stated that they are blind because they produce a determinate impulse without the exercise of judgment. To be cunning is also natural, but persons do not like to be considered cunning, although nature appears to have given a propensity. What, then, is the fundamental power of this organ? If you reflect on the actions of men and animals, you will find that there is a peculiar instinct to hide and conceal: an instinct which is very necessary and important to animals. Many escape from their enemies by hiding themselves; the fox, being pursued, runs into a hole and hides himself. Many other animals do the same to obtain their prey; the cat, when watching for a mouse, contracts her

body into as narrow a space as possible, and moves in a very peculiar way. Cunning persons always try to conceal their motions; everything they do is concealed and kept secret. An individual may conceal his intentions to do good, but he may also conceal them to do mischief; if he do mischief, we call him an intriguing being; but if he do good, then we call him a prudent man. Thus, the name is given to the application of the power; but, in phrenology, we must try to find out the fundamental power, not the result of its application, because that very much depends upon accidental circumstances.

The instinct to conceal is active in animals and in men. Look at children: you will see some very active in concealing any thing they meet with. We see that some animals not only conceal themselves, but their provision. If a dog finds a bone, after he has satisfied his appetite, he will conceal it until a future time. Indeed, you will find, in animals and in men, that to conceal is a fundamental power. Tell one man a secret, and he will keep it; tell another, and he will repeat the secret to everybody. Some will make presents to their friends, but will do it in a very concealed way. So, in a general way, we find that it is a fundamental power, and one that is very necessary; its organization is quite ascertained. Whenever I find this part large (No. 10), I know that the individual has a great tendency to conceal, but I will not say to what purpose he will apply it—whether to a good or to a bad purpose. There are some individuals who will sometimes tell you things—known to every one—quite in a secret way, and in them you will find this individual part much developed. Whenever you see heads of this kind (showing three or four), you may rely on the person being very secret. You must not expect that such an individual, having the organ large, would always say what he means. The organ, then, may be observed, and we call the power or feeling among mankind Slyness, and in animals Cunning; but I prefer the term Secretiveness.

Acquisitiveness.

I come now to the consideration of another power, which has done harm to phrenology; it has been made quite the scape-goat, for all persons have spoken of an organ of Theft, and it required great courage in Dr. Gall to show that their was an organ of Stealing. There are thieves in all countries, and individuals who have a great inclination to steal. Characters of the first kind—or the thieves—we know, exhibit great dexterity in contriving to accomplish their purpose under a

variety of circumstances, and among the latter, we know that persons of good education and good families have yet shown a peculiar inclination to steal. It must have come under the notice of every one present, that there are individuals among the rich and the poor who do not need to steal, and yet exhibit the greatest pleasure in stealing. Lavater speaks of a physician who used to steal anything he could lay his hands upon from the rooms of his patients. A lady of fortune used to take a great pleasure in visiting shops, and she contrived to steal something from every one; and her friends used to send persons with her to watch, and afterwards to restore the articles. These are positive facts. We see among idiots this propensity very strong; for although they may have their pockets full of bread, or other eatables, they will go on stealing. In insane persons we find this instinct to steal sometimes

Acquisitiveness large.

strong. Unfortunately, there are too many persons who have a propensity to steal; and Dr. Gall, observing such individuals, found the cerebral part hereabout much developed. I can show you many examples: they are not scarce. This is the part of the brain where the organ is situated (showing a cast) here, anterior to Secretiveness (it is marked No. 9, on the model bust.) Here is the cast of the head of a man who first cheated his friend and then murdered him; here is another who did the same—Patch. We have observed many facts of this kind, and it is positive that the greater number of such persons have the brain large in this region.

We must now reflect on this power a little. We see that such actions as I have mentioned do take place, although we have the law given expressly on the point, morally and politically, "Thou shalt not steal," yet we find that some

persons will steal. However, we shall not admit that there is a peculiar power for stealing, but we observe thus much, that persons who are very active in that way, and who show a great propensity to steal, have this part large; but we do not say that every one who has this cerebral part large shall be a thief. No; this is an organ which is very large in mankind, and it is the cause of infinite mischief; there are few organs to which a fundamental feeling is attached which do so much harm as this. It is this feeling which separates mankind one from the other, and nations from nations; it is the propensity against which Christ himself was so severe. Look at an individual in whom selfishness is a very prevalent feeling: talk to him about charity, and he will say, "Charity begins at home;" and he will place his personal interest above every other consideration; he cannot conceive that any person can be gratified without getting something by it. In individuals who, in an honest manner, from infancy, try to become rich, to acquire riches, you will see this part much developed. It is a power absolutely necessary for existence; if we wished to exist, must we not take care for our subsistence? Animals make a provision for the winter; they do it by instinct, as it is said, but you will not only see this feeling among the lower animals. You will see persons who are very fond of bringing things together; they are not satisfied with collecting what is merely necessary, but as the organ of Destructiveness is sometimes so powerful as to cause the animal to kill more than is necessary, so the organ of Acquisitiveness induces persons to bring together more than is necessary, being never satisfied; and in such people you will always find these organs large. There are certain species of animals, as magpies, that take away and collect what they have no necessity for, as spoons, and glistening things of any kind, and will conceal them. There are some dogs who appear to think that stolen meat is always better than that which is given them. We admit, then, as a fundamental power, that which gives the desire of acquiring or collecting, and in phrenology it is called Acquisitiveness. It does not determine the objects to be acquired, nor the means of acquiring them, the choice of objects in which this feeling is to be exercised depending upon other powers. People generally try to acquire money, because that will procure all other things; but it is peculiar that, in the application of this power of acquisition, some will, like the magpie, collect together things which can never be of use to them. A gentleman at Vienna had collected together a great quantity of things into one room—things which he never could use. It is very interesting to contrast these two examples of

the development of this organ: now, in which do you think Acquisitiveness is the largest? (Showing the casts, in one of which the organ was much more developed than in the other.) Which do you suppose of these would gain by a bargain? (Contrasted with this, was the cast of an unfortunate female, who, even in her reverse of fortune, declined to accept of more than she considered necessary for her existence.)

I hope, then, that you will have no objection to Acquisitiveness. What would mankind be without Acquisitiveness? But whether you gain by industry, or by stealing,—whether by commerce, or in any other way,—that does not depend upon this individual power, but upon a combination of powers. This organ gives the instinct only, the propensity or power of wishing to get. If you find an honest man who has made his fortune with a particular desire to get rich, you will find the organ large in his head. When we speak of stealing, we must admit that legislation has drawn a distinction, and fixed arbitrarily certain regulations for the public good, but legislation does not destroy the power of selfishness.

Look at animals: there is no tenure by which property is held among them but by force. We see, that among birds, the stork will fight with its neighbours to try to gain possession. A stork comes back every year to build in the same chimney, and will allow no other to build there. We know that in certain districts there is only a certain number of birds of prey, and they will allow nothing to come into their estate; they will fight with them, and drive them away. Even among the chamois, which feed on herds, one herd will not allow another to feed on the same mountain. There is a feeling, then, which leads us to acquire and collect.

Constructiveness.

We come to another point. In animals we see an instinct which leads them to build or construct. Birds especially build their nests—some in trees, others in holes—and show great skill in the manner in which they do so. Among mankind we observe a disposition to build. Some men show a great disposition to architecture, to become architects, and the question is, whether there is a natural disposition to do so, independent of a combination with any other power? There are children who sometimes show a particular talent for the mechanical arts; they invent machines, and sometimes they are prohibited from exercising their talents, and punished for doing so. As we see in schools, if a boy will draw when he ought to be reading his lesson, he is punished. If you observe persons who excel in drawing, and show any talent for inven-

tion, you will find that they are differently organized from others in this spot here. Look at this head : you observe that it is large just behind the external angle of the eye. Anterior to Secretiveness is Acquisitiveness ; still more anterior than Acquisitiveness is an organization which gives the power called Constructiveness—it is the power I now speak of. This is the cast of the head of a boy only eight years old. He had the talent of imitating in paper the figures of whatever he saw ; you observe how broad it is here (pointing to the part). Here is the cast of a person who was punished for his talents, and he ran away to satisfy his talents, and you see the organization is very full in this part. Do you think that such a person (showing a cast very flat in this place) would show a great talent for construction ? Shall we find the powers of constructing in the arts different in different nations ? You will find this part more developed in the French than in the

Constructiveness large.

English. If you observe persons in the streets of Paris, you will observe the organization large, generally speaking. Here are two French skulls : you see that this part is full, not that I would draw any inference from them that the heads of Frenchmen are so generally ; I give you the remark in a general way. If you observe in common life persons showing great dexterity in the use of instruments, as mechanics in the use of their tools, you will find this cerebral part well developed. Many mechanics can devise very ingenious things, but they have not the power of carrying their inventions into effect ; they must have others to manufacture for them, because they have not the power I speak of. As far as manual dexterity is concerned, you will certainly find a greater number of persons who possess it in the French than in any other European

nation. Here is the head of a person who had the power of putting a few things together ingeniously; she was a *merchande de mode*, one of those people who, by constructing bonnets, give the fashions all over the world. You see she has this organ large. From the many observations which have been made, the situation of the organ may be considered as certain. It is situated behind, and a little above, the external angle of the eye, and it is situated in this country a little higher up than it is abroad, for this reason: when the cheek bones are narrow and contracted, the organ is situated a little higher up than it is when the cheek bones are very prominent, because all anatomists know that the cheek bones form a part of the orbit externally as well as below. Hence, then, a distinction would be necessary, if we spoke of the situation of the organ in relation only to the external angle; but in phrenology we never confound the face with the brain. It has been often said, that Voltaire had a small head, but the truth is, that he had only a small face.

This is a cast of what is considered the true skull of Raphael; I know there has been some dispute about it, but it is considered in Rome to be his skull, and I can only say, that you might examine thousands of skulls and not find one presenting such organization indicative of the mental powers which, from his works, Raphael must have possessed. The cerebellum is very large, and the organ of Construction is very large—organizations essential to a fine painter, added to other powers. But our opponents cannot conceive how we can compare the organs of such sublime conceptions, as those of Raphael, with the head of a marmot. I do not say that a marmot has the same extent of powers as Raphael; but, combined with other powers, construction, which is fundamental and acts as instincts in animals, gives rise to a particular application of the higher faculties. The power of construction is one thing; but whether a person possessing it will be an artisan, a painter, or an architect, is another; you must never confound the power with its application. These are the several powers called propensities.

Sentiments.

I come now to other feelings, which have certainly claims to be considered more than mere propensities, and I wish to speak of two of them to-day. These have a great influence on mankind, and they have been considered as factitious. If you will observe phrenology, you will be convinced that it is easy to prove that they exist fundamentally in nature, and yet that they depend upon the brain. I should wish any one,

who does not like phrenology, to reflect on these two, as I am sure that they are as great obstacles to morality as extreme selfishness, and the Christian code is very severe against them, and whenever that is the case, you may rely on it that there exist strong fundamental powers.

SELF-ESTEEM.

Do you think that pride exists naturally, or that man can be proud from nature? It is quite astonishing that philosophers have not more insisted upon the fundamental nature of pride. We are told that the first man fell from pride, and we shall find throughout mankind, the feeling very strong. I admit a fundamental feeling which gives to man a disposition to have a good opinion of himself; make that feeling a little stronger, and then it is called pride.

Self-esteem large.*

Take it up, then, as pride—the feeling in a higher degree—and you cannot deny its existence. There are those who maintain, that such feelings are the result of society; that if in society any one has great natural talents, or if any one without the possession of such talents acquire a great influence on society, such an individual will be proud. But is every man of talent proud? Some are—others are not; these circumstances then, the possession of talent, and the influence of that talent on society, do not produce pride. Some very inferior persons, poor and having no talents, have a very high opinion of themselves. Others have again said, that great talent gives humility, but I do not admit that as a cause; I consider the feeling as fundamental. If you know an indi-

* The Indians of North America, or at least those who formerly inhabited the Atlantic Sea-board, were noted for their pride of character; and their skulls are remarkable for the sign of Self-esteem. In the illustration Approbativeness is small, and the quality does not appear to have been a general characteristic of these peculiar and interesting people.

vidual in any profesSsion who knows a thing better than another—if he knows better how to give medicine if he be a medical man—or if he knows how to give a better interpretation if he be a metaphysician—if he thinks he can do them better than anybody else, and if asked his opinion, will say, I have not examined, and have not made up my opinion, and therefore, the matter cannot be settled, you may be sure this organ is large in his head. There are people who speak in a very positive way, and who have greater opinions of themselves than any other persons: you will in them find this part of the brain much developed. You may go through sexes, and families, and nations, and then you will decide as those have who have already done so. You will find throughout each, that such persons as place their opinions above all others, and have great notions of their own worth, are high here, at the vertex (the upper and back part of the head): it is the organ of the feeling of Self-esteem, and in a higher degree—Pride.

This power is very necessary, it preserves individuals from lowness of mind; I cannot conceive a noble mind to be without some self-esteem or independence. We have no hesitation as to the seat of the organ; it is here, and you may see it large. Some nations manifest much more self-esteem than others, and in individuals it manifests itself in a good or bad way, so that we can speak very positively of the power. A very rich man in Paris, a man worth millions of francs, shut himself up in a little house near the Palais Royal. On the contrary, you will see that the feelings of individuals, who are sunk much in that part, are meek and humble, whilst those who like to command and to take the lead, to be the first in anything, have the part largely developed. You see the feeling among boys, those who will play at soldiers; some will never consent to be common soldiers, they must be captains, or generals, and those who have the feeling strong are also fit to command. You will understand this feeling better if you consider another at the same time. The neighbouring parts are sometimes larger, and these combinedly have a great influence upon society. You may have the organ of Self-esteem well developed, but you may have the lateral parts, the parts on each side, still more developed, and when that is the case, another strong power is brought into action. I speak of a fundamental power in phrenology, which is called the

Love of Approbation.

This feeling is very evident among children, and it is encouraged in the schools under the name of Emulation; there

we make use of it for an excellent purpose. If you notice the organ full in children, you may depend upon it that they are fond of approbation; the feeling being called forth is said to be the love of glory, but whether the love of approbation be considered in a general or in a slave, it remains essentially the same. Hold out some public honour to men and they will do anything, no matter whether it be the gift of a pebble, a bit of metal, or a ribbon. Some men will do anything to have a ribbon. I might be severe, because we may notice the errors of all nations founded on this anxiety to be distinguished from others by some external distinction. Combined with other powers, self-esteem and the love of approbation do good in society. Does a man do good and wish to keep it a secret? No, he wishes everybody to know it. I do not blame the feeling, because I cannot expect to limit it by the rules of philosophy; it is often productive of great good; it is a very active feeling in mankind; the desire of being noticed publicly is very great. If a man wished to be remarked by the world, he would, Erostratus-like, put fire to the Temple of Ephesus to obtain it;* he would rather be pitied than be unnoticed. Some persons will do anything provided the world will notice them, and in such persons you will always find this cerebral part large. Sometimes both this organ and the one I before described are large; look at the different bumps, as they are called, in inhabitants of different countries, and you will observe great differences. You find great difference also in the sexes, particularly in the young; you may talk to boys and point out the value of what you tell them, and say, what will people think of you if you do not learn? but they will not pay much attention; but if you observe in girls their lateral parts large, they will be attentive to what you say, and you can make use of this feeling to instruct them, and if you appeal to the opinions of others as motives for excitement, they will be very attentive; they ask, "What will they say of me?"

The feeling produced by a combination of these powers, very largely developed, is very curious. I have never seen an individual who had them both large who was satisfied with the world. Such a person thinks that the world has not done so much for him as he deserved; he imagines that he has deserved very much more than the world is inclined to remunerate him for. Some people are very touchy, and even sometimes among labourers, the lower classes of society, the love of

* The famous temple of Diana at Ephesus was burnt by Erostratus on the same day that Alexander the Great was born.

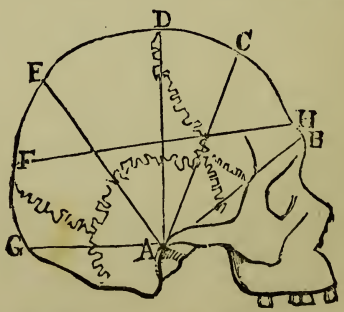
approbation is so strong, that when they are drinking together, the one who has felt his consequence much hurt will even stab his fellow-labourer. In looking for this organ you will not always find it very elevated, but it is generally very broad in the characters I have been describing. I give the feeling as fundamental, and the organ as quite certain.

The doctor then briefly recapitulated, and exhibited the casts of several persons known to possess this feeling in considerable activity.

Lecture VII.

(Dr. Spurzheim briefly recapitulated what he had said on the preceding evening, respecting the power of the love of approbation, and proceeded to make some general remarks on the powers situated in the occipital region.)

We have now finished the functions of the parts of the brain situated in the occipital region. To judge accurately of the force of these powers I should say, in a general way, look at the occipital region ; see whether it is small or large, and you may know, by comparing this part of the head with the other, which will be most active. But to come more to particulars : be attentive to the occipital region, and you will find the upper part more developed in some than the lower. There is a great difference in this respect between some nations, particularly between the English and French ; and you will find, generally speaking, in the English a greater mass of brain hereabout (the upper and back part) than you will in



Outline of the Skull, showing the different regions.—Lines A B and A C indicate the extent of the intellect ; A C and A E the extent of the moral ; A E and A G the social ; F H divides the moral from the basal faculties.

the French, the greater development of this region being, in them, at the lower part. A line being drawn from the ear to the upper and back part of the head, would show a larger

radius than if carried horizontally backwards in the English, generally speaking, and the contrary in the French.

Now, without comparing one individual with another, the question is, in phrenology, whether such feelings are stronger than other feelings in the same person. To decide this, you must contrast the front with the back part of the head, and if you do not find the other organs developed in equal proportions, you may be sure that these will be more active than the others. Again, if the other organs be not very active, and although the development should appear to be equal, these organs will generally be found to possess greater activity than others. If a man be of a nervous temperament, as it is called, he will be found to have these organs very active. Then learn the influence of the whole mass of the brain.

Would you not, on looking at this head, seeing that the upper part of the occipital region is more developed than the lower, say the love of approbation was pretty strongly marked in him? That was the fact. Seeing this head (showing another) might you not conclude that the mind would show the love of approbation, in proportion to the other feelings, strong, since the upper part of the cerebral mass is largely developed? Not that this part is developed so as to form a protuberance—and I hope you will all understand the distinction I made between a protuberance and development—but because the neighbouring parts are also large. You see the love of offspring, and attachment to places, also large. In a general way, we should say that these parts were large in proportion to the other parts of the head of this individual, and, therefore, more active. (Several other casts were shown, to illustrate the subject, large and full in the upper part of the occipital region.) I should say then, in order to estimate the powers situated in the occipital region, observe whether the base, the middle, or the upper region is most developed, because you find in some the base very narrow, in others the base very broad. Where the base is broad, and the upper part contracted, you will see the lower propensities more active than the others. As to the individual parts, you will recollect their functions, as I have already mentioned them, but I cannot speak here of action; I repeat this because it is important. Now as to Acquisitiveness, the wish to acquire, that is fundamental; but whatever we wish to acquire, to take possession of, depends upon a peculiar power, different from that of Acquisitiveness. Some men show a disposition to steal, to get unlawfully the things of others; some again will show a disposition to collect things about them according to their talents; some again show a talent to possess and to

accumulate money; in all these persons the feeling of Acquisitiveness is active, but the peculiar application of the feeling does not depend upon it.*

Cautiousness.

I go now to new ideas. There are individuals who sometimes reflect well, and who at once resolve to act; and there are others who can never come to a resolution; they think of doing something, but they do not act. Some are so hesitating that it is almost impossible to get them to determine. Look at individuals who are careless, they will always say, if you advise them about anything, "Never mind"; and there are others who always say, "Take care"; and you will find, among scientific men, some who, in discussing any subject, will always have a "but." Look at such individuals, and observe the part of the brain situated here about, in the middle of the parietal bones, and see whether such individuals will hesitate or act as soon as the feelings give the impulse. I have spoken from the beginning of certain feelings destined to give impulses to animals and to man, called propensities, and now I speak of feelings which modify the lower propensities, which modify their actions.

If you see individuals very narrow here, you will not find that they hesitate so much as persons who are very broad here (the middle of the parietal bones). What would you think of such an individual (very broad in this part)? Look at the head from behind forwards, and you will see that the head is very large here; try if you can get him to an immediate resolution, or whether he will not say, "Let me reflect upon this." See what he will do. There are nations known for their cautiousness, and you will find great breadth in this part of their heads. The man who does everything cautiously is sure to be broad hereabout. In women you find this part large, and it seems that nature has given them this power to watch over many of the other feelings with which she has endowed them, and you will find that the organ is proportionately broader in females than in men. If you reflect on what I stated before, you will remember that I said that the heads of men were broader, laterally, than those of women, and this is true, because the organs of Courage and Destructiveness are broader; but in speaking of this individual cerebral mass, the organ of Cautiousness, it will be found broader in women than in men.

* What the doctor wishes to say is that the manner in which Acquisitiveness manifests itself will depend upon other organs. With Veneration it may show itself in the collection of antiquities, with Ideality in the accumulation of works of art, and so on.

Certain animals have this feeling; they do not act as soon as the propensity impels, but pause and take care as to what they do. Look at the roe; being pursued, he pauses, looks about him, acts with care, and then starts off. Nature, probably, has given this power to animals, and in man we call it circumspection, from the Latin verb *circumspicio*, to look about. The fox acts differently; he does not start up and look about, but runs away to conceal himself. If you look at cautious animals, you will find this part of the head broader than in those which act with less care. Moreover, we find that certain animals place sentinels, and they are always broad in this part of the head. If you look at the hyæna, you will find this organ very little developed, and the same in the wolf, whilst in the roe and chamois it is very much so.

If this feeling be very predominant, then the individual becomes fearful, particularly if the lower feelings be but weak, so that if we speak of fear it must be combined with other conditions of the mind. Speaking of caution, I can speak of it alone, as it appears to be a fundamental feeling. From infancy you may observe, in some children, this feeling very strong, and if the feeling of courage be not active, they will always keep in the background and be timid, and you generally observe, in such children, this part predominant. Those who are of a melancholic temperament, and have been so from infancy, have this part largely developed, that is quite ascertained. These are the feelings which are common to men and animals, hence I have stated that, as far as these go, man is an animal. But man has great advantages over animals, because the different feelings I have spoken of are given to no other animal altogether, hence the great superiority of action furnished to man by having all these feelings congregated within himself, added to which, there are many others of still greater importance, which will hereafter be pointed out. Some animals have a great love of approbation; our dogs and our horses show this; there is the love of approbation remaining the same fundamentally, but modified in its action according to the circumstances in which the individual is placed.*

We come now to the upper region of the head, to the top—a part which deserves all the attention of phrenologists, and first we try to ascertain the proportion which the upper part

* The student will have no difficulty whatever in verifying the organ of Cautiousness (No. 11). It is generally very prominent in women and children, and the quality is as marked in their characters. A line drawn from the ear to the crown of the head passes through the middle of the organ, which almost invariably forms the broadest point in the upper portion of the head.

of the brain bears to the lower. In looking at a head it is necessary, in order to arrive at this, to draw an imaginary horizontal line from the points I before described, so as to divide the head into two regions, and then you can compare them, and you will find that by far the greater number of persons have the base larger than the upper part. This is a fact; nobody can deny it. Go to nature, and you will be convinced of it; look at mankind generally, not confining your attention to those who attend to the sciences only; take both classes together, and compare the upper and front part of the occipital region and base, and you will find much more brain in the latter. Here are the specimens (pointing to those on the table) in which you observe by far the greater number as I have described. If you find the upper region as large as the lower, that is well, that is what we like in phrenology; we like to have the upper as large as the lower: perhaps it may not be so good an organisation for the individual himself as for others. The delicate, soft, good feelings which we shall have to examine, have not strength enough when the animal feelings, which give energy to them, are wanting; if we have not courage, determination, self-esteem, and so on, little good is done. In comparing the species which possess the same superior feelings, we find that they derive a certain degree of energy from the lower. The lower feelings may be larger, but provided that the upper are also well developed, that will do.

In speaking of the superior cerebral parts, we come to a very interesting subject, and one which is also very difficult. I shall speak of a feeling which has been called moral and religious, as far as these feelings appear to be dependent on the cerebral parts. If we look at the productions of artists in ancient times, we shall find that they have given to the superior beings—beings celebrated for their moral and religious actions—very high heads. Lavater has observed, that some persons who are bald are religious, but I do not say that every bald person is religious. However, if you look at the head designed by the ancient artists of the Saviour, you will see that it is very elevated, whilst the head of Judas is represented as quite depressed. (Casts were shown intended to represent the heads of these persons.) Which form would you like the best of these? Anyone by intuition almost would give the preference to such a forehead (pointing to one very elevated). It is always agreeable to see the cerebral mass full in the upper part, but it must be compared with the base; and again, not only the elevation itself, but the surrounding development ought to be large, not elevated and tapering like a sugar-loaf;

we like to see not only a good elevation, but a good development of the circumference of the upper part. You know that I have stated already that I prefer breadth to elongation.

Benevolence.

We shall find the upper region the seat of the moral feelings. Study man from nature, and you will find that he is by nature a moral and religious being; he has feelings which invite him to listen to such considerations. If I speak of moral and religious feelings in phrenology, I do not speak of any determined application of them, I speak merely of the fundamental feelings. They may be applied in various ways, and the application cannot be seen in the head any more in the superior feelings than in the lower. It was an opinion formerly entertained by the adversaries of phrenology, that phrenology would be unfavourable to religion; but we know that truth can be dangerous to nothing; if we say only what we find, we can do no injury. Every man, I say, has naturally that which disposes him to be a moral and religious being, but that many external circumstances may very much influence him; I am borne out in that assertion by phrenology, although I know there are some who think the contrary. As soon as we can show that certain cerebral parts are destined to such and such functions, that is all we can do. Hitherto philosophers have judged of mankind by their own feelings, and what they found in themselves they took as the standard or representation of mankind, and they have admitted that some individuals have these feelings weak, but shall we say that they are weak in all mankind? Phrenology does not say so; it says that they are more or less active in different individuals.

Before going into particulars, I wish to call your attention to some distinctions which I make between the two orders of feelings called moral and religious. I call that feeling moral which is given to mankind in order to direct his actions, in reference to other beings around him, particularly to his neighbours; whilst I call that feeling given to man religious which brings him into communication with superior beings—supernatural beings: and all conditions of that kind belong to the religious feelings. There are some persons who venerate very much superior beings; they have the fear of God always before them, and they will not do what they consider to be disagreeable to Him, they would not do anything to offend Him. There are others who pay great attention to morals, who wish to do good to everyone, but, at the same time, are less inclined to believe in religious opinions. We see the greatest differences in mankind, and if phrenologists will be

attentive, they will find great differences in the organisation of such individuals. We observe that some children reason with their parents, and are afterwards inclined to admit and believe things, whilst others admit things to be as they are told them at once, and never reason. Some children are very attentive to the lessons they receive with respect to other individuals, and again in others it is quite different. These are facts; everyone must have observed them. Now we shall find that there are several feelings which influence our actions relative to other individuals, and that there are several feelings which lead to the adoption of religious opinions merely as far as we are concerned with superior beings. We shall find that there is a peculiar organisation in those who are much inclined to believe in a supernatural power, and in those who are less disposed to believe. We find in animals nothing analogous to this feeling called religious; but there are some animals that feel so attached to each other that they will place them-

Benevolence large.

selves in circumstances of the greatest danger, and even allow themselves to be killed to save others. No man can go farther than that. We see the feeling of attachment as strong in animals as in man, but there is nothing in animals which gives any indication of their having any communication with superior beings. We have something in animals which shows a touch of what we call benevolence and good heart. We find that among dogs there are some which are very kind to their masters and mild in their temper, and there are others very mischievous. There are some dogs courageous, but mild at the same time, and there are others courageous but very vicious. Look at such animals as are mild in nature, and you will find that their brains are much more developed than in such animals as are mischievous. Look at two tribes of

monkeys, the one tribe being good-natured, and the other vicious, and you will find the heads of one tribe more raised than the other; you never find a monkey with a little forehead good natured. The flatter the head the more vicious you will find them. The chamois is found to be more vicious than the roe. If you look at horses you will see some much more vicious than others. There is a less number of vicious horses in this country than in France; that is, among an equal number of horses in Paris and London, you will see a greater number of vicious horses in Paris. If you see a horse whose ears come out very much, appear to be much separated from each other, and which is at the same time flat upon the middle part of the head, you may depend upon it that there is more vice in that horse than in another where the part is elevated. (Two skulls of horses were here shown, which exhibited a striking contrast in this respect.) Is there anything of that kind to be observed in man? It is common to speak of a good heart and a good head, we place the good feelings in the head, whilst the heart is made the seat of benevolence, affection, and so on; but in phrenology we are content with a good head.

Do you suppose that this feeling has been assigned to this part of the head by caprice or by reflection? It could be done by neither, it has been done only by experience. If you examine the head of a person who takes great delight in doing good to others, who is continually employing himself in framing schemes for their comfort, and so on, you may depend upon finding his head well developed in this particular part; whilst, on the other hand, if you examine the head of a person, and find it flat upon the top, "Oh!" he will say, "charity begins at home." This feeling is very strong in mankind; fortunately there is a great deal of natural benevolence in man in all countries; but I shall have to complain, in my next lecture, of other feelings not being sufficiently active. Some few children are inclined to give what they have to others; they will give anything—their toys or confectioneries, or anything; and other children will not give a bit; they will say, "No, I will keep it myself." You may always find in the former the organ of Benevolence very prominent. We have multiplied our observations on animals and on man, and may add a few more cases in illustration. If you observe the skulls we have here of Hindoos and Caribs, you will see these organs are more developed in the Hindoos than the Caribs, and that is in conformity with the history we have of these people. Benevolence would not be predominant, in my opinion, in such a skull as this, and I do not know that

Robert Bruce was much celebrated for benevolence, but there certainly is little of it shown in his skull. What are called kindness, benignity, compassion, hospitality, good nature, are so many modifications of this feeling, which I consider as fundamental. We may even see its influence on thieves; some there are who have this feeling pretty strong, but Acquisitiveness much stronger, and would rather steal from the rich than from the poor. This is the cast of a person who was the leader of a band of robbers, and he always prevented his companions from stealing from the poor. Some people steal from churches rather than from other places; and again, there are others who would never steal from churches. We must look first for the fundamental powers, and having made ourselves acquainted with them, we can go further, and observe their combinations, and the modifications produced by the action of one on the other. There is a fundamental feeling of benevolence which disposes us to be kind and agreeable to others; if we see a suffering being, we are disposed by this feeling to assist him. This feeling is given to direct our actions in relation to other beings; if we had merely selfishness or attachment to offspring, or to our homes, and if we paid no attention to beings surrounding us, would society go on as it does? No, I am sure it would not; man's beneficence would be confined to his personal friends, or his family connections at most, and we should never see that disinterested liberality extended to mankind. Benevolence is the feeling which inclines us to act in obedience to that law which requires that we should love our neighbours as ourselves. I have now given you an explanation of what I consider a moral feeling, and the next time we meet I shall go to another feeling, which I consider also as fundamental, and which is evidently given to make man a religious as well as a moral being.

Lecture VIII.

I have now to consider certain feelings which, in my opinion, are of the highest importance—feelings which have produced great disorders, and which, I fear, may still do so, but which, when well regulated, become the greatest blessings to mankind. I have called your attention, in the first lecture, to the relative development of the different parts of the head; I have mentioned them. No given configuration is of much importance but that. Thus, we have to inquire, what is the proportion of the upper to the lower part of the head? since we find that in many heads the lower region is much

more developed than the upper, and that in others there is as much brain in the upper as in the lower part; and that there is, again, in some individuals, more brain at the upper part than at the lower. We have also seen that it is necessary to look to the whole size of the upper part; and you will find, in some individuals, the head is more developed anteriorly than posteriorly: in others, more in the centre than either anteriorly or posteriorly; and in others again, more posteriorly than in the middle or anteriorly; and there are some quite depressed in the centre and elevated anteriorly and posteriorly. Every one may observe these differences, and I am sure that among the persons present the greatest variety will be found to exist; hence there can be no doubt that the different parts of the brain, placed in the upper region of the head are differently developed. Is it indifferent whether we have much brain at the top or little? Is it a thing indifferent whether we have more brain in the front and upper part, or in the posterior and upper part? Observations and experience must decide.

Veneration.

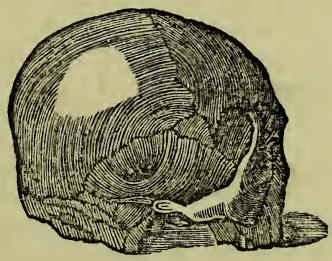
I stated the last time I met you, that we look here for the organs of the moral and religious feelings, since phrenology admits that man is by nature a moral and religious being. I hope no one will find the least difficulty in admitting this. I know that several persons have thought that such a doctrine must be dangerous, but we also know, that new doctrines have at all times been thought dangerous by their adversaries. We know their reasons, but we wish all those who hesitate to consent to reflect upon the point, because you must always recollect, that we do not create any powers as phrenologists; we only observe the operations of those powers which already exist, and when we see certain beings manifest feelings disposing them to certain actions, we admit the existence of such feelings. I do not know whether you ever noticed it or not, but there are children who, from their infancy, show themselves more disposed to religious considerations than others. If you consider the subject in a philosophical sense, you must allow that the Creator has communicated to man important faculties by which he is prevented from being given up entirely to his animal nature. Nature has taken care of man as an animal, and has given him certain powers to enable him to do so; and do you think that the Creator has given up man in the more important feelings to his own caprices? I will endeavour to explain what I mean.

You will find among all professions, and especially our own, persons who wish to be the masters of nature; and you will meet with some who will say, "We are the masters of nature, and nature has no rule;" but this error may be exposed easily, for we all know that we suffer from diseases, and frequently cannot obtain relief; and I am sure every scientific physician will admit this. There are those who say, that eminence in the arts and sciences may be acquired by education; that, in fact, education can do every thing, and that man is a moral and religious being from education. We pay masters great sums of money for the education of our children, hoping that they may acquire the talents, and we find often that, in the end, money and time are all lost; so that we see that even great masters cannot give the talents; but where there are natural dispositions for them, they may be cultivated, and so give excellence. Now, in the same way man is a moral and religious being; he has these natural dispositions, and if he take care of them and cultivate them, they prove to him the greatest blessings which the Creator has conferred. Education improves and cultivates the talents, but it can never bestow them. If education can impart talents to beings without any predisposition on their parts, why not teach religion and mathematics to our domestic animals? It is impossible to instruct any being in that which he is not prepared to receive; hence I speak of certain natural dispositions, called moral and religious.

I have spoken in a general way of several sciences, and I come now to speak more particularly of religion. Is there one fundamental power in mankind which predisposes to the actions called moral? Dr. Gall speaks of the organ which I have named the organ of Benevolence as the seat of that feeling. If we examine mankind, however, it is impossible to acknowledge that all their actions are the result of benevolence. Do not confound the opinions I advance; I repeat, therefore, and say, that I admit the existence of a moral feeling in man, and I am of opinion that the morality of man may be explained as an individual primitive power. I admit benevolence as a fundamental power, the organ of which is quite ascertained. I know persons who spend their time and fortune in doing good to others, and you will find in them the part of the head I have before described as the organ of Benevolence much developed, whereas the contrary characters, persons who are selfish in a high degree, have that part much less developed. I will admit that sometimes very benevolent persons may become, by their benevolence, unjust; on the other hand, we find persons very just, but at

the same time very severe. In legislation there have been courts of equity established favourable to benevolence, but in courts of absolute justice there is no exercise of any such feeling. Again, we may have a sense of morality and justice in the highest degree, and yet not be benevolent; and we may steal from others and cheat others, and yet be benevolent; there is no proportion between these feelings. I shall speak of several feelings given to man to regulate his actions with reference to other persons, and in the same way I cannot admit only one fundamental feeling to produce all the manifestations of man, called religious.

Veneration is a feeling given to man in order to guide him in his actions, to modify his actions: a feeling which may be sometimes called religious and sometimes moral, because the same feeling is applied to man, to our neighbours, and is also applied to higher conceptions, to supernatural conceptions. I have shown you a difference, but I repeat that I do not



Veneration large.

speak of determinate actions, nor do I speak of a determinate religion, whether of the Jewish, Mahometan, or Christian. We know that the Christian religion impresses morality; but phrenology cannot decide for you what religion you are to choose; it only asserts this, that there is a feeling given to man which induces him to pay attention to supernatural religion. All natural philosophers have admitted that men have instincts which lead them to have communication with superior beings. It has been attempted to deduce these feelings from reasoning, but in the dark ages of the church, when there was very little reasoning admitted into their worship, we find that this feeling of devotion, of attachment to superior beings, existed in a high degree. Reason, however, is cold, we want a warmer impulse; if we were to act from reason merely, we should do very little. I put it to any one of you now, whether you do not find feeling the first motive in all actions, not reasoning? If our feelings were the result of reason, then we should act differently; but I

have to show you that the feelings are all blind, from the highest to the lowest, without any exception. Benevolence is blind in itself; if you were guided by benevolence alone, you would commit mistakes; you cannot prevent errors by mere benevolence, and so of other feelings which have been called moral and religious; they must be guided by and combined with reason, but the feelings themselves are not the result of reason, nor is reason the result of the feelings. You may see very good-natured men, and you may like to be in their society, but you can place very little confidence in their judgment.

Dr. Gall thinks that the feeling of religion is attached to the cerebral part which is situated in the upper middle line of the head; he calls it the organ of Religion. I have seen, however, individuals who have had this cerebral part very much elevated, and yet have not been religious. We see some persons who are very much attached to what they call faith in religion, and pay little attention to works; whilst others do not care what their belief may be; they do not consider the fundamental condition of salvation to depend upon belief, but regard works more. Some persons are particularly attentive to what they call worship, to do what they consider pleasing to a Supreme Being; but recollect, I do not speak of any peculiar kind of worship, or of any determinate adoration, whether of the Jewish or any Christian sect; I speak only of fundamental feelings which dispose men to reverence, to pay respect as well to a superior being as to beings around us.

We may pay respect to our ancestors, or to our parents, or to old opinions, if you please, and there are many men who very much respect them; so that you see I cannot speak of its application; it seems to me a fundamental feeling, and if we admit the Cause of all causes, we shall pay to it the greatest respect. Determinate lessons are given to us from infancy to adore a superior being, and therefore some say, there is no proof that this feeling is given by nature; but observe such as receive no such lessons, and you will see that to adore, to venerate superior beings, and to respect beings around us is a fundamental feeling; and that feeling, like all others, is blind. We know that the ancients venerated objects, and that savages do still, which a reasonable man cannot respect, such as animals, the sun, moon, stars, and so on. Look at those men most disposed to veneration, but yet being of different opinions as to the application of it, does not the one sect complain of the other's doing things not to be admitted by reason? It must be left to every individual to

determine in what way he will adore; phrenology cannot decide this; it can only point out the disposition which influences man to do so. Some individuals say that, having this feeling, no man would be an unbeliever. This feeling is not important to cause a man to believe, for I have seen persons who have had this feeling strong, and yet not shown great belief in holy things, and even some who will believe nothing without their own investigation and inquiry will have this part of the head very high.

If I see a person whose head is developed highly at the upper part, I admit that he is good natured, but what application he will give to this feeling I do not know. We often find that the anterior part is high and the middle is depressed. The posterior part is high in others, and when you find the posterior part high and the middle depressed, you may be sure that the individuals are not much inclined to worship in any religion; they might worship from a sense of duty, or to show an example to others, but if they were to consult their own feelings, those I mean who are depressed here (in the middle), they would say, if they could abstain from doing it they would. The individual feeling must be directed in this, as in any other power: respecting, for example, acquisitiveness, the law is given, "thou shalt not steal," and so here I speak merely of the natural disposition, not of its application. The anterior part is the organ of benevolence; the middle part is that which gives rise to feelings called moral and religious, inclining us to respect beings around us, and to pay veneration to supernatural beings or to saints; but there are some persons in society to whom nothing appears worthy of respect.* Veneration is a feeling productive of good to society, and one of those which exercises a sort of control over the lower feelings.

Firmness.

I come now to a power which has hitherto been too much confounded with the will, and it appears to me to have been so confounded because will itself has been expressed by different names. Phrenology, however, makes a distinction, for it will be seen that the feelings have been considered as so many species of will, from the highest to the lowest. If you study all philosophers, even Locke, who have studied the

* There is, as some think, a distinct division in the organ of Veneration, the anterior part giving respect for persons and institutions; that is, it concerns itself with things human; while the posterior part of the organ gives reverence for the Supreme, and inclines to submission to a divine mind and will. Mr. Fowler divides the organ into three parts. (See his new bust.)

powers of the mind, you will find that they have divided the mental operations into two great classes—the understanding and the will; but sometimes the will is good and sometimes bad, because we do not know what the will is. We find that some persons talking to others, or making known their wishes to others, will say, "I will that such a thing is done; I will this or that;" but if you ask them, "What do you mean by saying you will?" "Why, that I will," they say. They are inclined to speak generally in an imperative way; they say, I command, or I insist, not I desire, or I request; they feel that strong inclination to exert authority, and to speak with great decision. If you know such a person who has a strong desire to have command, and if such power be combined with self-esteem, they will be sure to obtain it somehow or other. If I observe a person studying phrenology going on very well for a time with it, and then starting objections, which naturally occur to a beginner, and if I see him consider and overcome such objections, I could say, "Let me examine such a person's head," whether there is any development of the power I speak of. But if, on the other hand, I meet with an individual who will admit every thing, and make no objections to what I say, I should not expect to find much of this power in him, and would rather see an individual make objections and investigate the subject; I like that better.*

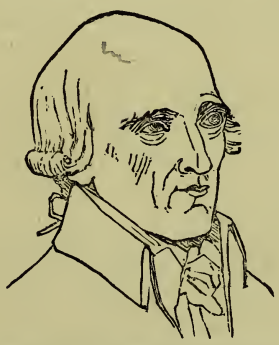
I like to see the power of firmness; it is the basis of the love of independence. I like to see the organ well developed, and I like to see the surrounding parts also well developed, for if this power be active alone, and be not in combination with other powers, or in harmony with other powers, abuses are the result. We have seen that benevolence alone produces abuses, and that veneration alone produces abuses, even superstition in the highest degree. Firmness is so important in nature, that nothing can be done without it. I am sure, that if we had not shown some firmness in our support of phrenology, it would have been dropped long ago. If the power goes alone, then stubbornness and obstinacy are the results. In such a head as this (in which the organ was very much elongated, the surrounding parts flat) I should say that stubbornness and obstinacy prevailed. This power has nothing to do with any philosophical knowledge, although it is often

* Some difference of opinion obtains among phrenologists with reference to the functions of Firmness; some thinking it gives will pure and simple, while others believe it does no more than hold the mind to the determination come to by the will, which may be taken as the impulse given by the sum of the faculties acting together at a given time. This is the view taken by Spurzheim, and on the whole it seems to be the most reasonable one.

confounded with the will. Many persons are ready to undertake things, but they never overcome them; if any little difficulties occur, oh! they give up.

I shall show you a head just to try you. Now what would you think of such a head for perseverance? (Showing a cast.)

You would not judge much of it; and this is generally the case where the middle is depressed and the posterior part of the head is high. Now here is another cast; what would you think of such a head, judging from the size of the whole head? You see that the upper region is very large; we have Veneration, and Benevolence, and Firmness, all large in this head. You might depend upon such a person's being good natured, benevolent, and yet decided. Those who have at all studied anatomy, well know that there are two hemispheres of the brain, and that they are separated by a membrane called the falx, at the root of which runs a large blood-vessel



Firmness large, Conscientiousness small.

called the longitudinal sinus, so that although the organs are marked singly on the skull, yet in point of fact they are double; we speak of the cerebral parts situated on each side of the sinus. Sometimes the course of the sinus can be distinctly traced on the skull by a projection which it occasions, but we attach no importance to it. It may be seen in this skull, and in this. (Two were shown, in which the projection of the sinus was marked.)

I have already gone through a number of powers situated in the middle region of the upper part of the head, and I have to speak of another; now all these, as benevolence, veneration, and firmness, will have a great influence on our actions in society. A man may have great veneration, and worship the sun, and yet be benevolent; he may be benevolent, and yet very stubborn, or may be either one or

the other, and yet be either just or unjust. We have now to examine that power which gives man an inclination to be just.

Conscientiousness.

It would, perhaps, be difficult exactly to define what we commonly understand by the term justice; since, as there is no determinate justice given by nature, our distinctions must be arbitrary, and especially since justice and the principles of justice vary in different countries. Hence we cannot speak of any determinate actions as being just or unjust, since we have no determinate justice to try them by. When we speak of a person having the organ of Veneration large, we merely mean by it that the person is disposed to venerate; and if we see the organ of Firmness large, we know that the individual likes to insist upon the feeling, but we do not know how he will do so, in what particular way he may choose to insist upon it. Now I admit that there is a natural feeling which makes us look up to our actions with a desire of doing justice, and this feeling is called conscientiousness, a feeling not sufficiently acted on by mankind. There is a great deal of benevolence in mankind, much more benevolence than justice, and if we appeal to the benevolence of mankind, we shall find them disposed to do more, and to give up more than they would sacrifice for the sake of justice.

That the love of truth is not very predominant in some persons I think you will all admit; it is common for persons to hesitate and ask,—Shall I injure myself by telling the truth? But what I have to maintain is, that there is an innate feeling, a sort of internal monitor which communicates to men the course which they should pursue, and the regulation of their actions in conformity to the principles of right. We see that it is more prominent in some characters than in others. I appeal to observation, to nature, to legislation, to answer whether this feeling does not exist, although we see but too rarely the influence of it in overcoming the feelings which are opposed to it; so as to cause persons to ask, when their interests are in the way, Is such an action just or is it unjust?

Let the other powers clash with this in its ordinary pursuits, let the love of approbation, let misfortune, or selfishness interfere and you will too often find that this power of conscientiousness is not strong enough. Some individuals have the other feelings, benevolence and the love of approbation, we will say, strong enough to break through all other considerations, but we find this individual power generally small

in mankind; and I think the neglect of education of the moral powers very much prevents the development of this feeling. Look into nature, and you will find the heads of some persons contracted, and others full in this part; and whenever you find an individual who has a desire to be just, who wishes to become just, who has the zest to be just, he will have this organ well marked. But every man has for himself his own peculiar justice. You know it is a proverb of the old times, "The way of every man is just in his own eyes." The determinate application of this justice will be modified by the force of the other powers, but the feeling itself is essential.

The development here on both sides of Firmness, between Firmness and Circumspection, is that which I consider to be the seat of this feeling, or desire to be just, not of any determinate justice. (Different casts were then shown, in which the organ appeared more or less developed.) However, you meet with some persons in whom it may be pretty large, yet

Conscientiousness large, Firmness small.

Acquisitiveness or Destructiveness may be larger. Now you may see the development of these organs in this head. The desire of doing justice was not so strong in it as the desire to steal and to destroy. These latter powers were very active in this individual. Would such a man as this be active in his desire of doing justice, do you suppose? (Showing a head in which the organ was little developed.) Do you think he would allow the dictates of this internal monitor to guide him? I like to see heads broad here; broad in Firmness, and good development in this part also. If I see a person with a development like this, broad here anteriorly, full in the middle, and broad laterally, I am sure that such a person will always combine good works with his religion, for we shall have Benevolence, Veneration, Firmness, and Conscientiousness all full, and in good activity.

(Dr. Spurzheim then showed the cast of the head of a criminal very flat in this part, the organ of Conscientiousness being very little developed, and the individual had betrayed not the least contrition for his offence up to the moment of his execution.) If the laws were the only restraint I think crimes would be more frequently committed, because the laws are easily evaded; but I believe that this feeling is more active in preventing bad actions, when it exists in good force, than anything else. Some would not do anything against the dictates of their consciences; but look at this head (flat in Conscientiousness): do you think such a man would make his conscience the most severe judge? I would say that the individual was disposed to be very liberal, but the organ of Conscientiousness is flat.

I have considered the power of conscientiousness as the basis of all legislation, for without the fundamental feeling of looking for justice, no laws could have been made; for it is the desire to be right and just to others as to ourselves, that we must admit. Some men merely decide by firmness, and their will becomes the law; but I consider that the fundamental feeling of the desire of justice is the basis of legislation, and this combined with other feelings, must point out to us what is to be regarded as just or unjust.

I shall next consider a power called Hope. It has been ranked among the moral and religious powers, because it is essential to belief.

Lecture IX.

I beg leave to call your attention to certain distinctions which have been made between the moral and religious feelings. I know that the same thing in its application can be called moral and religious. I have spoken of several powers which, in their application, are moral. And first of Benevolence. We have seen that the cerebral part situated anteriorly in the upper region is destined to what is commonly called goodness of heart, or benevolence; we have also seen, that the organization situated in the middle part of the head, at the fontanelle of children, is destined, according to our observations, to Veneration, which being applied to superior beings is called "adoration," and when applied to beings around us, is called "respect." I have spoken of an organization destined to what is called Firmness in phrenology, often in common language the will; we have seen that individuals who have this cerebral part large insist much upon their ideas; they say, "I will do so," not "I desire to do so." I have also spoken of a

power under the name of Conscientiousness; we admit that there is, in every man's mind, a primitive feeling which disposes him to look for justice, and we have then distinguished between the power and its application. All these feelings, in their application, are moral; and I come now to a still more difficult part; I confess it freely; it is to speak of certain feelings situated in the anterior part of the head. Phrenology embraces the whole of the human mind; we have considered man as an animal and as a moral being, and we have now to consider him as a religious being.

Hope.

I shall speak of a particular feeling under the name of Hope. Is there anything in man which may be styled hope? It is a feeling necessary in every situation. What would a man do without hope? Are we not sometimes infinitely more happy whilst hoping for a thing than after its enjoyment? Is it not necessary to possess this feeling? Philosophers and others have spoken of many impulses to action, as desires, but there is something in man not to be confounded with desire. Each power in itself desires, but we have not hope in proportion to what we desire. There are some who have this feeling in the highest degree, sometimes even to such an extent as to become deranged. Others who have not quite so much of it, but are nevertheless continually scheming—building castles in the air; they form plans and immediately think they must be realised; they think and immediately begin to act, without reasoning—without caution; this is the abuse of the application of this fundamental power. There are others who so easily despair that they never hope; if they undertake a thing they scarcely ever hope to succeed.

You may discover the organization in a most positive way; look at both sides of Veneration and you will easily perceive a great difference in the development of individuals.* You will see that this cerebral part is variously developed in different individuals, very large in some, very small in others. Some

* The location of the organ is immediately in front of Conscientiousness, and laterally of the back part of Veneration. In many persons a distinct depression will be found there, in others a distinct swelling, and the character of the individual will be in accordance therewith. The writer is well acquainted with a man who has a large development of this organ, and who, stimulated by exessive hope, has for years past been devoted to speculations of the riskiest and most forlorn kind. But, though disappointment has followed disappointment, and failure and ruin, such as would have driven hundreds of men crazy, have long been table and bedfellows, yet he never doubts, never despairs, never relinquishes one jot of anticipation. He is going to succeed, going to win his thousands and be happy. Meanwhile he eats the bread of sorrow almost cheerfully.

have the middle part very much developed and the lateral parts depressed; and the lateral parts will be strongly developed in others. (Several casts were shown, in which great differences of these organizations were evident.) You see here a great development of Cautiousness, but not much of Hope; looking at such an individual I should say, that he fears more than he hopes. Some individuals are very fearful, scarcely ever hope to succeed. There are some persons who make various projects, various plans, and then give them up; they do not consider them beforehand, and in such persons you may always expect to find a large development of Hope; there are others again who undertake very little. If I see an individual with a large development of Hope, and if I see also Acquisitiveness large, I know he will undertake things from selfishness, and so of the other powers, being combined, we may trace somewhat of the application of primitive feeling, but this is not our object now.

This feeling, in common life, is very important; it is essentially the parent of the religious sentiments; it is this power which disposes man to hope for future life, that gives him a "longing after immortality;" we are so often deceived in this life that we hope for something better in another. There is a natural feeling in man to hope for things; and Christ himself taught man to hope for something better in a future state. In conversing with persons of religious habits, you will find some who hope much, others fear very much, and you will be sure to find this cerebral part large in the former persons. I give this organ as quite certain, and the power is that which gives a disposition to hope. Look at such a head: do you suppose that the person would be influenced much by the hope of future rewards, or the dread of future punishments? This was a criminal who did not betray the least fear even at death. Compare it with others; can you not distinguish a great difference between them? (Several specimens were shown of different degrees of development of the organ of Hope.)

Marvellousness.*

I come now to the most difficult, I confess, of all the organs, and it is one extremely active in mankind. Men have been conducted by their feelings in all times, and still are in a very great degree. There is something peculiar in the human mind; if we consult the history of ancient times, we find that

* The American phrenologists have given to this organ the name of "Spirituality," and it has been generally adopted in England, whether wisely or not is perhaps doubtful.

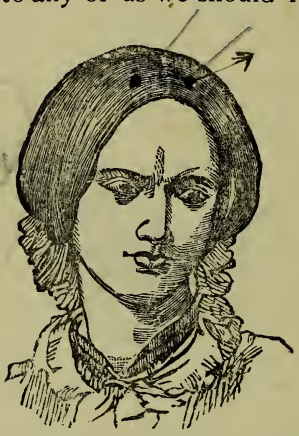
man has always been pleased with the ideas which have reference to superior beings; if man is to have commandments, he wishes to receive them from above, and he is very attentive to such as he supposes come from above. The Greeks had their oracle, to the instructions of which they paid the greatest attention; the Romans looked out for supernatural events and miracles, and they had their oracles, to which they attached much importance; if a crow flew to the right or to the left it was regarded favourably or unfavourably for the intended enterprize; if the intestines of an animal offered for sacrifice had certain appearances, they were encouraged to undertake, or to abstain from doing, a thing intended. Indeed there would be no end if I were to mention every proof of the tendency of the human mind towards what is miraculous and supernatural. I find that it is a feeling still very prevalent in persons of all degrees of civilization. The savages are powerfully influenced by their sorceries and witchcrafts, and so on;

Marvellousness large.—Greek Skull.

and if we observe even civilized nations, we shall find abundant proofs of the existence of the same feeling. I have only to contend for the existence of the primitive feeling, not of its particular application. I shall not say whether the Greeks and Romans were wrong or right,—that does not devolve on me to prove; I only assert that we find them disposed to entertain such feelings.

We come to more civilized beings—to reasonable beings. A man, by an excess of Veneration, will become superstitious, and some will say that they believe in witches; this is the love of the marvellous, you see. A man has a fundamental feeling, by which he wishes to be in communication with something superior; and we must take great care not to be led into abuses by this feeling. I am sometimes astonished to see it so strong in individuals; if you reason with them on their religious opinions, they will say, "Ah!" there is no reason to

be admitted here, this is a mystery; and the more mysterious the better are they pleased. Others will say, that they will not believe the religion of other nations, of other individuals. There is the greatest tendency to believe in miraculous and mysterious things, and we see that reasonable persons, even persons who reflect, have the greatest difficulty to overcome certain feelings. Look at such a man as Samuel Johnson; it is known the great difficulty he had to overcome certain opinions which he had formed. If you observe the common people, you will observe this feeling very active in all countries; they do not like to change their places of residence, or to be married on a Friday; if the salt is turned over, some mischief is to happen; and then there are winding-sheets on the candle, and various prejudices. If any person would tell a mysterious story to any of us we should feel amused by it;



Marvellousness large.—CHARLOTTE BRONTË.

we are all fond of fictitious stories. Tell people astonishing stories and they will be pleased. In theatrical representations, introduce a multitude of transfigurations, incantations, enchantments, and so on, people will be amused, not only children but men. So that you see there is a feeling which disposes mankind to be amused by such things.

In religion, even of a refined order, you will see this feeling active. We find that some individuals place the greatest confidence in their faith, however mysterious, and there are others who would begin by reasoning, and you will find the greatest difference in their organizations; for he who wishes to receive his religion by reasoning has not much faith. I have repeated this assertion, and it is an important one in the consideration of the philosophy of the mind, that all the feelings

are felt. Every one from infancy is attached to things which savour of the wonderful, and such as appear supernatural, but different in their degree; and I repeat that I do not speak of their application, but of the fundamental feeling, and that those who have the feeling strong have a peculiar organization.

This feeling is like all others, blind in itself, and if you allow it to act alone, it will produce disorders, as well as the other feelings. Recollect, however, that I do not speak against its useful application, but merely assert that disorders result from it when in excess. In phrenology we admit that the powers are given for certain purposes, but not to be abused; we speak of hunger and thirst as natural to man, but we do not say he is to be a gourmand; we speak of the love of children and of the desire to acquire, but not so as to be unjust to each other; let us be attached to each other, but let us not blunder about it. If I speak of the love of self-esteem, or of the power of destructiveness, I do not say man is to destroy himself or to be proud. I think that man is endowed by the Creator with power to destroy animals for his sustenance, but not with authority to torment and injure them; no, Benevolence, which is also given to him, counteracts that. Benevolence may produce disorders, but we must not encourage idleness to be benevolent. So of Hope, we may hope for things that are reasonable, but not such as are impossible. Let us admit hope, that hope which leads us to the belief of communication with superior beings, and which induces us to believe that we shall live hereafter with superior beings. There is a point of harmony to be arrived at, and we must try to bring the whole into harmony, and not let one power run alone; for if we let any one power go alone, and not in combination with other powers, the result will be bad.

I spoke of a feeling of this kind, and formerly I called it "Supernaturality;" I have called it so in my French work on phrenology. I spoke of some singular observations made on the heads of persons who were visionists, who thought they had seen ghosts; and it is said of Socrates even that he had seen a demon. Some people have said that they can raise the devil, and many persons have given figures to him. Many people, reasonable enough on all other subjects, believe in visions, they believe in them, and think they see them. I will show you the head of a man of your own country (William Blake), who wrote a book on visions; and if you look at his head, a little anterior to Hope, you will see that it is very full there. Many other individuals have come under our observation, but I merely give these as examples, because nothing can be done in phrenology without observation; we may observe

the manifestations of the human mind, and arrange them afterwards, but we could not say there is a fundamental power of believing in the existence of ghosts.

During the past few years I have reflected upon this power, and by degrees I have found that it is the organization which undertakes the support of faiths. Seeing that some individuals had a greater tendency towards the dogmatic part of religion, and that others directed their attention more to the moral actions, I was induced to observe their organization, and I found that such persons were alarmed at hearing of or seeing ghosts. I found that such as believed in ghosts, and have a tendency to the miraculous or to supernatural events, were large hereabout, and seeing this, I called it "Supernaturality" in my first work, published in 1818, but it is really difficult to find names for the primitive powers.

The object of phrenology is to display the fundamental powers of the mind, to discover the parts of the cerebral organization with which they are connected, and then to find names to express them correctly, and this is often as difficult as the two first. Those who believe in wonders and miracles have this part large. The Edinburgh phrenologists, particularly Mr. Combe, call it Wonder; that is a modification of the expression I have used, but there is no doubt as to the power or the organization: as to the name I will not dispute for that; we have no authority for names, and I am ready at any time to change the name of a power if a better can be substituted. I should not, perhaps, be able to speak so certainly of this particular feeling, if it were not the cause sometimes of mental derangement. It is for me to call your attention to this feeling, and I leave it to you to say, whether you can find an appellation preferable to the one I have affixed to it.

This feeling ought to be brought into combination with all the rest; I like to bring them in harmony, to bring them together. This feeling is sometimes excessively active in insane persons, and whenever I see such particular manifestations, I am sure that there is something primitive in the feeling, and I look then for the organization. The powers are given to produce certain satisfactions; but it is not every one that is quite satisfied with this life, and therefore looks for future satisfaction, and he does this by hope. Certainly any one, without having religious faith, will sometimes be astonished, and it is not necessary to go far for him to feel astonishment, for if he will reason with himself as to the means of his existence, how he is nourished, how his body is built up, he must say that it is incomprehensible; we must refer it to some more ultimate cause, and it is said we shall know the master by his works.

I wish a term for the power itself, not for its application; and therefore, perhaps, the name of "Supernaturality" is not exactly correct. I look in Johnson's dictionary to find the meaning of "wonder," and "supernaturality," and "marvellousness." I find that "wonder" is defined to be merely an expression of surprise at any natural event; but this feeling I am speaking of is not confined to natural events, but has a still greater tendency to supernatural events, hence we seek for a name which embraces both, and looking at "marvellousness," I find that it has in this language a twofold meaning, that it expresses both, and if I were to choose the term for this power, I should prefer "Marvellousness," according to Johnson's definition.

But you must not suppose that because we differ in names we differ in the science. I must confess that the Edinburgh phrenologists have done great good to phrenology by taking it up in the spirited manner they did; it was laughed at by every one, because it was much easier to laugh at than disprove it, and I acknowledge my thanks to the phrenologists of Edinburgh, and I am sure that if it had not been for their exertions, for those of Mr. Dunkin and Dr. Elliotson in London, and the large collection of casts made by Mr. Deville, phrenology would not be known half so much as it is in Great Britain. If we differ from each other in opinion, we must go to nature and see what she will show us; whether Dr. Gall, or Mr. Combe, or myself, may differ in our opinions, we cannot decide but by an appeal to nature, and we must be content to be instructed by her.

This is a great advantage which phrenology has over all other species of philosophy; we go to nature, not to the study, to decide our differences. There will be differences among phrenologists as to the application of the fundamental powers, but to ascertain what mental operation must be ascribed to each power, is the great object. Is there a fundamental power to regard with surprise and astonishment natural events? Then let it be named accordingly; but if there be a power to regard also supernatural events, then the sphere of its activity is enlarged, and I think that the name attached to it should express this. We cannot say that we have the real picture of the Saviour, but the ancient artists have given such a shape to the organization as represents him disposed to believe. This (a mask of Jupiter) is certainly an extravagant representation; it is larger than natural. They have given to Jupiter a much larger forehead than is natural. Let us look, however, to smaller proportions in men, and be contented with less development.

Whenever this feeling is strong, you will find great breadth hereabout, upon the upper and lateral part of the head, and it is, generally speaking, much more developed in this country than in France, a little anterior to Veneration, by the side of Benevolence. Shakspeare, in his conceptions, indulged in this train of ideas, and you know that he has succeeded in making great impressions on the minds of others. It is found large in the head of Johnson also, and in the representations which have been made of angels. It is very singular, that among all antiques, the artists have given to none of these great men such a fulness as to Socrates. It is certain that they paid great attention to formation, and we see, among the Grecian sculptors, that they paid great attention to the form, and selected that which they considered the best. We all know that a Grecian nose is considered most beautiful, but it is not every Greek who has a Grecian nose.

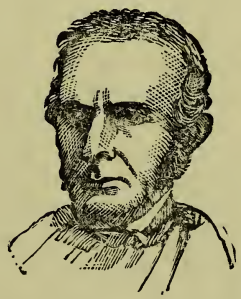
To return, however, to the subject, we find that some men, as religious martyrs, have died for their faith, and we find such persons very broad in this part of the head. If you examine the upper region of the head, begin in the middle line, and then examine the parts laterally. I would say of such an individual (having Veneration and Marvellousness flat) that you must not begin with the religious feelings in him. It appears then that man is by nature invited to, and has received a cerebral part to manifest marvellousness.

Ideality.

I go now to the consideration of a power which gives poetical talent. Poetry does exist, and it is admitted that education cannot give this peculiar talent. We never say that children acquire the talent to become great poets. "A poet is born a poet," that is an ancient maxim. Look at the organization given by the artists to the poets of ancient times, and you will see that they are broad here laterally. Horace, you see (showing a bust), is represented with this part very prominent. Take your own poets, compare the breadth of their heads hereabout; look at Milton, and compare Milton with Locke, and you will observe great breadth in the head of Milton in this part, and narrowness in Locke. Many others I could show you; here is the cast I had taken from the head of a shoemaker at Paris, François is his name; he is quite a natural poet, he makes shoes and makes poetry by turns. Here again is the bust of Homer, but it is said we have not the true bust of Homer; whether we have or not it is singular the artists should have given to him from guess that organ

ization which corresponds with his character before phrenology was known as a science. Look at those of the modern poets who excel in the true poetic genius and you will find them broad here.

Still, not all men who are broad here are poets. If poetry is one talent, can you ascribe its modification to one power? No more than you can the religious manifestations to one feeling, or the moral feelings to one power. A great number of conceptions are necessary to constitute a poet, and these cannot depend on any one power. Poetry is the result of a great combination of powers, and there is something very peculiar in it. One man tries to write verse and it is prose; another man writes prose, and you will find that it is quite poetical. I say that there is a feeling essential to constitute a poet, but yet this feeling may exist without the individual's being a poet. It is necessary, to write poetry, that there should be a certain warmth of feeling, an exaltation of the



Ideality large.—WHITTIER, the American poet.

mind, not merely to describe things as they are, but to give the description a tinge beyond what is real, there must be a little fiction.

Some men in looking at things as they are, become unhappy, because they do not find them as they should be. The feeling of "Ideality" is the one I speak of, whether the conception be moral or religious; in all good poetry you will find this prevailing; but as to rhyming, that does not depend upon this power. Let me see a man wild in his conceptions in his poetry, or if he be an artist, in his designs, and I shall expect to find this part broad. It is a feeling, too, which disposes men to become unhappy, since it induces them to look at things as they ought to be, rather than for things as they are. It is a power which gives a great exaltation to the feelings. Here is the head of a woman who lived in a poorhouse; this organ

is very large, and I am sure, that whatever feelings she might have possessed would have been exalted by this. Those who have a great combination of this power with the other feelings are very sentimental. I give the organ as positive, but do not speak of the application of the power.*

Lecture X.

Among the powers which I call affective there remain yet two to be considered; one of them is commonly called, in England,

Wit.

If you ask, what is wit? it is difficult to give a definition, though everyone feels what it is. I formerly reckoned this manifestation of the mind among the intellectual powers, and I cannot think a man can be witty without intentions; but the great object of phrenology is to ascertain whether, what in England you call wit, and what the Germans call *witz*, and for which the French have no proper term (they call it *bel esprit*), is a fundamental power of the mind. I have just now to mention that I cannot conceive any true wit without intellect, but we see some individuals in whom this power is manifested without much intellect; we see witty conceptions in their acts without reasoning, and there are children fond of playing with each other to amuse, and fond of being funny, as it is said. If I begin with the observations made by phrenologists on the configuration of witty persons, I think that will be a good way. Here is the head of a witty person, a man famed for his wit, Sterne; in all his conceptions he was peculiar; we find that his head is broad here. We find that there

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* Sublimity.

Since Spurzheim's time the organ of Sublimity has been added to the list of original faculties of the mind. Its location is between Cautiousness and Ideality, and it may be said to partake of the nature of those two faculties, namely, a blending of the love of beauty with awe. It appears, however, to be a distinct organ, and may be found large in development when the neighbouring organs are small. It was included by Combe and the earlier phrenologists in Ideality, though the former surmised that it was a distinct organ, and from its proximity to Cautiousness might have to do with the feeling of the sublime. The function of Ideality seems to be simply to give the sentiment of beauty, and in its cultivated state imparts taste and fancy; whilst to Sublimity belongs the power of developing the imagination in its wilder and grander forms. "It is the sentiment of beauty mingled with awe; it imparts a sense of the vast, stupendous, and illimitable, and gives to the mind the power of enjoying nature in its ruggeder and more magnificent forms, even while the chill of fear creeps along the nerves" (*Manual of Phrenology*). Those of the poets in whom Sublimity preponderates delight to depict gloom and terror; its influences are markedly manifest in Dante, Milton, Byron, Shelley, and Wordsworth. It is an organ that is large in the Scotch, and generally in people who live in mountainous districts.

are some poets who have witty conceptions, and they are broad here laterally. If I see a fulness here above the external angle of the eye, anterior to Ideality, then I conclude that the person has wit. Some individuals have this power so strong that nothing goes through their brains without receiving a tinge from it. Now this is an individual (Voltaire) who could not contemplate any subject, not even a holy subject, without giving it a peculiar tinge of this feeling, and you see the head is broad here. There are some individuals who, in their countenances, show what is called wit, such as comedians; Garrick, for example; everyone laughed as soon as he appeared, and we find the organ largely developed in his head. There are other good humoured persons as we call them; they tell a story, and everyone is amused; but the same story

Wit or Mirthfulness large.

told by another would excite no attention, and you will find in the former this organ large. We give here a peculiar sort of mental operation, which we call wit or good humour, and we find the organisation full in the anterior and lateral part of the head.

There are other persons again who like to tell stories, but always with a kind of mockery, and they say things with a feeling of irony, have a sarcastic way of speaking of anything, and if they are offended with any individual they give a sharp reply when asked a question; if you look at such, they are broad here. Now if I were to speak of a particular application of this power, I should be obliged to speak of a combination of all the powers, and if you learn the combinations you will find why persons who tell stories succeed in amusing, and

why some persons give a sharp, cutting reply, and why others give a tart answer, but not so severe as the others. Now, if a person have Destructiveness large, and Conscientiousness small, with this of Wit large, that individual will be very severe ; but a man having combined with Wit Self-esteem large, would not be so severe in his replies as the person I have first mentioned. There are men in society who give perhaps witty, but unguarded answers, and they give offence. Some, being offended, will go away and say nothing, while others will say at once what they feel. Here is the cast of an Esquimaux's head ; he was a very funny being, and you see the organ is large in him.

If you come to artists, there are some who prefer caricaturing to anything else, and some, if they try to make a caricature, could never succeed ; now these artists who succeed best in caricaturing are full here, and I am sure this was the case with Hogarth. I have a cast here of a young boy, who had a great talent, constructiveness for cutting out animals, but he always preferred to give the animals such attitudes and positions as would make people laugh. In all countries you will find persons who have early in life shown this power strong. Here is the cast of the head of an Irish boy, eight years of age, and this part is largely developed. We see, even among musicians, that there are certain composers who produce peculiar kinds of music, witty, striking music, so to speak. In architecture we find certain persons fond of whimsical constructions, and so we shall find that no single power gives great talents ; if it did, talents would not be so scarce, but a great number of talents are necessary in order to arrive at great perfection in any science.

How seldom does an artist exhibit great accuracy of colouring and of form ! He may colour well, but his forms are bad, there is no proportion between them. I said in my last lecture that there is a certain power necessary to all parts, there must be a certain inspiration in their conceptions, but the other powers give the modifications to their productions. It is the same in music,—a power is necessary to make a musician ; but some are philosophical in their compositions, whilst others are quite superficial ; some are quite witty in their conceptions, and introduce chords which are quite amusing. I have been told by an intimate friend of Joseph Haydn, that when he saw, at the performance of a piece of music, his audience inattentive, and some perhaps quite asleep, he would introduce some dreadfully discordant sounds to rouse them, to bring them to their senses, and then go on with the piece as before. So that in common life, among artists and

others, in the liberal sciences, in the higher conceptions, the power is manifested in different degrees, and is called, in the highest degree, wit.

But what is the fundamental power of the mind, the manifestation of which we call wit? It appears to me that there is a feeling given to man of this kind, but I do not consider it as an intellectual feeling, although it may be combined with the intellectual feelings, and receive names accordingly. We must first have clear ideas of the primitive powers, and if we have not, we can never express ourselves clearly. Hitherto the knowledge of the mind has been vague, and principally on this account names have been attached by philosophers, not to the primitive powers, but to their applications. It is that faculty which the English call *wit*, which the Germans call *witz*, and the French *bel esprit*, and I am sure that this power is not in such combination in this country as it is in France; the sense, however, remains the same; it is the wish to amuse others, but the application will be modified according to the combination of the other powers. If you find a person who, like this man, Voltaire, ridicules so many things considered sacred by others, you may be sure that Veneration is not much developed with this power.

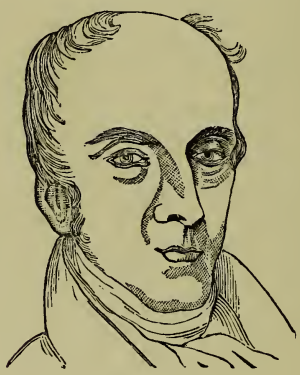
Is wit a combination of the intellect with the lower feelings? Shall we call it genius? Genius is supposed to exist only in superior intellects, and if to speak of things around us in a merry way be genius, then idiots have genius; for some idiots who have this power strong, and hope strong, speak of all things about them as if they were heavenly. It is fundamentally a wish to amuse, and it will vary in its application according to the activity of its combination with other powers.

Imitation.

We see that some persons have a great talent at imitating others, and this art is particularly exhibited in children; if they observe anything going on, or hear anything, they try immediately to imitate it. There are adults who are particularly inclined to take off others, as it is termed; whatever they see done they like to imitate. There is a peculiar talent then for imitation, and we see this power more active in children than in adults. Some philosophers have said, that man learns everything by imitation; but that is not the case. We see this power very strong in some adults, and it is a power essential to great actors—to those who excel in dramatic representations; and we find that it is differently exercised even among those persons. There are comedians and tragedians,—some who excel in the imitation of the softer

feelings, and others who excel in imitation of the stronger feelings; some excel in the representation of imperial characters, others in the representation of mild characters,—that, however, is not conferred by this power.

Many men, who are good actors, have great power of imitation, but they could not invent a character; one power is sufficient to imitate, but to perform a deep character many are requisite. The character can only be well represented by him who possesses the feelings which that character is supposed to feel, because these feelings influence the whole expression, the whole appearance, and when I come to speak hereafter of the natural language, I shall describe this more fully. We see that in the arts imitation is very useful, but we find that some men who can copy very well cannot invent anything; if they try to represent a figure in a painting, they



Imitation large.

may give it a correct form, but a person who looked at it would say it is stiff, there is no expression in it. If you look at a statue well executed, you would say, there is life in the statue, you may almost fancy it about to speak, and those who excel in giving expression to the various productions of art, have the power I speak of.

Now it would be impossible to guess at the situation of organs, but experience shows that the organ of Imitation is situated here, at the upper part of Wit, by the side of Benevolence, and whenever you see the organisation full here, you may be sure that the person has the faculty of imitation. There is in this skull, said to be Raphael's, the organ of Imitation very large; it has Constructiveness large also, and it has form and expression: it combines, indeed, all the qualifications necessary for a great painter. I have mentioned

before, that there are several individuals who doubt whether this is the true skull of Raphael, but I know that you might look at thousands of skulls before you would find the manifestations of all the talents which have been shown by Raphael, and that would, therefore, be to me a great proof that it is the true skull, judging from the combination of the powers which it exhibits. I have seen many skulls in the catacombs, and other places, but never saw any one that would do for Raphael so well as this. The organisation is quite ascertained, and in practical life you will find that those persons who excel in imitation, whether in the arts or in common life, have this cerebral part large.

These are the feelings which I call *affective*, because the affections depend upon them, and it is important to recollect that they exist from within. There is a new series of powers to be considered, and you know that the ancient axiom of Aristotle, brought into more general repute since the time of Locke, that "there is no power of the mind which has not been derived from the external senses"; but if every mental operation is derived from without, then we could instruct our animals, because they have the external senses as perfectly as ourselves, and hence an interesting source of intellectual activity would be discovered. But what we have affirmed hitherto as being affective in the mind are the feelings, the propensities, and the sentiments, and all these have their source from within, and they act against our will—are not under our control. You cannot say that I shall have this feeling or that feeling, you cannot say, after dinner, "I will be hungry." The feelings are all blind, they act more or less, but only as impulses without judgment, and every one of them acting by itself would produce disorders. Imitation acting alone would make a man a buffoon; caution would make a man fear his own shadow; and benevolence, veneration, self-esteem, or the love of approbation, acting alone, as I have before shown, would produce abuses.

There is a remark which I have to make, and which you must keep in view, that by far the greater part of the cerebral mass is given to the feelings. We have examined all the posterior and lateral parts of the head, and the superior part of the head, and we have arrived only as far as the feelings. Which is more active in man, the feelings or the understanding? I would ask whether we act by the feelings or by the intellect? If you appeal to your own consciences you will say that the actions which you do with respect to other beings, and even to the Supreme Being, you do by the feelings; the first impulse is given by feeling. If you would pay attention you would

find that by far the greatest portion of the cerebral mass is that which is given to man in common with animals; and the other part, by far the smallest, is allotted to the feelings proper to man. I would ask you whether you do not find this to be so? Hence arises the great necessity of education to exercise the higher faculties, to give them an ascendency over the feelings.

The results of our inquiries thus far are these: first, That the brain is necessary to the manifestation of the feelings; and it is astonishing how anyone can doubt that proposition. I am sure that those who object to it have never looked to nature. Secondly, We conclude that it is necessary to the manifestations of the mind; that it is the organ of the feelings and of the understanding. There are some philosophers who do not like to acknowledge that the brain is necessary to the manifestations of the feelings, although it is much more easy to show that than it is that the brain is necessary to the intellect. Would you say that because a blunder has been made in phrenology there is no phrenology? Yet there are those who have made blunders in phrenology, and still do so.

I come now to the forehead, and to consider the intellectual operations.

It is necessary to divide it into smaller portions than we have done the other parts of the head, and, therefore, mistakes become more easy here, than in showing the seats of the inferior feelings. When you reflect for yourself you will be convinced that it is much easier to show that the brain is necessary for the feeling than for the intellect, and yet everyone admits that it is necessary for the intellect. We want understanding: well, we admit there is understanding in nature, and that as the Creator has given us feelings, He has also given us other powers, which we call intellectual, in order to distinguish them,—powers by which we are enabled to acquire a knowledge of the external world, and of the physical qualities of the objects around us. The feelings are not under the control of the judgment; we may have an inclination to eat, and nourishment may be placed in the room, but the presence of the food is not the cause of our being hungry; to be able to take food there must be an appetite for the food. The feelings have not an object for their satisfaction, they merely wish to be satisfied, and then comes the intellectual power to act, to point out in what way they may be satisfied, and this is the cause why they have been confounded, their actions being simultaneous.

In speaking of the intellect, we must examine the external senses; certainly they are necessary as intermedia between

the mind and the external world. The mind cannot act upon external objects except by instruments, and the senses are necessary to that communication. There is activity in the mind without the senses; but I will not anticipate that. I would ask, however, do we acquire a knowledge of the world by the senses alone? It is said that man acquires the knowledge of the world by the five senses: Is this true? If we go to animals, we see that many of them have some of the senses more perfect even than man. An eagle sees, from the immense distance at which it is poised, the hare sitting in the grass; the turkey sees a bird of prey when man cannot, and gives signs to her young ones to hide themselves. Examine the other senses of hearing, smelling, and you will find that they are even more perfect than those of man; yet animals never acquire that knowledge of the world that we acquire.

To consider man only; do you think you can acquire the powers in proportion to the activity of your senses? Ask an artist, who has great facility in distinguishing colours, if he could acquire from that a talent to paint, and I am sure he would say no, there is a peculiar instinct for that; but it is sufficient for us to know that there is a something internal necessary. An idiot has the external senses as perfect as another man, but has he ideas from them? There is an excellent refutation to such a doctrine afforded by the person of James Mitchell, of Scotland. I dare say many of you know his history. He was born perfectly blind and deaf, and consequently dumb; he has arrived at the age of twenty-one years without any education, and yet he has shown from infancy an activity of mind. He has shown the existence of caution, of self-esteem, of benevolence toward his family, and it is really astonishing how this young man arrived at the possession of the individual feelings; to receive them from without was impossible, he was cut off from any communication with external objects. Yet he had self-esteem, and acquisitiveness, and other feelings he thought it necessary, under certain circumstances, that he should conceal; he was allowed to smoke four pipes of tobacco in the day, and if any persons came and gave him tobacco, he would conceal it until he had received from his friends his regular allowance. He was fond of having new clothes, and would destroy his old ones. He manifested a great desire to become acquainted with the external world, and wished to obtain a knowledge of the things around him, and certainly this was very peculiar. He had a good organisation, and the fundamental powers were evident, so that we must admit that to acquire knowledge the external senses are not sufficient.

I wish to call your attention to three points: First, That the external senses are not sufficient to explain the intellectual operations of the mind.

Secondly, That every external sense has its power perfect in itself, and is not, as to its power, dependent on another. I am sure that each of you has heard of the rectification of of the senses, namely, that we learn to see perfectly by touching, and that without touching we could not see, and so on; but every sense has its own power. We do not taste, because we can hear; nor see, because we can touch. A person might ask, when he plunges a stick into the water, Is it straight, or is it crooked? It appears crooked, but when it is taken out it appears straight, so that it is the same afterwards as before, and before as after. This doctrine appears to have been adopted from observing that children, soon after birth, show a great wish to handle everything they see, and appear then better satisfied; but the truth is, that children are born with the organs of vision imperfect, and as soon as the eye becomes perfectly adapted to the medium in which it is placed, sight is perfect also. However, we must admit one modification of what is called rectification, each sense can acquire that knowledge of the world which the others cannot. Hence, when a stick is plunged into water, we see it crooked, we touch it, and our knowledge is rectified, but not the senses. Can the sight rectify the touch, or the touch the sight? If you place a bit of sticking plaster upon the finger of an individual, so as to take away the sensation from the finger, will that enable him to see better? By the action of each sense our knowledge is corrected, but not the senses themselves.

Thirdly, That as the powers of the external senses are very limited, so our notions derived from them would be few. I will give you an explanation of what I mean: suppose we say that the mind acquires knowledge by the external senses, but the knowledge acquired merely by the senses is very limited; the greater number of notions we have of the world requires some intellectual operation; hence the necessity of some cerebral parts besides those assigned to the senses. The knowledge we have of individual beings around us, of the physical qualities of the objects—such as their form, size, colour, number, motion, not only, indeed, of their qualities, but also of their relations—has been ascribed to the external senses, but the external senses alone cannot explain this knowledge.

That part of the brain situated in what is called the forehead has something to do with acquiring a knowledge of external objects, and in making us acquainted with their qualities and relations. The first thing is to examine the

forehead in general, and I cannot call your attention enough to this part, if you take any interest in the intellect of man. You must make this a particular branch of study ; difficulties above difficulties are here. I wish first to call your attention to the different sizes of foreheads.

In the scale of beings, we remark that the cerebral parts above the nose increase in size in proportion as animals advance towards the organisation of man, and we infer that the intellectual powers have the forehead assigned to them. Look at the wolf, and if you remove the olfactory apparatus you will find that there is no forehead left, and in the fox you will find little more than in the wolf; but in the more intelligent dogs you will find more than in the wolf or fox ; and in proportion as animals exhibit higher degrees of sagacity, or what we call in them instinct, we find the anterior lobes of the brain more developed. But to come to man, draw a comparison between those who have exhibited the strongest intellects, with others who have manifested very little, and you will see the greatest differences, and such differences as must lead you to acknowledge the need of the forehead to the display of intellect.

Here is the skull of a man twenty-one years of age, with very little brains in it ; now if man is to learn everything from without, and if the anterior part of the brain more especially be not necessary for the possession of intellect, make such a man become a Bacon or a Newton. It may be said that education makes the difference, but although we admit the influence of education as a kind of moral culture, yet if the seed be not in the ground we can expect no harvest. Here is the cast of a man who lived at Amsterdam, he was twenty-five years old when he died, and he was a complete idiot ; now what could you make of such a forehead? (Showing it to the audience, the head being very small.) If the various tribes of mankind spread over the surface of the globe were examined, great differences would be found in the intellectual powers, and differences equally great would be found in the size of their foreheads. There are some persons who say that there are several species of mankind ; but such an opinion is erroneous, for all the characteristics by which animals are separable into species are to be found in every man, so that there is only one species, although there are varieties. An African is inferior in intellect to a European, and one European is inferior to another. But among ourselves, even in the company before me, there are great varieties in the shape of the forehead, and so different are the foreheads of individuals, that I am sure you might as readily distinguish persons by

their foreheads as you do now by attending to their faces, or eyes, or noses.

Everyone may have a talent even with a small forehead; he may have, I say, a talent; but see whether an individual with a small forehead has ever exhibited great comprehensiveness of mind, whether he has shown great powers as a metaphysician, a mathematician, a poet, or a painter; you may rely on it that such a man has a forehead large. Everyone may make himself a useful member of society even with a few powers; but where you find a person who excels in everything he undertakes, and understands everything, you may depend upon it that his forehead is large. The ancient artists have given foreheads to the gladiators quite different to such as they have given their great men, such as Demosthenes, Socrates, Pythagoras, and Hippocrates, and to the divinities they gave enormous heads, as we see of Jupiter and others; but these are all exaggerated representations.

In my next lecture we shall come more to particulars, and shall begin with the powers situated in the anterior parts of the brain.

Lecture XI.

We are now arrived at the consideration of the forehead, and no one can be more convinced of the necessity of the brain than myself to the manifestations of the mind. It is a common opinion that the intellectual powers depend on it; but I confess that I feel more difficulty, by far more difficulty, in showing that, than I have in showing that its existence is necessary for the manifestation of the powers called feelings. I would not advise you to begin the study of phrenology with the intellectual region, for there are difficulties upon difficulties in the forehead.

Size.

We have already seen that foreheads are very different in their general size. Now as to the size of the forehead, we must make some reflections. The size alone is not the cause of the greater activity, it is only one of the conditions. In speaking of the intellectual powers, we have to consider the influence of the constitution, seeing that with foreheads of equal size, one individual will have powers more active than another. But we come now to the most immediate difficulty, which is to ascertain correctly the size of the forehead; not only is it difficult to judge of the different degrees of activity, but it is extremely difficult to ascertain the size of the development of the forehead. Now you would find that persons

beginning with phrenology would say this is a fine forehead (showing one nearly perpendicular, but not very prominent), but a person of more knowledge would say, "It is very indifferent." Here is another; it is covered, as you see, with hair, and it seems a good forehead (showing a model), but is it so really? It appears large, but you might be deceived by such a forehead. Now if you reflect on what I have said on the divisions of the head, you will discover whether it is a good or bad forehead. I divided the head vertically into two regions, the one anterior, the other posterior to the ear; beginning then from the ear, see whether the greatest mass of brain lies anterior to it, or posterior; draw a line from the ear to the centre of the forehead, and see whether the radius is long from that centre. You see, in the model I have just spoken of, the distance is nothing, although it appears at first sight a good forehead.*

Therefore, in examining the size of the forehead, do not be satisfied with taking a front view of it, but see it also in profile, and observe whether the whole mass comes out. Moreover, in the forehead in general you will find that the lower portion is commonly more developed than the upper. In consequence of the greater development of the lower part of the forehead, the whole may present a declivity, and you might be deceived by that, and say it is a bad forehead, when, in fact, it might be a very good forehead. (Two engravings of an oblique and perpendicular forehead were shown.) Now a beginner seeing them would say, "The straight forehead is the best, there can be no doubt of that;" but if he were to take a compass and measure the two, he would find that the greater development of brain from the ear would be found in the oblique forehead in this instance; so that you must examine the size in all its dimensions. Examine not only the surface or the front, but whether from the ear the cerebral mass comes out, and if you see a person with a reclining forehead, that may be caused by the greater projection of the lower than the upper part, and yet the upper part may be well developed. This, then, is one difficulty; and we now come to another.

The organs situated here are all small, and we have some difficulty to distinguish one power from another, as the powers are numerous. If we take the posterior part of the head, we have there merely three powers occupying a large mass of brain double the size of the forehead, and yet we divide the forehead into fourteen parts. This division, or arrangement, is not arbitrary, as some persons suppose, but is such as is indicated by nature. We observe that certain feelings are

* See p. 449 PHRENOLOGICAL MAGAZINE for 1881.

combined with larger masses of brain than others. If the individual organs be large here (the forehead), it is easy to distinguish them, but it is not so easy where they are small. Every person may have powers enough to be a useful member of society, and yet not enough to constitute him a genius. Everyone may have faculties enough to exercise his profession, but very few will be able to say, "I have a great genius." A man may understand mathematics without becoming a Newton; another may be able to put colours together without becoming a Titian. Great talents are rare; but if you find an individual who excels in any branch of the arts or sciences, you will find a great development of the brain hereabout.

Then, again, there are parts in the middle line extending also to the right and left, called the *frontal sinuses*, and these present another difficulty in the study of the forehead. The frontal sinuses are cavities situated above the root of the nose, between the external and internal tables of the skull, and communicate interiorly with the upper part of the nasal passages. We know that these hollows or cavities exist, and therefore we do not mistake them for brain. Then, again, there is a space between the eyes, and the brain occupies that space as well as behind and above the eyes. Hence, if we wish to know the correct development of the anterior lobes, which are situated in this part of the head, we must take all these circumstances into account. There are difficulties to overcome, for which study is required, and, therefore, I would not advise a phrenologist to begin with this part, no more than a musician would advise his pupil to begin to play Handel or Mozart. If blunders are to be made, I am sure that they are more likely to happen with regard to the intellectual parts than the others, and, therefore, I should advise you to begin with the study of the posterior parts. But let us see how far we can overcome these difficulties.

The understanding of man is very complicated; we cannot examine the functions of the brain here according to the doctrines of the schools of philosophy; we shall find no organs of attention, of memory, of judgment, of imagination. All these things exist; there is attention, there is memory, there is judgment, there is imagination. As phrenologists, we do not deny any of them, but we maintain that these manifestations are not primitive; hence we cannot speak of organs of such manifestations; they have been looked for, but never could be found. Dr. Gall spoke of certain talents in the same way that he spoke of certain actions in the feelings, and as there are great poets, and musicians, and mathematicians,

and metaphysicians, and as he found these great talents to exist, he spoke of organs of music, and poetry, and mathematics, &c.; but must we admit that there are organs for all these, or are these manifestations the results of a combination of several powers?

My mode of judging is this: it seems to me that the mind acquires a knowledge of the external world, of external beings, then of the physical qualities of the objects, and of their respective relations, and, in the end, reflects and reasons upon them, and has knowledge; so that I think there are certain fundamental powers by which the mind acquires a knowledge of individual beings, and of their qualities. The organs which give these powers are placed just above the root of the nose, whilst the power by which the mind acquires a knowledge of

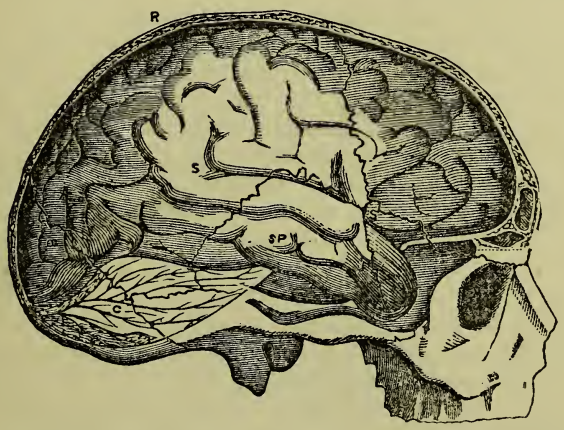


Diagram showing the brain and skull, with the frontal sinuses.

the relations of objects, appears to me to be placed a little higher up, and I think if you reflect on them, you will be satisfied that they are so placed. Before, then, you proceed to the investigation of the talents situated in the forehead, ascertain how far it is projecting, how far it is broad, and then see the individual development of the parts, and you will find, in a general way, that the lower part is much more projecting than the upper, especially will it be so in those who have the power of modelling and judging of size.

Let us see what are the individual powers attached to this portion of the brain, and see if these powers are not more active in some than in others? Now as to the configuration of the lower part of the forehead, only look at the situation

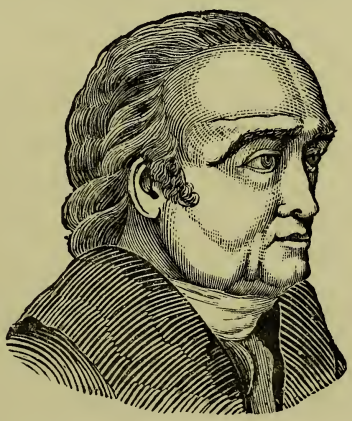
and direction of the eyebrows, and you will be astonished at the varieties which they present; so great are the varieties, that any individual who would pay attention would soon be able to distinguish and recognise persons by the configurations of the eyebrows, as we now commonly do by the appearances of the nose, eyes, and lips. It is really astonishing, this variety of appearance. When I look round on the persons here, I see that some individuals have the eyebrows drawn up, in others they are quite the reverse; some, again, are quite horizontal, some arched externally, some depressed externally, and so they have various directions.

Confining the attention merely to the configuration of the forehead, and after having noticed the great varieties of the eyebrows, regard next the distance between the eyes, and you will observe that in some the nose is very broad, in others very narrow; in some the part above, and at the root of the nose, will be prominent, in others quite depressed; only pay a little attention, and you will soon be convinced that there is a great difference also in this respect. Go to the eyes, and you will see that some individuals have the eyes much closer to each other than other persons; the eyes will be prominent in some, sunk and depressed in others; some having the space between the eyes broad, and the eyes themselves very much pushed out; and this peculiarity prevails even in nations; the French nation is more developed here than the German, and the greater number of English have the space narrower between the eyes and nose than the French. Take only the two capitals, London and Paris, and you will find that many more French have the distance greater between the root of the nose and the eye than the English. Some have the parts above the eyebrows quite depressed, and in others the parts project just as much.

Individuality.

I would say that those who are very broad between the eyes will see things much sooner than those who are narrower there. Every artist, who has exercised the organs of Form and Size, will distinguish objects more correctly and quicker than those who have not exercised those organs. Those who have exercised these powers have a great facility in acquiring a knowledge of the physical qualities of the things around them. First, then, we acquire a knowledge of the existence of objects by individuality, as I call the power, the power by which the mind acquires a knowledge of the existence of beings. Some have denied even the existence of beings, as you know; but I would not do myself the honour of speaking

here if there were no beings around me. Now there are some individuals who are very fond of natural history, even from childhood, who like to know plants, animals, minerals, indeed all things around them, and you will see that they have a greater fulness between the eyes than those who show no such desires. This is a power which is sometimes very active and produces errors, as happens in the feelings where they are too active and go alone. Some persons have great difficulty in distinguishing between *entia*, or the mere existence of beings, and *phenomena*, or the actions of beings or events. There is a great difference between them, yet we know that even in the medical art it is very common to speak of insanity as a being, and we speak of many other functions as agents instead of events; they have been personified, so to say, and individuals,



All the perceptive faculties large, Calculation and Locality especially large.

who have a great tendency to personify phenomena, have this power strong—Individuality. Look at those who are fond of natural history, who excel in botany, geology, and so on, and you will find them broad here.

Form.

Next we acquire a knowledge of the forms of objects; there are persons who have great talent and taste in forms, and others who are almost insensible to form. It is certain that you will find a greater number among the French, as a nation, who are extremely sensible of form, than among the English; and whatever the French artists take in hand they finish. This form is essential to portrait painters; it is the power which gives them an inclination to finish well. I do not

mean to say but that the English portrait painters can finish as well as the French, but if they see that the public do not value the finishing of the painting, and are content with what is called a good likeness, they will not finish. Look to the works of art in common life, and the French workmen will be found superior in this respect; they finish what they take in hand better than the workmen of this country. It is a power also essential to architects; you will find that all those persons who excel as architects are broad here. Observe the Italians, and you will find this organ much developed in them; it is essential to sculpture, and the organ which belongs to form and configuration is placed between the internal angles of the eyes; the cerebral parts placed on both sides of the optic nerve push the eyes outward. Look at the cast of Raphael, and you will see that the space on each side of the middle line passing down the forehead to the root of the nose between the eyes is very great.

There is more difficulty in ascertaining the development of this organ in adults than in children, on account of the frontal sinuses, as I have before explained. This individual power may be very active and yet act imperfectly, just in the same way as happens to a person who likes colours, and yet has not a taste for colours. There are others who have a taste for music, but have no judgment of it; persons may have great intellectual powers, and yet want judgment; so a person may be disposed to look for form, and yet not have a good judgment of forms. Judgment refers to the mode of acting, it is not the power; power may be active, and if it act in a certain way, then we say there is judgment.

Size.

Above Form we admit the organ of Size to be placed. An artist may have made a form, and when you look at it you see there is no proportion.

Colour.

There are individuals who have natural taste for colouring; if you ask them whether it depends upon any will of theirs to place colours together, they will answer, No. There are others who will put colours together, but they never harmonise. We observe that some ladies are good judges of colour, and when they dress they choose such colours as harmonise; and there are others who will dress in all the colours of the rainbow, and yet never get the colours to harmonise; the more colours the better are they pleased. Look at those who excel in colour, and you will find the eyebrows arched

upwards. Look at this picture of Rubens, and you will see how the eyebrows go up, quite curved. You will find that all those who have displayed taste in colouring have this part of the brain more developed than others who have no taste. I can give you this part as quite certain. Sometimes persons cannot distinguish even one colour from another, and what is very peculiar, the greater number of persons who mistake one colour for another, cannot distinguish red from brown.

There is a gentleman in Dublin fond of drawing, and he would have been fond of colouring, although he might not have equalled Claude, but he could not distinguish colours, and he painted a tree red instead of green. There was a gentleman at Edinburgh who could not distinguish red from green. I knew a female who could only distinguish white from black, all the intermediate colours appeared either as one or the other. The case of Ottley, in Dublin, I suppose you are acquainted with; he could only distinguish the shades of green and red; if you placed before him a dark-green and a light-red, he could distinguish one from the other as differing in shade; but if you placed a dark-green and a dark-red together, he could perceive no difference; he would say the colour is the same. He would say, "I receive one impression from the dark-red and the dark-green, and another impression from the light-red and the light-green, but the species of impression is the same, the only difference is the shade." Sometimes this defect runs through a family. I know a family on the Continent, all the males of which labour under this defect, and the girls can distinguish all the colours perfectly well. In judging of the powers situated hereabout, there is the difficulty of the frontal sinuses to overcome; but they do not interfere with the organ of colouring, although they do a little with Individuality and Size. Now if you find such a sharp ridge as there is here (showing a model), you may suspect that the projection is owing to the frontal sinuses. You should begin early in life to observe accurately these powers, and you will find some children of eight, ten, or twelve years of age, who will recollect persons after having only seen them once; and in such you may expect to find Individuality strong.

Others begin to draw very early, and you may observe the organisation in children without any fear of being misled by the frontal sinuses, but about fourteen, sixteen, and twenty they begin to form. In very advanced age, and sometimes from disease, it appears that the whole forehead is hollow. I have seen a skull in which the separation between the

external and internal tables was about an inch. Children are very attentive to the beings around them; they wish to know every thing, every plant, animal, and so on; but there comes an age when things around us possess less interest; we think we are already sufficiently acquainted, and our anxiety to know things is removed. When I hear a person say "I had a good memory once, I could learn by heart very well, but my memory now goes away by degrees," then I think the frontal sinuses are developed; but we need not wait for old age, or study the powers of the mind in a diseased condition of the parts. Let us still consider a few organs hereabout, because I wish to give some further remarks upon the powers placed around the orbit. I have spoken of Individuality in the middle line, low down between the eyes, then of the organisation destined to form or configuration. Here, again, toward the middle of the eyebrow, is the organ of Colour, so that if the space be large between the eye and eyebrow, I should say the organ of colour is well developed. Whenever you see the eyebrow more drawn up toward the external than the internal angle, you may be sure of this power.

Order.

If we come to the external angle of the orbit, we observe a great difference between the English and French; the French are generally less broad between Colour and the external angle than the English. Again, compare the Irish and English, and you will find the English much broader here, between Colour and the external angle. By experience I have found out that this is the part connected with order and arrangement. Some children are very much disposed to set every thing in its place, whether toys, articles of dress, or furniture, and there are others who are fond of scattering everything about in most "admired disorder;" now the first of these will show the organ full. I have known some ladies who were quite disturbed if they saw a spoon or a knife out of its place at table, or if a chair was out of its place in a room, and you may depend always on finding the organ well developed in such persons.

At the external angle of the orbit is the organ of Calculation. Here is the cast of a little boy, who, without any education, displayed great power of calculating, and you must observe how much this part of the brain is developed. The fulness of this cerebral part commonly elongates the brow and deepens the external angle; whenever I find the external angle deeper than the internal, then I admit that the organ of

Calculation is large. Look at all great mathematicians, and you will find that they have it large; but this power is destined merely to calculate, not to give the knowledge of the principles of mathematics, no more than size alone can give a man a good knowledge of geometry, or the perception of colour make a good painter. All those who are full here, externally, at the external part of the orbit, have a talent for calculation. This deepening of the external angle gives a person a dark look, a thoughtful, designing look, whilst painters and poets have a great hilarity of look; mathematicians, on the contrary, have a grave, sombre appearance, because the eye is covered by the external angle of the orbit.

Locality.

We now come to the middle part of the forehead, and if you see great breadth here, it indicates the form of objects, and a little above this is the organ called Locality. Some persons show a very strong local memory: they remember every place they have seen, and others can never find their way. Some animals manifest the greatest power of knowing places; animals have been brought from Liverpool to London by water, and yet found their way back to Liverpool again by land. Pigeons have been taken in sacks to great distances, and have yet found their way home: and some have called this power a sixth sense. A dog was taken from Lyons to Marseilles, and from Marseilles to Italy by water, and yet it found its way back through Italy to Lyons. There are individuals fond of scenery; they are fond of travelling, fond of seeing countries, and they sacrifice many comforts in order to satisfy that inclination, whilst others, if they travel, fall asleep in their carriages. Amongst artists there are many who show themselves most attached to scenery, and prefer landscapes to portraits. This power of great local memory was noticed by the Jesuits at that period when they were made the guardians of education; they observed that some children manifested strong local memories, and others had very weak ones. The knowledge of places, and the talent of judging of their relative situations, belong to this one fundamental power, and the organisation is placed hereabout, a little above Size.* If I find an individual who has this part very full, I am sure that he is fond of travelling. If you know an individual who would recollect where a book is placed in a large library, and who could go into the library and fetch it, even in the dark, you will find this organ of local memory strong in him. It is somewhat difficult to separate the organ

* It extends a little upward and outward of Size, more above Weight.

from the eyebrows, but it is placed a little higher up. Such persons as have this organ full are fond of scenery, have a great inclination to travel, and, if painters, they are fond of landscapes; you will find the power active in such persons, and it gives local memory.

LECTURE XII.

We come this evening to organs less difficult than those we considered the last time; and you will remember that our mode of proceeding with the intellectual powers was this: first, we admit those powers which make men and animals acquainted with external objects and their physical qualities; that above these are placed the powers of considering the size, the configuration, the colour, and particularities. First, then, we become acquainted with the individual objects, then we learn their situations, their qualities, their relative situations.

EVENTUALITY.

Men acquire a knowledge of the number of objects; and we come now to consider this kind of knowledge. Children, from infancy, are particularly attentive, not only to the existence or

PITT.

24. Individuality moderate.
32. Eventuality large.
37. Comparison rather large.

MOORE.

24. Individuality large.
32. Eventuality small.
37. Comparison very large.

objects and their qualities, but to every thing which relates to them, and any one accustomed to children must have observed, that in a very short time they make a great number of observations, so that many persons are astonished at the progress their children make; if they would go on so for twenty years they would all become great geniuses. Among adult persons there are some who are quite indifferent to occurrences, and take no sort of notice of any thing around them. Others know everything which happens; not a thing can take place but they must know it; a noise in the street—what is it? They wish to know everything; a stone falls and they know

it. Other persons, again, are content to hear what happens, and take no active part about it. Some have the external senses so quick that they perceive every thing; and if you pay attention to their organization you will find that the middle and lower part of the forehead comes out.

It is observed to be very flat in new born children, and to remain so until about two months after birth, when it begins to expand; and in some children there is a projection quite like a walnut in the middle of the forehead, and you may depend upon it that such children always show a desire to have stories told them, and to become acquainted with things around them. There are adult persons who wish to know all the occurrences of the day, and who like to tell stories; this desire appears very common in mankind, and the part is much developed, generally speaking. Reason with people, and tell them stories, and see to which they will remain most attentive. Those who take an interest in observing society must have noticed that there are persons who make themselves agreeable companions; they know something of every science, and they have a general knowledge of everything; they know something of chemistry, of botany, of painting, of music, of architecture, and so on, and you will find that such persons are full here. However, this peculiar development I speak of is most easily observed in children; it comes quite out in the middle of the forehead, and such are always fond of hearing stories; and if you find individuals depressed in that part, you may be quite sure that they take no interest in what is going on around them.

There are persons who easily recollect facts; in reading history, a greater number of persons will recollect the facts, the events, than the dates or names; they may recollect the dates for a little time, but they soon go; and they may be able to repeat the names for a short time, but they are also forgotten, yet the facts remain, and that power belongs to this part. If you are reasoning with individuals, and you find this part most developed, begin always to state facts, and then you enter into their mind. Those among medical men who publish cases, and never reason on them, have this power I speak of; although the power is the basis of reasoning, yet in itself it is confined to the knowledge of facts. By far the greater number of individuals have this part of the forehead developed. There are some nations in whom it is more developed than in others; it is more prominent among the French than the Germans; the French think that it is an essential feeling which exercises the external senses, since the wish to become acquainted with external objects, and since the two powers of Individuality

and Eventuality exercise the external senses, and the nations who have these two powers most active have the external senses more active. You must repeat things to some persons two or three times before they hear so as to understand, and others hear at once. There are many children and adults fond of acquiring a knowledge of facts. Now, you will find that some persons like to learn the precise period, and dates, and names connected with any occurrence; if they tell you stories they are not satisfied with telling you the facts, but they will say, that such a thing happened in such a year, such a month, and even on such a day; and unless they can tell you all these they will not feel satisfied; others say, never mind them; they will tell you the facts and forget the periods.

We see, therefore, great differences in the memory, because certain powers are more active than others; hence there are several species of memory, and this has been observed in former times, and especially by the priests; they found that there were persons more attentive to dates—numbers; others to events; and they divided the memory into several species, and they called that memory which retained dates and numbers a verbal memory. But we can have no organ for memory. In painting and music there must be various other powers brought into action, for if a man had no more ideas than those of mixing colours, he would never excel as an historical painter. Individual powers are necessary to certain talents, but the whole faculty, commonly ascribed to one talent, generally depends on a combination of powers. Hence, to become a good musician, melody and calculation are necessary.

Time.

I have before spoken of a power which disposes a person to take notice of events, and I have called it Eventuality, and there is, it appears to me, likewise a power for noticing the duration or succession of events, and I believe that this is done by a peculiar power of the mind, and I call it Time; it is a power essential to music. Can we admit an internal power of the mind as necessary to music; or shall we suppose that the talent is acquired by the accuracy of the external sense? Every one knows that there is a difference between hearing and having a musical ear; a person may hear a sound very well and yet have no musical ear. There are persons who do not hear the harmony of tones, and there are others, although almost deaf, yet if they hear two tones brought together that do not accord, they say there is no harmony in this, there is discord. This power exists, in a certain degree, in animals; there are singing birds and birds which cannot sing. Now if

the power which disposes the birds to sing depend upon hearing alone, as some have said, try an experiment; take the egg of a singing bird, and let it be hatched by another bird which does not sing, and you will find that the young bird will sing; and you will find, moreover, that the males will sing, and that the females will not. Hence there must be an internal impulse, an instinct. In men there is a similar power; the power of judging of the harmony of tones is not always received by hearing, but some men begin to compose from within; great masters of musical composition have been both blind and deaf, and yet go on with their composition; they cannot hear any instrument, but they commit their thoughts to paper; they read them, they calculate on them, and they go on with their composition.

This power of the mind depends upon a cerebral part, and you will find that all great masters of composition, all great composers, are full hereabout, above Calculation.* You may see this power developed sometimes in an extraordinary way; the infant Lyra, as she is called, when only six months old, showed a great talent for music; she was displeased by certain tones and amused by others: there must be something in the interior to do this. We have several examples of the early manifestation of this power. When Handel was quite a child his parents took away the instruments from him, and when they were gone to bed he would get up and amuse himself by playing on them. Whenever you find that talent active in children, you will find the part I have mentioned developed. I have observed a great many persons, and I have found that if this part comes out more than the external angle of the eye, just above Calculation, that such persons have the power of judging and understanding music.

This is the cast of Joseph Haydn; you see that this organ is well developed, and so is Wit; he had Wit also. There are countries in which this organ is found much larger than in others. Now if you take the common people of this country and the common people of Germany and compare them, you will find the organ larger in the Germans. If you know establishments where children are taken in on account of their musical talent, and compare those children with others, you will find this organ much broader in the former. Several blunders may be made with this power, but you must see whether it comes out beyond the external angle, and then you may be sure of it.

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* When Time is large it gives a roundness and breadth to the forehead immediately above the external corner of the eye.

Tune.

Is melody a fundamental power, or is it a compound operation of the mind? To constitute a good musician, a combination of powers is necessary; first, it is necessary to possess melody, then time, or the duration of melody. There are individuals who like music and have a good musical ear; they feel the harmony and melody, and can immediately detect any discord in the tones, even when a number of instruments are playing at the same time; and harmony is a combination of a great variety of tones agreeably, whilst melody means only an agreeable succession of tones, or simple sounds. Now you will find some who have a good musical ear, and feel the melody or harmony, but yet have great difficulty to play in concert; others, again, play in time, but are not harmonious in what they bring out. We see, among musicians, some celebrated for one of these qualities, and others for the other.

Handel: Tune large.

Ann Ormerod: Tune small.

Some composers produce very harmonious music, but there is no depth in it, it is quite superficial, whilst others compose with great feeling, combining harmony with sound and science. This organ is placed here, beneath the posterior convolutions of the anterior lobes at the base of the brain, and this convolution passes transversely from one side to the other, whilst the other convolutions of the anterior lobes are placed longitudinally; it is the seat of melody or tune.

Language.

There are some who have the lower lid very protruded; the eye appears to protrude the lower lid, and such individuals are very fond of languages. If you look into their libraries you will find a great number of grammars and dictionaries, and they can remember a great number of words and languages, and they seize the spirit of a language; they are good philologists. In the artificial languages we have a great many

words, but the words are arranged according to certain laws, as there are certain rules which regulate the other arts. In the composition of colours we find that there are certain laws which operate, and all things produced by nature are subject to laws. Colours do not depend entirely on our will, there are certain laws by which they are influenced, and to which we must submit. So we find in the arrangement of signs called language, there are generalities in all languages, as in the sciences. It is very important in studying the mind to see first what language is. I find a great deal of confusion among men who reflect on the human mind as to this matter, and I wish to call your attention to a few ideas.

First, let us see whether the powers can act, whether the individual feelings I have spoken of hereabout (on the upper and back part of the head), as the love of approbation, self-esteem, caution, love of offspring in man, can manifest themselves without any artificial signs. When I speak of a power of language, I mean by language in a general way, signs by which the activity of the mind is communicated to other beings. It is not always understood exactly to imply this; but we must try to separate the signs from the operation of the other powers. The individual powers I have spoken of may become active without having any signs by which to communicate their activity to others. In speaking of signs, I shall divide them into two classes, such as are natural, and such as are artificial. The next time I shall explain myself more fully as to natural language, but I mean by it this, as soon as the powers become active, external signs are employed by which to indicate that activity to other beings possessed of the same powers. But besides this natural language, there are other artificial signs employed to express the activity of the powers. The powers, therefore, in my opinion, may be active, without having artificial signs to indicate their activity. Many have written on the influence of the signs upon the ideas, but I think the ideas may produce the signs, and that there are natural signs by which the ideas may be communicated; but as man has also an intellectual sort of activity, he is not satisfied merely with natural signs.

The five senses exist in animals and in man, and the animals have things which are agreeable and disagreeable to them, as well as man; the same smells do not please all, nor the same touch. If you give them different things to eat, they will soon find out such as are agreeable; they will make a choice. So in their sensations they choose situations more agreeable to themselves, and a great many of them prefer heat to cold. We find the same operations of the senses in

man, but as he has a superior talent, and has intellectual powers, so he can gratify his senses in an artificial way; he prepares his aliments, whereas animals do not. Animals have a natural language, and it is really astonishing to hear some persons ask whether animals have a language. Animals place sentinels, and if they had not signs, how could they understand the approach of an enemy? Look at the dogs much attached to their masters, and they show their feelings plain enough by external signs. Animals have language, in the application I have given of the term; they indicate their feelings by signs, and they understand this expression of feeling shown either against or toward each other. If they place some as sentinels, the sentinels must have signs, and the signs of the sentinels can be of no use unless the others understood them; but I repeat that man, in addition to this, has intellectual powers, and he invents also artificial signs. But if beings are together, being deaf, can they insure an artificial language by adapting artificial configurations to the eye? Certainly they can, and we know what has been done for these unfortunate people in that way. Then there is the case of James Mitchel before mentioned to you; he was deprived of sight and hearing; was it possible to have given him an artificial language? Yet he expressed his anger, and several other feelings. He expressed his assent or objection to any thing by a nod and a shake of the head. I believe he might have been instructed by artificial signs, and it is a pity that it was not done. We see, therefore, that there are natural signs, and that there are arbitrary signs, and we find that there are some individuals who have a great facility in tracing them; the organ is placed very peculiarly, and I call it the organ of artificial language. The position seems very curious; it is placed transversely to all the powers we know.

I come to another organ, to one of the first discovered, and which to this day presents great difficulties, and is subject to many blunders; it is situated behind the eye. Dr. Gall had often observed that some children had a great facility of learning by heart; if they looked over a thing once or twice they knew it, and that other children were obliged to labour a great deal to be able to repeat any thing, and it is a great mistake to make children waste their time in making them learn by heart. There are some children and adults who have no great talents, and even almost idiots, who have good verbal memories. It is a great error in education to think that one talent gives another. Again, those who are to teach morality must calculate, and those who treat disease must calculate. There are some professions, certainly, in which calculation is

necessary, and there are others in which it is quite superfluous. So there are others who have a good verbal memory but no calculation, and there is a great number of such persons. Here is the cast of Jedidiah Maxton, a man educated in the country, and being brought to London, went to the play to see Garrick; he recollected the syllables, but the ideas of Shakspere were not retained by him. We are too much addicted, from infancy, to learn words and attach no ideas to them; we are taught to repeat like machines. There are children who have good verbal memories, and Dr. Gall observed that such children have very prominent eyes; however, we see persons who possess good verbal memories sometimes in whom the eyes are not prominent.

There are some individuals who have the greatest difficulty in learning names. The mind invents names according to the activity of the powers; thus Individuality affords the substantives, names which express the mere existence of objects; then the powers by which we judge of the qualities of objects afford the adjectives. The powers which make us acquainted with the mutual relations and actions of beings supply the verbs; so that our arbitrary signs are the result of the activity of the intellectual powers. If, therefore, we have new ideas, why may we not invent new signs to express them? I come now to ideas of a superior order, and such as are of the highest importance to mankind.

Comparison.

By far the greater number of persons are satisfied with knowledge of the things around them. Tell them of enchantments, tell them marvellous stories, and they are amused; they do not like to go further, and it is not necessary for them. But others have a tendency in their minds constantly to compare; they are never satisfied with individual knowledge, they bring it up to a point and compare their knowledge; they compare the forms and localities of beings. Comparison is a high operation of the mind, and I speak of the power as reflective also, and this is what is commonly called reason. The number of those appears to me small who reach to comparison only. To compare is a great faculty; to point out what is analogous, and what is different, and what is commonly called discrimination of the mind is this power. Speak with persons, and you will see that some have a great faculty in discriminating and comparing their ideas, and others put all together, and have great confusion of ideas. If you look for the organization, look in the middle line of the forehead, at

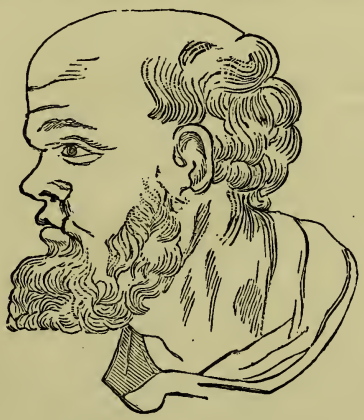
the upper part, just above Eventuality.* Those who quote examples, and compare what are analogous and what are not, and if, when reasoning, they say this is just like such a case, and then quote the case, a manner very effective in speaking to common people, you may be sure that this organ is well developed. If you know a preacher whose discourses take great effect upon common minds, you will see something going on here; they have the power of bringing down, and comparing with common events, things which are even supernatural. It is impossible to comprehend what is preternatural; it must be elucidated by what is natural; and have we not seen that the Gospel has been propagated from the earliest times by this mode of reasoning? If, on the other hand, people hear a preacher, perhaps a man of talent, and they will be ready to say, "Oh, what a great man he is! What great volubility of language he has!" and so on. Ask them what he has been saying, what he has been preaching about, and they cannot tell. That is the result of his not bringing down to the capacities of his hearers, by examples, what he has wished to enforce. It is quite certain, that if you see persons in common conversation who are apt at quoting examples, and analogous cases, they are broad here.

Causality.

Comparison, however, is not the highest power, there is one still more important in its effect, it is Causality, We see, sometimes, from infancy, children who ask, why this, and why that? There are others who never get up so high as to that why, or, as the ancient poet has said, "Of all things to trace up the cause." Metaphysicians have exhibited this power, and Dr. Gall called it "the power of metaphysics," but they go too far, they want to know too many causes; the first cause of all things must exist, but we cannot arrive at it. We know the secondary causes; we see them, we know them in the succession of events, and in relation to them we may observe and learn many things displayed by nature. We cannot invent or create causes, but we can observe circumstances under which events take place, and then we call these circumstances causes. We cannot do more than this, and if the mind could be convinced of this, and be contented with observing the succession of events, and the regularity with which they occur, we might be able to do many things. This power is important in every situation, not only to metaphysicians, who wish to dip into the first cause, but to every individual. Those who wish to

* In those in whom the organ is large there is a distinct ridge in the middle line of the forehead, between Eventuality and Human Nature.

account for events, and ask what is the cause of every thing, have the parts adjoining Comparison broad ; Comparison is in the middle, and Causality at the side of it, and you will see the organ large in all those persons who like to dip deep into their profession, whatever it may be, and make themselves acquainted with its principles. If you know an historian who writes the facts merely, without attending to the order of events, and makes one precede another when it ought to follow, such a man will be defective in this power ; but if you know an historian who, in a philosophicial spirit, gives a well arranged concatenation of events, and reasons on them, you may be sure that he has this power. If you find, among the poets, men who dwell much on principles, this organ is full in them. Take Locke or any man who has, as far as the know-



SOCRATES : Causality large.

ledge of the times has gone, reduced the operations of the mind to principles, such as Milton, Harvey, Bacon, Watts, and Franklin, and you will find in all of them the organ is large. It is infinitely more developed in this country than in any other.

There are other operations of the mind which tend to speculation, and if the upper part of the forehead be developed without the lower, then the reasoning will be speculative, because it is not founded on fact. This is the case commonly in Germany, the upper part is larger than the lower, so that there is a great necessity for bringing all the powers into combination. If you see in common life a servant who has this part large, he will execute your commission, but you must tell him exactly what he must do. There are some persons who will reason very well, as long as they keep on subjects with

which they are quite familiar, but take them into other subjects, and they are quite at a loss. But to have common principles, common sense is a great thing, although it is really very scarce. Look at persons who have sound judgments, who can contrive and separate the various opinions in moral philosophy, and you will find them broad in this part. I know individuals who have great tact in phrenology, but they do not understand the principles, and I know others, it is true, who are acquainted with the principles, but who cannot arrive at the practical tact.

I have now finished the individual organs; the next time I shall consider the signs which show us the activity of the powers. Having the powers, I wish to know how the activity of the powers is to be measured, and I said from the beginning that we ought not to speak of the activity until the powers themselves had been considered; that the alphabet of the science was first to be learnt. The activity of the powers is marked by certain external signs, and these I have called the natural language. Since I am convinced that every thing given by the Creator is submitted to principles, that is enough for me to allow. What nature has done, what the Creator has dictated, is done according to laws. Every thing in nature is done according to principles, and we must see if the natural signs cannot be reduced to principles.

Lecture XIII.

I have finished the individual organs and the respective powers manifested by them. You may ask whether we have not too many, or whether we have enough. Those who think that we have too many, must reflect that the same mode of reasoning which convinces us that there are two or three fundamental powers proves also that there are thirty-five, or probably more. We endeavour to explain the parts we observe, and if we could explain them by a single power, there would be no necessity for multiplying them. I say to those who hint that there are too many powers, "Tell me any one that can be expelled, or any one power whose actions you can explain by referring it to another." I have not found that the parts could be explained by diminishing the number; Nature is not so simple in her operations as some speculative philosophers suppose.

Those who think that there are not enough powers, confound the action with the power. This is a very important point to distinguish, because a small number of powers may

produce an infinite number of actions by their combination. It is really astonishing to find every individual so modified in this way, although possessing the same powers, that among thousands and thousands of men, you will never meet with another exactly like yourself. We shall find that thirty-five powers, if tried by numerical progression, would form an infinite number of combinations ; just as a certain number of letters, possessing few primitive sounds, will allow of the formation of an immense number of words. There are but few primitive colours, but their combinations are immense. We never see two faces quite alike ; the parts composing the face are but few ; but how innumerable are the varieties of appearance produced ! I see no reason for believing, therefore, that there are too many, or that there are not enough.

The parts of nature must be explained, and if it be necessary to adopt a power to explain them, we must not hesitate to do so. In looking at the individual organisation, and the several organs of the powers we have spoken of, we shall find really a philosophical arrangement. The powers have not been discovered in the order I have spoken of them, but one has been discovered here, and another there, and in different parts successively, and if you just look at their situation, it is curious to find that those powers, common to man and animals, are the powers necessary to animal existence, are all placed at the base of the brain, and you will find, that the more rare the powers in nature, the higher up are they placed, and you find them largest in man, as he is at the top of the animal creation. We find also that all the similar powers have their organs near to each other ; you may see an instance of this in the arrangement of the propensities or feelings, the sentiments proper to man, and so on. Then, again, you see a difference in the size of the organs, some being small, others large, and if you reflect on the sphere of activity, you find that also differing ; the activity of all persons is not equal. All things are reasonably to be understood by taking them into parts ; make a moral analysis of any subject, and you will soon arrive at the elements of which it is composed, but talk of it in the bulk, and you will discover nothing. Suppose we say, first, that the individual fundamental powers exist, and that they are attached to individual cerebral parts to be ascertained only by observation ; reasoning is worth nothing here ; you may reason for ever on the subject, but you could not ascertain the situation of the respective powers by reasoning. Supposing this to be the case, we can then take a step farther, and endeavour to show the usefulness of phrenology.

In the first lecture, I had the opportunity of saying, that it

was impossible to speak of the usefulness of phrenology before the thing itself should be thoroughly understood. Suppose an organ exists, will it not be necessary to represent the configuration as nature presents it? An artist may draw a portrait of a person, or he may sketch out an historical picture; he may draw up dramatic scenes of common life, and produce good effect; but they say he ought to imitate nature. I have before shown, in drawing portraits, how necessary it is to attend to the configuration of the head. I have shown you that the head is as much modified in figure as the face, and that, therefore, it is necessary for an artist to attend to the figure of the head as well as the face, if he would represent nature. (The painting of the head and face separable from each other, by which another head might be appended to the same face, was shown, to point out the great importance of an attention to the shape of the head in portrait painting.) Do you suppose that if an artist were to represent a person he intended to be sent to heaven, and another to be sent to hell, that he would give them the same shaped heads? The ancient artists were very attentive to the various shapes of the heads of persons of different talents, and they were right in doing so; why should we neglect it? Hence, in studying characters, it is necessary that artists should study the configurations of their characters, so that where cunning prevails, or natural affection, where firmness or humility prevails, we have seen that they are connected with individual organs; and these organs must be studied, if they wish to represent nature.

I come now to another point, to a new step in our investigations, to give a new application to the arts in common life, and to consider how far the powers of the mind are indicated by certain appearances of the countenance, by what is called physiognomy, a term derived from two Greek words *φνσις* nature and *γνωμον*, a sign or indication, so that physiognomy means the indication of nature by certain signs, although in its application the term is restricted to the expressions of the countenance. Is there any such thing as physiognomy? I propose this question, and I know some will say there is, and others will contradict that assertion. We will assume that there is such a thing, and I am sure that every one is a physiognomist to a certain extent; when persons are brought together, one judges of another at first sight, but whether right or wrong I will not say. Animals, too, are physiognomists, and so are children. Animals can judge of some of the feelings of man; a dog will know whether his master is angry with him or pleased. His master may be angry with him, and express himself in an artificial language, but he may do this with a

smile upon his countenance ; the dog looks at him, but takes no notice of what he said, and, if he could speak, would say, no, no, my master is not angry ; but give him only one look expressive of anger, and the animal is afraid. Children always look at the faces of their parents to see whether what they say is true or not. This is physiognomy, but I prefer to call it natural language. The last time I spoke to you of artificial language, and pointed out the differences between them. Language is the expression by signs of what is going on internally ; these signs are natural or artificial : if the signs employed be natural, then I call that natural language, and if the signs be artificial, then I call it artificial language. The natural language is employed by all animals endowed with consciousness and other powers. As soon as there is a power active, it is indicated by external signs, and this is a language. In discussing about physiognomy, we have first to settle what we shall call physiognomy ; according to its etymology, it means a knowledge of nature ; but this meaning is quite overlooked in the present times, and it is commonly understood as the knowledge of internal feelings by external signs. However, these signs must be distinguished into two classes ; firstly, such signs as indicate natural dispositions, but not their activity ; and, secondly, such signs as indicate the activity of the natural powers.

Physiognomists, from ancient times to the present day, have confounded these two ideas ; they have attempted sometimes to distinguish them, but in their application you will find that no sufficient distinction has been procured. In Lavater's work, entitled " Fragments of Physiognomy," (and really they are but fragments,) two sorts of signs are spoken of : physiognomical and pathognomical. By the physiognomical signs are understood such as are shown in the solid parts, and the pathognomical are the signs observed in the soft parts, in the motions of the parts. This is an ancient distinction, but it has not been sufficiently observed in the application. When you look into the work of Lavater, where he applies the signs, you will find that he confounds those which depend upon motion with those which depend upon configuration, and you will find that there is no rule, no principle established to guide our observations. I am sure that Lavater himself had a fine tact in discovering, even in an astonishing manner, characters and talents ; but he has given no principles by which others may do the same. However, this art of reading in the faces the characters and the talents, is very important to actors and to artists. If you were to appeal, as I sometimes do, to artists, and ask them how they know how to represent exactly such

and such characters; they say that the power must be felt; that there is a peculiar talent given to artists. This is true. There are artists who have a wonderful talent of representing on paper the internal feelings, by certain external signs, and others cannot succeed in doing so. There is something of the same kind in practical life; there is the finest tact in some, of judging of others by the external expression of the face. Some can do so with a certain description of men, but not with all characters. Among the actors, again, you will see that there are some who will perform certain characters very well, but not others. Now, is it possible to establish rules of natural language? I said before, that every thing done by nature and dictated by the Creator is submitted to rules, and that there are, therefore, principles in natural language. Hence, whoever has the talent I have just described, is in possession of the principles of natural language.

Take any individual who has the power of Colour large; it is not necessary to say to him, place such and such colours together; he will know what to place together. Take another who has the reasoning powers strong, he will feel what is wrong and what is proper. The principles are necessary for the guidance of moderate powers. Nature has furnished principles, by intuition, to men of talents; but since the powers are not all equally active, it is necessary that principles should be supplied to persons possessing weaker talents; but recollect that the principles are discovered, not created. Natural language exists; the principles of it exist. The power of imitation is great in some, but not in others, and those artists who have the power strong, will give great expression to what they represent. But what shall we do for those who have not the power very large? We must give principles to them; but how shall we find them out? It is really astonishing to observe how ancient this doctrine is; we find, if we read Solomon, that "one teaches with his fingers, and another makes signs with his hands;" many ancient authors, as Cicero, and other great men, had written on physiognomy, and artists, who represent nature, ought to study it. The fundamental powers were not understood, and that seems to me the great reason why the subject of natural language has not advanced; for as soon as we know them, our judgment of natural language begins, since every power has its peculiar sign in animals and in man. You can never confound the signs of one power with those of another; hence I repeat, that each is fundamental, and that it is necessary for those who study physiognomy, and the signs by which the activity of the powers is indicated, to understand the fundamental powers of phreno-

logy; and more especially is this necessary for those who study expression in the arts. Follies have crept in here, in the study of physiognomy, and, therefore, let me repeat, that I do not speak of the configuration of the face or other parts of the body as indicative of the powers, except the configuration of the brain. You would not, for example, judge by the shape of a man's hands whether the person had a great power of Comparison or Causality; you would not say, by the shape of a man's fingers, whether he is benevolent or otherwise, nor would you say by the shape of the nose, whether a man were a musician or mathematician. If you study the works of physiognomists, you will find that they admit certain signs to indicate the manifestations of the mind. They imagine that the nose is in some relation to the mind; they examine the nose of a witty person, and if they can find any thing peculiar in the nose of a witty person, then such a nose is regarded as demonstrable of wit. Some imagine that there is something in the lip, or in the nose and lip, as indicative of wit, and so there are several external signs for the same internal power; but nature does not employ many modes of indicating the same talent. Nature is constant, and does not vary her course to flatter our conceptions; she is infinite in her modifications, but never varies in her principles. Hence we deny to physiognomy the power of indicating the talents, excepting only the brain, where the talents reside. If there be a proportion between the manifestation of any power and the appearance of the brain, we can distinguish it, but not so in any other part of the body. If we look for a talent, we must go to the part where the power resides.

I come now to a second point of physiognomy, which I shall examine a little more closely, namely, the motions of the soft parts, or the pathognomy of Lavater. The internal powers of the mind are manifested externally by the five senses and voluntary motion; hence we wish to find the signs of the internal activity in the five senses and voluntary motion. All that takes place externally must be considered in speaking of the internal powers; and this I have before spoken of under the name of natural language—not the configuration merely, but the actions and expressions. Suppose I were to confine myself to configuration, and take that part which physiognomists have chosen—the face; I might look at a bust, or at a man asleep, but there is no activity in them. I wish to arrive at the signs which indicate the activity of the internal powers. Is there a sign for Self-esteem? How can I know if Self-esteem be active? Or any other powers, say Cautiousness, or Acquisitiveness, how can I know whether these powers are

active? By the external signs; by the natural language. Hence I say that a phrenologist studies the expression of a power, and the signs by which the activity of that power is indicated. A power being destined to act, will employ the instruments necessary to act with, and will employ them in a way in which the function of that power may be best exercised; and I can conceive of nothing more simple, as the principle of natural language, or of the knowledge of the activity of the internal powers, than this. A power will employ the instruments wherewith to act, and the five senses in nature are familiar examples of what I mean. We find an apparatus, a mechanism fitted to each; every one will agree with me in that. Now, certain other internal powers manifest themselves as plainly, by certain external actions, as the senses I have just mentioned. Permit me to go through certain powers, and to make certain applications of the powers by phrenology, to the arts and to practical life, in order to convince you of the accuracy of this principle.

There is a power called Combativeness. This power gives a disposition to fight, according to its activity—to defend or to attack. A man attacks, I suppose, from the impulse given by this power, the power being very active; there are those who, like the gladiator of ancient times, attacked others in the amphitheatre to amuse the people; and those who read the Roman antiquities will find various positions in which they fought described. The statue of a gladiator at Paris, of which this is a small model, is said to be in a position admirably calculated to fight; various opinions have been given on this point, but in what position is this man, I ask, to fight? (The trunk and right arm are stretched forward, and the weight of the body consequently resting on the right leg, which is also advanced.) The description which is given of the position of this statue, at the Louvre, is, that it is admirably calculated for fighting, but I do not believe this. Every one who fights must take a position in which fighting is possible. Place yourself in the position which this statue is placed in, and you could not resist the blow of a boy, in such a position. The artist did not intend to represent him fighting, it was something else that he intented. Look at this statue of Apollo! Artists entertain different opinions of it; some say he is in the act of discharging an arrow from his bow, others say he has just discharged it, and is watching its effect. But what would you say of this position? Could he bend the bow and send off the arrow in this position? (Apollo is represented stretching his body a little forward, and throwing the whole weight of it upon the right leg, which is advanced.) I

have seen the Royal Archers of Edinburgh, and I never saw any of them discharge an arrow in such a position ; the right leg must go back to be capable of applying force with the right arm, or the equilibrium would be lost by a slight jerk. I cannot blame the ancient artists, because I do not believe it was intented by them to have represented Apollo doing such things ; they have represented their characters correctly, and they have chosen even difficult positions to represent, generally preferring beings in motion to those at rest. I believe that it is intended to represent a preparation for the discharge of the arrow, not the act of discharging. Observe the productions of the artists of this country, and you will find that they do not study enough the laws of natural language—their positions are not natural ; the first object should be to ask, How does the thing take place? and then put the statue in such a position in which the power intended to be displayed can act. Go through the other powers and examine them in the same way ; take Secretiveness, Cautiousness, and Adhesiveness. Now as to Adhesiveness, that will very much influence the manner of salutation ; in this country you shake hands, but let me see a person shake hands with another, and I know by it if his attachment be nominal or sincere. If you give another merely a finger or two, and just drop the hand down and remove it again in the same way, oh! then I know the power is not active. But see how good old friends shake hands ; they do it with an earnestness, and you may see that sincerity and attachment flow through their fingers, so to say.

I must be short, and therefore I will next say something of Secretiveness. How can I know when this power is active? By the natural language, by the appearance of the whole countenance ; such a person looks sideways, looks about the room, but never looks you in the face ; if he speaks, it is in a whisper, and if he comes in at the door, he comes in softly, scarcely allowing himself to be heard ; look at the sly animals, how they approach each other. If he do not feel great confidence, he will scarcely look at the person he is addressing, and I make it a point always to study the natural language of persons more than the artificial language. He will wish to conceal himself, will avoid company, and if brought into it, will soon try to get away. Look at the organisation of Secretiveness, and you will find the natural disposition and the development of the organ in correct proportion. Look at another who has Firmness active ; you will find it prevalent in all his actions. Having found the powers, the first thing in natural language (and every power speaks its own language), you will not confound Self-esteem with the Love of

Approbation, nor Secretiveness with Firmness, nor Acquisitiveness with Benevolence. We know, however, that these powers are not always disposed to act, but that at certain times they are more active than others.

You will find that even in the parts not necessary to act, the action goes on, and this is a second step in the study of natural language. I will explain: not only all the parts necessary to act are brought into action, but the similar parts of the body are brought into action, to contribute to the expression of a certain power. If I find a disposition to contract my arms forcibly, is it not necessary to contract the muscles of my face at the same time? There are some persons who have a language of the eyes, and that language is understood by some and not by others; is there no accordance between the expression of other parts and that of the eyes? It is necessary to come to common life to observe the activity of the powers. A proposition very important in connection with natural language is this, that there is a harmony, and there must be a harmony in all the natural expressions. The statue of Achilles, at Paris, is certainly a beautiful piece of sculpture, and it is represented in a sorrowful mood; all the right side is so, and all the left, except the arm, which has been restored, and it has no accordance with the other parts of the statue, for it is firmly contracted, whilst all the other muscles are represented relaxed; I would certainly knock it off, for it is only a disgrace to the other parts. The voice also bears a relation to the prevailing powers; if a man be very secretive and sly, his voice will be soft and sweet, but if very combative, firm, or courageous, his voice will be of a stronger tone.

Another point to be considered in natural language is this; all the motions of the body are modified by the state of activity of the powers. All the organs placed hereabout (the top of the head) draw the head upwards, and there are others which draw it down. Examine nature, and you will see how the external countenance changes, and how the positions of the head vary; if you see a person who has a good deal of Self-esteem he will keep up—up straight, and perhaps stand and talk with you thus (quite upright and the arms folded over the chest). There are some children to whom you never require to say, "keep up," and there are others to whom the governesses, or parents, are continually saying, "keep up; sit up." In walking, riding, and speaking, if you see a man keep himself quite erect, with the "os sublime," you may be sure that the feeling of Self-esteem is very active. But how do you say to another, "your humble servant, sir?" Do you throw your head back, and place your arms "a kimbo?" If a man

were to say, "your humble servant," in this way, you would tell him to go about his business, I am sure. The disposition is natural in all countries, and has been so at all times, to bend forwards whenever it is intended to show respect to an equal, or to a superior being. Raphael has beautifully shown, in one of his paintings, the attachment of children to their parents by their suppliant forms as they approach ; they lean forwards. See a man who has Acquisitiveness active, a cunning man, he looks one way and then another way. Secretiveness makes a man look down ; Cautiousness makes a man look all about. Look to the stern countenance and sturdy expression of a man who has Firmness active ; nothing will move him, he holds himself quite upright, and the organ is situated at the top of the head. Then, if you come to individuals who hope much, who pray with hope, they do not look for their Heavenly Father hereabout, (looking on the floor,) but they look up. God is everywhere, but whenever we wish to apply to a spiritual agent, then up we go, although reason does not indicate that it is always to be found in one direction, either upwards or downwards. Whatever the situation of the organ may be which is active, there the head is carried in that direction, whether laterally, upwards, or downwards. If you try to recollect any thing, you lean your head forward upon your arm, and you put your finger almost upon the part ; and it is a known fact, that after having reflected long upon any subject the front part of the head becomes painful. When the organ of Harmony is active, observe how a person performs upon an instrument ; if a young lady plays upon a piano who has no taste for music, she puts her fingers upon the keys like sticks, but if she feels what she plays, then observe her motions. So of Wit and the other powers.

Following up the subject of the natural language, you will find that it will be more actively expressed in some countries than in others : some will speak with the whole body, others with particular parts ; do not, however, confound what is essential with what is merely a modification. The essential powers are always the same, but the slyness of an Italian will be differently indicated from the slyness of an Englishman ; the first will show it by his whole actions, and the second only in his eyes. In the expression of characters, you may study gracefulness, and this is commonly done, but the artists have forgotten too much to imitate nature. Moreover, those who wish to make a study of the natural language are invited to study first the primitive powers ; then the language by which their activity is indicated ; next the modifications ; and, lastly, the combinations of the powers as well as the expression of the individual powers.

Lecture XIV.

I shall now fulfil the promise that I made at the conclusion of the last lecture, namely, to show the influence and usefulness of phrenology. Then I had the honour to state several points interesting to artists; to-day I come to another consideration, which is to see how far phrenology has any influence on the systems of philosophy.

It is the true object of philosophy to point out the fundamental powers of the mind; and if we have succeeded by phrenology in showing thirty-five,* I think we have done more than any philosophers hitherto. Whatever has been done in philosophy may be reduced to a few simple ideas, for philosophers have merely pointed out the effects of powers and their general modes of action, leaving the powers themselves undescribed. The effects of powers only: I shall not say that what hitherto have been considered as the powers of the mind are not in existence, or that they do not take place, but all the things which have been mentioned as the primitive powers of the mind are not powers; they are only the effects of powers, or the modes of their action, and we have, therefore, to see how far phrenology can be brought into harmony with the philosophy of the schools.

It is a common opinion that the mind is composed of Understanding and Will. What is will in a philosophical sense? They commonly ascribe to it a kind of desire, or inclination, in the lowest degree; and in the highest degree it is called passion. Admitting that there are different kinds of will, will you be inclined to call every sort of desire Will? and can this be admitted as a fundamental power? I suppose, now, that an individual feels an inclination to do a thing, any thing whatever; one of the lower propensities is active, and gives an impulse; now, if you call this will, and if you consider it as the effect of a fundamental power, you might will to kill another, but then, having understanding also in the composition of the mind, your understanding says you must not kill. Suppose you feel hungry and wish to eat, and your physician should say no, you must not, it would do you harm; how can you explain this by reference to the will as a fundamental power? you will and you will not at the same time. How

* There are now forty-two recognised primitive powers of the mind.

can you explain it? Then you must speak of a good will and a bad will; you may have a will to take away a thing you may see, and conscience says no, no, you must let it alone; here is one will for, and another against. This sort of doctrine is not at all practicable; I have tried such philosophical opinions, and I have found that no use whatever can be made of them in practical life.

I shall come to-day to the individual application of the various doctrines which have been held respecting the mind.

We will with reflection, and sometimes not with reflection! how can we understand this? What is the will or desire in this general sense? I say that desire or will, in this general sense, is the effect of the operation of individual powers, and that there are as many sorts of inclination, or will, as there are fundamental powers. If I have adhesiveness, I wish to be attached; if I have combativeness, I wish to fight every one who attacks me; if I have great self-esteem, then I wish people to think me very important; if I have benevolence, then I wish every one to be well taken care of, and so on; having specified the powers, it can be easily understood that the will must be as various as the powers. We see that there are, therefore, thirty-five* sorts of desires, and perhaps more, and yet all these pass under the general name of the will, or desire.

We come now to other terms in very common use—Pleasure and Pain; what are these? Is there something primitive called Pleasure, and something primitive to be called Pain? Those who attend to the education of children know that some manifest great inclination for, and make great progress in, certain branches of science; one makes great progress in mathematics, another in geography, and another in history; now how does this happen? The general answer is that they are amused; but how comes it that one is amused with mathematics, and another with the mechanic arts, and that sometimes the greatest pleasure is felt by such persons in one sort of study and not in another? Can you explain this by the philosophical knowledge of the schools? Impossible. How comes it that what gives the highest degree of pleasure to one, produces a different feeling to another; why is it that every man has his peculiar feelings of pleasure? It is impossible to answer this by referring to any single power, quite impossible. Pleasure is the result of the gratification of a power, and desire is the activity of that power. There are as many sorts of desires as powers, and the powers being satisfied afford pleasure; hence as many kinds of plea-

* See foot-note on p. 126.

sure as powers. Now we can easily conceive that what is a heaven to one man may be a hell to another, and there are some individuals who thus express themselves; they cannot conceive how any person can be indifferent to what affords them so much pleasure. Phrenology teaches us why those who have the powers active are pleased. When the power is active, the desire is active, and the desire being satisfied affords pleasure; hence, we must give up the erroneous idea that the pleasure must be the same for all, and this is generally overlooked in society; everyone wishes that another may feel like himself, but that cannot be, in my opinion. There are some who, unfortunately, labour under the deprivation of certain feelings, and call forth strong expressions of sympathy from some, and others take little notice of them, and then, say the first, "how can you behold these things with indifference?" One would say, "to be approved of before the whole world is heaven;" and another would say, "pshaw! what is that to me?" Some have greater pleasure in the indulgence of the higher feelings than the lower, and others cannot imagine how these can afford any pleasure. Hence, in specifying the pleasures, and showing that they are the results of the gratification of the fundamental powers, the subject becomes clear, but in the common mode of expression it cannot be so.

We come to another subject, on which a great deal has been said, namely, to attention; nothing is done in the schools without attention, and I flatter myself that you are all attentive; what is this attention? All philosophers have spoken of a power of attention, but how can they explain why, in practical life, some are attentive to one object, others to another; or why, among animals, some should attend to certain objects more than others? The eagle and the fox are attentive to a hare and a goose, whilst a sheep is attentive to neither. Is there a power which gives attention? Yes, I would say, it is destructiveness in these animals, and the sheep having no destructiveness, has no attention. In schools, some children are very attentive to their teachers, when speaking of certain things, and the same boys would be very careless in other things; we must have an explanation of this, if we wish to have any practical knowledge. In mixed companies, if you will tell stories, all are attentive, but if you reason with them I would not say they would be so. Some, who are attentive to mathematics, would fall asleep whilst others were talking of music, but where the fundamental power exists in the mind, the attention is directed towards it, and hence there are as many sorts of attention as there

are fundamental powers. We do not deny the existence of such a thing as attention, but we deny that it is a fundamental power, and hence phrenology explains why some persons will be attentive to some things, and other persons to others. Philosophy is too general in the terms which are employed in it, for whenever we want exact knowledge we must specify. Suppose that, in speaking of an animal, I should merely say that it was an animal, would that satisfy you? You would require to know what animal; I might say it was a bird, but as there are several genera, you would then ask of what genus it is, of what species, then of what variety, and in the end you would want to know whether it was male or female? With the mind it is the same; it may be reduced to a few species, to a few fundamental powers, and this must be done before we can be satisfied with our philosophical knowledge, and phrenology has done this better than any other thing which has hitherto been attempted. Hence, there is no peculiar power of attention; attention is merely the result of the activity of a power.

There is another opinion, just as prevalent as the former, respecting the passions of the mind. There are passions, various passions, but is passion a fundamental power? Not in the language of phrenology, which will teach us, that as the powers of mind are influenced in different degrees, so will the exercise of some of them, in the highest degree, be called passions. I am angry; is there a power of anger? I may have a sensation of itching on any part of my body; is there a fundamental sensation of itching? I may have a peculiar sensation produced, called tickling; is there any primitive feeling of that kind? No. There are modifications of the senses called sensations. The sense of feeling may be affected in different ways, agreeably or painfully. There are modes of action in the sense of feeling; it is the same with the different internal powers, they are differently affected, and it is a great point in phrenology to show the affections of the individual powers, but not to consider them as fundamental faculties. Where will you place anger? will you place it with benevolence, or veneration, or justice? I do not think that anger takes place in the powers proper to man; it is a fact that it exists in animals; and even in the lower animals we find that they are sometimes angry even to fury, but there is no fundamental power of anger. Persons are very fearful; where will you place fear? Is it a power? No, it is an effect. I think that great circumspection, with little combativeness in the same character, would produce fear. We feel compassion and we feel remorse; to what powers are they attached?

Indeed, it is quite a peculiar study of the mind to point out what are called the passions; some are the results of individual powers, and others are the products of a combination of powers.

Where will you place jealousy? We have not spoken of an organ of jealousy, and yet you know there is such a feeling as jealousy. Some cannot bear to see others approved, unless they are approved of at the same time; how comes this? Jealousy is a combined effect of several powers and modifications of powers, according to their activity. If I am selfish, acquisitiveness being active, and if I have a good opinion of myself also, and have the love of approbation active, then if I see another approved of, I am immediately jealous of the same approbation. Suppose I have acquisitiveness very strong, and see another get rich, and if I should not have succeeded so well, then I am jealous of his being rich before me. Some people, on the other hand, are never jealous; hence I think it will be seen, this feeling, like others, is produced by the activity of the combined powers, and not of the individual powers. The passions are not fundamental powers, but are the results of the activity of singular or of combined powers, and I therefore wish that when passions are spoken of they may merely be intended to indicate the highest degree of activity of the powers. I have mentioned that the nomenclature of philosophy is vague, and that we can never be clear in our expressions unless we become clear in our knowledge of the powers of the mind. If we can show the modes of the activity of a power, then let us give names to them, but do not let us confound the power itself with its application. Passion, then, indicates a certain degree of activity in a power or powers, but the higher powers of the mind have scarcely any influence on the feelings. You may take pleasure in every power when very active; your reflection has little power over your feelings. Unfortunately the lower feelings can be very active, and they will not listen to the superior feelings. Some think that when the superior feelings are active, that their products ought not to be called passions; but if you will admit that the same degree of activity may be displayed by all the powers, and if we admit a high degree of activity to be a passion in the lower feelings, let us admit the same in the higher. A musician may have his attachment to music so strong, that he sings wherever he goes; if sitting at table, or anywhere else, he must sing; such a man may be called a passionate musician. Another man may have the power of constructiveness very active, and he may ruin his family by being continually engaged in building, rebuilding, and so on;

the highest degree of activity of the mind may be called a passion. If I speak of the intellectual powers, strictly as they have hitherto been considered, such as the memory, judgment, and imagination; these all exist, I do not deny it, but I deny that they are primitive powers. Attention exists, but it is in the effect of a power being directed to an object; if we have size very strong, we shall be attentive to the dimensions of objects. Now, we see that, in the schools, attention is every thing, nothing is to be done without attention; there must be attention to teach, and attention to study; I say yes, and the more attention the better, the more active the powers are the better; but I do not admit attention to be primitive, and this is one essential part of phrenology. And so of memory; there is memory, it is true, but will you not see some children show memory of one kind and others of another? If memory were fundamental, would it not be applied in the same way? Tell some children a fact, with dates and names, only once, and they will remember the fact perfectly, but forget the dates and names; others will recollect the dates and forget names and facts, and others will not forget the names, but the dates and facts will be lost. Some children can recollect any place they have seen, and yet not be able to learn two lines from memory. In short, there are various sorts of memory, one sort strong and another weak. How can this be explained by phrenology? The powers are active in different degrees; the powers of the intellect remain the same in point of number as before, but they act differently. You will recollect that I have insisted on the difference between the feelings and intellectual powers, and again distinguished the latter into such as are destined to make us acquainted with the external world, with the qualities of objects and their relations; now all the intellectual powers may be so active as to reproduce in the mind the perceptions it had before seen. I have seen a figure, and I recollect the figure, my constructiveness has the power of reproducing the image in my mind as perfectly as I at first saw it; I am the witness of a fact, I know how it happened, and that is called memory. I have seen a number of persons, and I recollect the number I saw. I have seen colours, and I have all the colours now in my head; I have the memory of them; hence memory is the higher degree of the activity of a power, but not of itself a fundamental faculty.

I may here observe that the feelings are not what is called memory. Can you remember certain feelings; can you reproduce the sensation you have felt before? You can reproduce an impression you have received through the intellect;

you have received a knowledge of individual objects, of their sensible qualities, of their place, number, size, colour, and so on, and you can reproduce these impressions on the mind, but you cannot do so with the feelings. I have before said, that the feelings must be felt, they cannot be taught. Can you reproduce these when you like? can you say I will be hungry or thirsty? You may know that you had the feeling once, but you cannot, by any effort of any power, bring back that feeling. Whenever we can reproduce the perceptions we had before, we call that memory, and it is the result of the activity of a power; and we have, therefore, as many sorts of activity as there are different primitive powers. You can easily conceive, now, the error of the notion so prevalent in education, that by the exercise of one power you can excite the action of the other powers; that each power may become more and more active by exercise I shall hereafter have occasion to speak about; but you cannot, by putting one power in action, put all into action; if I exercise my eyes, do I exercise my ears? We advance a step farther, and assert, if the individual powers which have been displayed by phrenology exist, then whatever may have been the notions hitherto entertained by philosophers must undergo a change. Either phrenology is true or not true; if true, the fundamental powers have been ascertained, and we must attend to them.

We next come to the Imagination, and there has been a great discussion amongst philosophers about this term; but is there anything primitive in the mind which disposes it to invent? How comes it that one man has invented mechanical instruments? They say it was by his imagination. How comes it that another composes music only? The answer is the same, by imagination. Another solves mathematical problems, and he does this by imagination. Do you think that the power which can compose music can invent machines? or that the power which can solve intricate mathematical problems can invent poetry? You will see that the inventions are different as the activity of the powers differs. Invention is not a fundamental power, but it is a high degree of activity of one or more powers. Observe an individual who has melody, and time, and various other powers; just see how the tones will come out in harmony and order. Go to another who has form, size, and constructiveness, and you will see how the mechanical powers will be active; give him ideality, and see if he can make poetry. The powers become active, but they do not acquire the perceptions from without by memory, but they will invent; the powers themselves will act. See if a mechanic discovers new principles; he will

make new applications of the principles already known, but will not invent new principles. Hence one will have a great imagination in a certain line, but not in another, and phrenology can explain this, since the powers are so different.

As to judgment, is there a fundamental power of judgment? Not in my opinion. We see persons who can judge perfectly well of colours, but not of music. Some can judge well of mathematics, but not of poetry. Persons may reason well and judge soundly on one subject, but not on another. I feel the greatest difficulty to make myself understood here. In my opinion, the individual powers I have before described, being fundamental, are submitted to laws, and it is a fundamental idea in philosophy, that all the powers of nature act according to determinate laws. The mathematics have laws; colours have laws. There are optical and acoustic laws. Do you think that the eye sees large what is small, and small what is large; or are these laws given to sight by nature? Can the musician say, I will place together just such tones as I please, and they shall be harmonious, or is he obliged to follow certain laws in his compositions? Can we say of digestion, that it is quite under the control of the will, and a person can digest whatever he chooses to put into his stomach? If so, let him eat a little hemlock. A painter cannot bring together whatever colours he may choose, and say they shall make such a colour; nor can we, as animals, breathe in every gas. There are laws to be observed and obeyed, and this is the first idea I wish to present, in order to make myself understood. When the powers act in a perfect manner, then we may say they judge correctly; but they may act perfectly or imperfectly. Suppose, now, that digestion goes on well, but the secretion of the liver and inspiration may go on perfectly or imperfectly; if imperfectly, then we call it disease. We come to the senses, to the taste; and if the taste be vitiated, as it is sometimes, by which persons will wish to eat charcoal and clay, then we say that such a being has a bad taste. There is a power of configuration; is it submitted to laws? Can a person having this power say, I shall find ugly things beautiful? We want to know whether the activity of the internal powers is going on right or wrong, and it is this sort of decision of the internal powers acting perfectly that we call judgment. In the arts, this power is sometimes called judgment, and sometimes taste. The greatest activity of a power does not always indicate the best judgment. We compare here the operations of the mind with those of the body, and we find that it is not every one who has the best appetite that has the best digestion; not every one who has

a fine ear that has a perfect action in the ear; nor has every one who has a good taste a delicate taste. Some who are fond of music are not capable of judging correctly of its merits; some who are fond of colours are not capable of judging of them; hence we may have as many judgments as there are powers. There is no fundamental power of judgment, but it is the attribute of the powers I have already spoken of.

What we call a philosophical judgment in the reflective powers, what is that? The judgment of each power is confined to itself, as colour, melody, configuration, &c.; but as we have spoken of certain reflective powers which act differently from others, we perceive these powers sometimes to be active, and when they are active, then the result is that which is called a philosophical judgment: but it is not of itself a fundamental power, it is merely the perfect state of action of the individual powers. One may have a perfect action in comparison, but not in causality.

Is there a power of association? Association takes place we know, but is there a power of association? It is supposed, in general, that one power excites another. I may see a colour, and it may remind me of a person I saw with clothes of that colour, of a thing of that colour. Is there a power of association? There is a combination of the individual powers, but those are wrong who speak of an individual power of association. Thus we are able to rectify by phrenology the abuses of philosophy, and whatever has been said, by philosophers of the mind, can only be explained by reference to the individual powers themselves, and then we have seen how diversified are the modes of action, which have been mistaken for primitive powers. We have taken quite a new step to-day, particularly as regards the modes of action of the different powers.

Now I wish to touch on another point, after having examined the powers themselves, their natural language, and their modes of activity, and this is certainly a very important part of the subject, to study the modes of the activity of the powers; I come to the mutual influence of the powers; no power acts alone, all the powers act in a combined way, and in this combined operation there are various subjects to be considered. First, How the powers ought to act. It seems to me, that the powers are given, according to certain rules, as they ought to act; therefore let us first look at men as they ought to be, and then as they are; but we always wish to see mankind act as they ought to do. The mutual influence of the powers opens a wide field of study; an immense fund of

phrenological inquiry is open here, to examine the mutual influence of the powers, and this is necessary if you wish to speak of actions. You must, I repeat, first discover the difference between the fundamental powers, next their different degrees of activity, and lastly, their mutual influence. The mutual influence of the powers produces a greater degree of activity in the powers individually, and therefore produces an infinite number of modifications of actions. A power being combined with two, three, or four other powers, will produce quite a peculiar action, very different from what it would do supposing it to act alone. The result of the combined operation of the powers will be considered in a future lecture. I wish now only to call your attention to one point, that of the powers which act according to determinate rules ; some take the lead, and others remain behind ; and the question for consideration is, which ought to take the lead, and which ought not? Frequently I am told by a person, "You do not like to speak of my organs, because they are bad ;" but I say, "No, I do not, I cannot speak of good organs or bad organs ;" the organs in themselves cannot be good or bad, since these are only relative terms. Is water bad or good, or is fire bad or good? You can only answer this question by making application of either one thing or the other, and then the application may be good or bad. Now comes the great question about arrangement.

Reflect a little on this, whether a man comes into the world with certain regulations in his powers? The question is very difficult. I wish to know whether we can change the laws of nutrition, or of circulation, or of respiration? I am always inclined to defend the rights of the Creator, and the laws of nature? Can you change the laws of digestion?

There are laws to be submitted to, but they are not sufficiently attended to ; and I wish to know whether there is any arrangement here, whether there is any internal law given to regulate the fundamental powers.

In my next lecture, I shall consider all the objections which have been entertained against phrenology, as leading to materialism, fatalism, and the destruction of all moral and physical liberty.

Lecture XV.

By degrees you will perceive that the study of phrenology is very extensive ; so extensive, indeed, that it embraces the whole range of human knowledge. You have seen, that after having studied certain manifestations of the mind, and after

having observed the correspondence between their development, that some application of the knowledge thus derived has been made to the arts. You have seen how opposed phrenology is to the speculative philosophy of the schools, and how deceptive are their opinions, which have regarded the modifications of the mental powers as powers themselves, whereas they are but the modes of action of the fundamental powers. I come to-day to a new sort of consideration.

Many who at first opposed phrenology have, from an examination of its doctrines, become converts to it, and the greatest number of those who at present show an opposition to it, are not correctly informed of its nature or of its objects. I would say to those who suppose phrenology to have a dangerous tendency: Phrenology—is it true, or is it false? If it be not founded in truth, no danger can attend it, because it cannot stand long; and you know that in natural philosophy many truths were, when first promulgated, considered dangerous, and were attempted to be suppressed; the discoveries of Copernicus were for a long time so treated. Whatever is founded in nature, remains; hence we begin by observing in phrenology the fundamental powers, and if the brain be necessary for the manifestations of the mind now, that will remain eternally true. I would say to all those who cry against phrenology, and maintain that it is dangerous, Yes, I admit it, I know no modern doctrine so dangerous as phrenology; but to whom is it dangerous? Do you think that any truth whatever is dangerous to mankind at large? Impossible! for that would be to accuse the Creator, who is the Author of truth. But to whom is it dangerous? It is dangerous to mere speculative philosophers, for they must either prove that phrenology is unfounded in nature, or they must give up their self-esteem and false systems, and acknowledge that they are ignorant of the human mind. It must modify the opinions hitherto prevalent in society, and this will prove dangerous to mere theorists, who, ignorant of the powers of the human mind, yet exclaim against the dangers of phrenology. But phrenology has been considered dangerous in another point of view, namely, in a moral. It has been urged as an objection to phrenology, that it leads to materialism, to fatalism, and so on. It is very easy to cry, but do those who cry understand the thing they cry against? This is only done by those who have taken a superficial view of the phrenological system.

Hitherto it has been customary to consider the whole brain as necessary to the understanding or intellect, and, consequently, the whole mass of brain, weighing about three pounds,

has been required for what has been regarded only as a single power. Now, if a small portion of the brain can be shown only to be necessary to each particular power, and if it can be shown that there are thirty-five powers,* what objection can be made to phrenology on that account? The mind manifests different powers; but what the mind itself is we do not know. Phrenology cannot teach us what it belongs to the theologian to settle; we only maintain that the brain is necessary to the manifestations of the mind, not that the brain is the mind, but, I repeat, only that the brain is necessary for its manifestations. This will be sufficient to show that phrenology does not lead to materialism.

I come now to the second objection, which is, that phrenology leads to fatalism. What is meant by fatalism? If it mean that the Creator has dictated many laws to man, to which he must submit, whether he may wish to do so or not, so far we admit fatalism; but more than this phrenology does not teach. I hope you will distinguish this from other ideas, and it is important you should. Some persons speak of innate ideas and predetermined actions; such persons do not derive anything from will. Now I do not go so far as this; I speak only of powers which are given to man, and we cannot create powers; these powers are submitted to laws, and we cannot change these laws, therefore I maintain that man is submitted to the laws of nature, which are immutable. The laws of nature, I am sorry to say, have been too much overlooked in the study of man, and the greatest mischiefs have resulted from this neglect. The body is governed by laws which man cannot counteract; such are the laws of the senses, of nutrition, circulation, &c. The whole of nature is governed by laws, and what the Creator has dictated, to that man must submit. Some of them may be incomprehensible, but they must be obeyed. An infinite number of things is done against our will. Man cannot be in all cases master of his fate. Can we call ourselves into the world? "To be, or not to be"—is it dependent on our will? We observe that in some families the first-born is better off than those who come after; but does it depend upon our will whether we shall be the first or last? We observe, undoubtedly, that there are hereditary diseases, and we say of such, "take care;" but does it depend upon our will whether we will belong to such families as have hereditary diseases, or to others? Some are born deprived of one or more of the external senses—deaf, blind, and so on; does this depend upon their will, or are they what they are in

* See foot-note on p. 126.

spite of their will? There are conditions, therefore, to which we must submit.

Phrenology teaches us that persons are born with certain dispositions more or less active, as persons are born with stronger bodies than others. All genius is born, that is acknowledged; education has never produced it, for whatever some persons may do, they will never become possessed of genius; so that we see that some persons have by nature mental powers stronger than others. Several conditions, I grant, are necessary to produce these differences; many causes tend to modify the manifestations, and one of them is the development of the brain, and then there are external circumstances which influence its activity; but these will not explain why some powers should be by nature stronger than others. So far, then, we admit that phrenology leads to fatalism; but if you wish to include in the meaning attached to fatalism the irresistible actions of the powers, then I deny that phrenology teaches fatalism. I am sure that those who assert that it does harm, never reflected upon the subject. There is no connection between phrenology and predeterminate actions, or innate ideas; there is no relation between them; phrenology merely asserts the existence of powers, not their application, since they may be, as I have already shown, infinitely modified. To those who contend for the irresistible actions of the powers, I would say, look at animals, and you will soon see whether those powers which act with the greatest impetuosity, namely, the passions, cannot be controlled. A dog may be hungry; hunger is a feeling given by nature, and he will try to get something to eat; if he were not free, it would be cruel to punish him for being hungry; but if he should take away that which he ought not, you punish him for it, and another time he would rather remain hungry than be punished by the blows which would follow the seizure of the meat. Do you suppose that the dog must eat because he is hungry, or that he can control his desires? The carnivorous animals are disposed to destroy, but we see those animals are capable of overcoming the destructive propensities. We see every day numerous examples of birds of prey, and animals of prey, being confined with others of a different species in the same cage, so that the natural propensities of animals may be effectually repressed. If the passions can be counteracted in animals, I would ask whether the same cannot be accomplished in man? I would ask any man whether he has not, at some time or other, effectually overcome his natural inclinations, whether he has not restrained certain impulses to action? We all understand that man is furnished with mus-

cles, and that without the exertion of the muscular power he could not go about; without a vocal instrument he could not speak, yet there is no necessity for a man to be always walking, or always talking. Hence phrenology does not teach that the powers act as soon as they are given; and, therefore, it becomes us to consider under what conditions man is free. I shall never speak of an unbounded liberty, because man is subjected to certain laws. There is no effect without a cause, and no legislature has ever admitted of such liberty as some speculative philosophers have supposed. But although I cannot speak of an unbounded liberty, I can speak of a certain liberty to be found in man. If animals can manifest a liberty of action in controlling their passions, surely a greater degree of it must be found in man, who is endowed with such great superiority of intellectual power.

Man, then, to a certain extent is free; and the first condition necessary for the existence of a free will is a plurality of powers. If any being has only one power, he acts in one way, and can have no choice. Thus a stone, subservient to the law of gravitation, must fall; it cannot balance itself in the air, or choose whether it will fall or not. A second condition necessary to have free will, is understanding. No being is free without understanding. Do we not consider that infants are innocent of whatever they do, because they cannot distinguish between good and evil? Idiots may have Destructiveness and Acquisitiveness very active, and may steal and even destroy, yet we impute no moral guilt to them, because they have not understanding to guide them in their actions. Without understanding no freedom is possible. In common life do we not blame a man who has received education more for any bad action he may commit than a man who has not received education? and this shows that we consider a certain degree of understanding necessary in order to be free.

The last condition on which the state of moral freedom depends, is the influence of the understanding, or the manner in which the powers act. It does not depend upon me to have certain inclinations, but it depends upon me, since I am endowed with understanding, to prevent their actions. We cannot eradicate the inclinations planted in us by nature, but we can exercise a control over them by the understanding, as we do our voluntary motion and the five senses.

I have shown you, in my former lectures, that, being endowed with certain powers, animals acted in a certain manner, and that in proportion to the number of powers they possessed, the greater number of modifications of actions did they present, and the greater influence did they possess over

their actions. No animal has so many powers as man ; and he, therefore, having a greater number of powers than any animal, and being endowed also with understanding, is enabled to exercise the greatest control over his actions.

We come now to the most difficult point in phrenology. In mankind we speak of the morality of actions, but in animals we never can. What is moral is rather arbitrarily established by legislation. The question is, seeing that there are thirty-five* primitive powers given to act, and destined to act, whether by any system of legislation these powers can be prevented from acting? In my opinion, not; no power can be annihilated any more than a power can be by us created. If laws were made to take away the sight and hearing, do you not suppose that people would still be born with these senses? The laws of nature are immutable, and, consequently, the same in one country as another, but what is considered a great want of morality in England, would be considered differently in Italy or China ; however, what is poison in England is not aliment in America.

The principles of optics and music remain the same, although they may not be understood by all persons. To follow up the laws of nature is more difficult than it is to follow certain caprices. These laws must be observed, and if men say they will not submit to them, they will be punished ; take eating and drinking for example ; eat and drink with moderation and you will do well, but exceed this and you will suffer. If you look to the vegetable kingdom, you will observe that certain laws are submitted to ; the laws of gravitation are submitted to, but they are modified by others ; vegetables receive nourishment from surrounding substances, they connect them to their own nature, they grow and they propagate themselves ; the laws of nature and generation are observed, but without any exercise of choice. Animals partake of many of the properties of vegetables ; matter is obedient to gravitation ; the animal structure, composed of matter, is also under the subjection of the laws of nutrition, circulation, respiration, and generation ; but in addition to these, they are furnished with the powers of locomotion, and the senses of sight and taste to discriminate their food. The laws are essentially the same in vegetables as in animals, but they are modified. Man has many powers in common with animals, but he has many powers proper to himself, and he has acquired the mastery over animals. Man is both the master and the head of creation; has he become so by powers common to himself

* See foot-note on p. 126.

and animals? No, but by powers proper to himself. Now if man be thus able to overcome the lower feelings in the animal creation, how much more ought he to become the master over his own feelings; but, unfortunately, it is too often the contrary; the feelings, and not reason, govern us, although I hope the time will come when reason will have the entire mastery over the inferior feelings. A mother loves her child whether it is just or unjust; the other feelings will act—Acquisitiveness, Secretiveness, Destructiveness, and all the lower feelings, and when they have become stronger than they should be, then the interference of legislation becomes necessary in order to control them.

One man looks upon the same object with different feelings to another, and yet no error is more common than that of judging other persons by ourselves. Every individual is apt to make himself the standard of mankind; but phrenology teaches us the error of such a plan, by showing the nature of the separate powers operative in man. Why should a man who is a mathematician quarrel with another who is not? or why should a painter quarrel with a musician, or a poet with a mechanic? Mutual forbearance is necessary to all; for it is only by practising forbearance that men can live in society. We all differ on some points; no two characters can be found alike, but we are not on that account to quarrel. So in legislation it is necessary that all the powers should be taken into account, or the most rigid moral code will be found to fail in its object.

Every power is modified in its action, and, therefore, it is a great point to examine in what manner each power may be modified. Now, the observance of these modifications of the actions of the powers may lead us to the knowledge of the character of individuals, and in my next lecture I shall speak of this as one of the advantages of phrenology, and consider the difficulties which present themselves, and, above all, point out the great error of judging of others by ourselves, and show the importance of attending to the ancient rule, "Judge not, lest you be judged."

Lecture XVI.

Another important question now arises, namely, how far phrenology is applicable in social intercourse. The question is, can we make use of phrenology in practical life, and how are we to do so? I confess that the study of phrenology becomes infinitely more difficult, if you wish to make an application of it to individuals. You may be very anxious to

ascertain the functions of each part, and say, that if you know an individual who has one feeling more active than another, you will find in his head that part, which is the organ of the feeling, more developed; therefore finding one part more developed than another, you may be sure that the fundamental power situated there will be more active than another; but if I am to speak of the actions of a man, then I know that is very difficult indeed. It is so difficult, that I am almost afraid to mention all the difficulties; on the other hand, I have no objection to do so, since I fear more from ignorant friends than from avowed enemies. Those who endeavour to make an application of phrenology without having well studied it, must do mischief; the same in this as in any other science. If you wish to practise medicine without knowledge, you must do mischief, and if you attempt to interpret the will of the Supreme Being, without knowing the human heart, you will do mischief. So in phrenology; ignorance is the greatest misfortune, and is most dangerous to the science; I therefore wish you to know the difficulties of phrenology. Having a wish to make a practical use of phrenology in society, if you find an individual organization very large, do not hesitate about it, you may venture to ask whether, with respect to a certain feeling, the person has it strong or not. You may be sure that it is so. But the question is, can we consider the actions of any man? Let us first consider, that in speaking of others, we must not think that we are all alike, that others are like ourselves. This is commonly done, and is certainly a very great error. We cannot represent even the Supreme Being, unless endowed with faculties, and you see now how far I go. But every one will suppose certain dispositions or attributes to exist in the Supreme Being which he considers necessary for man. One will have a Supreme Being of mildness and of love, and another, one of terror. So if you look to the attributes of the Deity, represented by those who speak in the name of God, you will see how far the natural feelings influence our conceptions of the Supreme Being. Look at the Reformers, and you will find Melancthon's representations quite different from those of Calvin. Look even at more ancient times; if you read the epistles of the apostles you will find one speaking of a God of terror, and another of love. To come to the point, if you wish to arrive at a knowledge of other beings, through phrenology, you must be convinced that they all differ. Every one is inclined to look for the feelings in others which he has himself. Some powers are strong, and others are weak, but you must judge of them by some standard, not pursuing what you like or believe, but all must be

judged according to the same standard. Every one is modified; you will never find two persons exactly alike although their countenances are composed of the same integral parts, so each power acts in a modified way although each is essentially the same. You must remember this, and be attentive to it. The five external senses are modified, and the internal powers are modified. Take any power whatever, and you will not see that the action of the same power is exactly the same in another. These things must be considered in our judgment of characters.

Let us make some observations to prove that the actions of each power must be modified in consequence of the combination of the powers. This is the first notion. Each power acts, but it is modified in its action by the combination of other powers. Hence, if you see an organization large in any one, can you tell from that alone how he will act? If you attempt to do so you will do harm, therefore take care; study phrenology. I invite you to do so; but do not attempt to make an application of it before you know its principles. Suppose I see a person who has the organ of Self-esteem large; you may ask me, what do I learn from it? Seeing that part larger than another, I know that the person has a good opinion of himself, and that is all. It is a great point in phrenology, even to reach thus far; it is a point gained. But if you ask how that self-esteem will be applied in society, then I say that I must judge of that by considering other points. First, the powers are not active, according to their absolute size; the same size, in different individuals, may be more or less active according to difference of constitution. Hence study, secondly, the constitution, or temperament, and if the individual be of the lymphatic temperament, the power will be less active; hence, as you found the organ large, you would know from that merely, the person had a good opinion of himself, and the inference you would draw from observing this temperament would be, that the organ would not be extremely active. Then you would look to the natural language, and observe the indication of the powers, see whether there is great activity in the external senses, in voluntary motion, and so on; and if you find, although the part be well developed, no great signs of activity externally, then you may infer that the power is not very active. Then the Self-esteem will not act by itself; it will be combined with all the other powers, and will be modified by external circumstances, as the situation in which we live, by education; so that before you make an application of phrenology to the description of character, you must learn all these circumstances, and then

look to the combination of the powers. In the bilious and nervous temperaments you must make similar allowances, and seeing greater activity in the whole system, I would infer that the activity of the organ is greater. Now, then, I shall continue this power, still keeping to Self-esteem, and see whether the animal powers are most developed; whether Self-esteem is combined with the animal powers, or whether the powers proper to man are most developed, and consequently combined most with that, or whether it is combined with all.

In short, you must compare any power with all the others, in order to guess what direction the power will take. Hence, you may compare the most noble and the most ignoble characters by a combination of other powers, the organ of Self-esteem being large. Combine this with the human feelings, and take away the animal faculties, and see how the person will speak of himself. He will have a good opinion of himself, but he is benevolent, just, and respectful, because all these unite, and really this combination forms a most useful character. You cannot speak of nobleness of mind without self-esteem; I defy you to find such a character. In this way I might go through all the other powers, but I shall only endeavour to show you that it is of the highest importance that every one, before he attempts to make any practical application, with respect to individuals, should study all these points. What has been hitherto said is merely the physiological part of phrenology, namely, that the size of the organ is merely sufficient to determine the activity of a power, but that it is not sufficient to enable you to speak of the determinate character, or the determinate actions, since they are modified in the way I have just described.

The subject is important, and therefore I shall give you several applications. Suppose that a man goes to church on a Sunday: shall we see in every such man the organ of Veneration large; or that all who go would consider themselves as committing sin if they did not go? Do not many go because they wish to obtain the good opinion of others, and many to see and to be seen, as the ancient poet said, "veniunt spectentur ut ipsi"? Now phrenology shows the motives of all actions, and does not consider the actions alone. One man gives to the poor, but shall we find Benevolence large in every man who gives to the poor? A person may give his fortune to the poor, and do it from benevolence, but men give to the poor from various motives. We cannot say of any one, seeing an organ large, that he will do such and such a thing; that would lead to the irresistibility of action, which phrenology by no means teaches, because the powers have a mutual

influence, and each power, acting in combination, is modified by the conditions under which it may act. I know that beginners do not like these difficulties, but there are difficulties in all sciences, which require perseverance to overcome. To combine Veneration with other powers—with Marvellousness and Individuality, I will suppose—shall I say, that because the person has Veneration he is fond of going to church. He has the power which disposes a man to pay respect; but can you say that the power shall act in a determinate manner? No. Suppose a man to have Marvellousness combined with Veneration and Destructiveness at the same time, the act of satisfying these powers will very much depend upon circumstances, and he will satisfy them differently in England to what he would in Spain or Italy. Some would say, having this combination, let us destroy another man because he does not believe, and so to save an individual from hell, and make him love the Supreme Being, he must be killed. Another would say, having Benevolence instead of Destructiveness, combined with Marvellousness and Veneration, let us love another, and try to convert him in that way, even as the Supreme Being is a being of love. Suppose I see five or six persons, and Veneration strong in each, knowing that the actions depend upon the combinations of the powers, I am sure that they will not venerate the Supreme Being in the same way.

In society, many circumstances may occur to prevent or excite the action of a power, and therefore each individual will attempt to satisfy his Veneration in such and such a manner, according to the combination of his other powers, and hence it is easy to conceive why no two will satisfy it exactly in the same way. Suppose a man has Veneration, and wishes to preach, how will he preach? I am sure every one will preach according to the combination of his powers; one will preach in the most gloomy and fearful way, and another will embrace everything with love, hoping everything, and believing everything. One will use simple language, and quote facts, and another will be eloquent and draw his descriptions of characters and events in glowing colours. How do you suppose he would preach? (Showing a miserable cast.) Do you think he would preach by the intellectual operations, or the lower feelings? I would say such a man would preach in the religion in which he was brought up; but in order to give a little something original, it is necessary to have a little more here. (Ideality and Comparison.) One preaches with reason, and likes to examine subjects, and so on; whilst another is a moral preacher, who preaches accord-

ing to the letter, and never goes beyond it—who does not know "the letter killeth, but the spirit giveth life!" Now compare the foreheads of these men, and you will be sure to find that in one the intellectual powers act more with Veneration than in the other. One comes with Predestination and principles of that kind; you may see determination in the character; he likes to speak of a positive command, and you may observe Firmness and Self-esteem combined with his Veneration. Others, again, are just as weak, insist upon nothing, solicit and entreat everything; they are ambassadors who beseech and "pray you, in Christ's stead, to be reconciled unto God." There are many persons brought up to the church, who ought to have been brought up soldiers; and there are moral parsons, of whom some persons complain that they speak only of morality through the whole year. The combinations are almost infinite, and the direction in which the mind goes will be according to the natural dispositions. Hence, seeing an organ developed, you cannot speak of its action unless you observe its combination with the other powers.

Again, suppose a man wishes to do something pleasing to his Heavenly Father, and he thinks to amuse Him by destruction; a man of delicate feelings would not think so, but I can conceive that some persons have imagined that they have been right in their own consciences, gratifying the Supreme Being, and doing Him service by destroying others. Give such persons more of the lower propensities, with Veneration and Destructiveness, than the higher, and see what they will do. I should say, that those who instituted the Inquisition, and were so zealous in persecuting others, had this combination. Every one must take care in judging of others by himself, or he may be easily deceived. A man has some feelings strong, and he thinks it is right to satisfy these feelings; and if he have the lower feelings stronger than the superior feelings, he will wish to satisfy them, and will think others wish to satisfy similar feelings, and that the same feelings must be pleasing to the Supreme Being because they are pleasing to himself.

This is a very important point for those who make institutions, whether religious or civil, to attend to; great mistakes are made here. Go to an institution of education, and those who have an inclination to make themselves the standard of mankind will found an institution to make others what they are themselves; but a mathematician must not think that the whole world are to become mathematicians; nor a man who likes the ancient languages infer that every person must like the ancient languages; it is important not to take others as we find ourselves.

How different do we find parts in consequence of the combination of Ideality with other powers; combine Ideality with the lower feelings and with Veneration, and the poetry will be very different from a combination of that power with others. So again in Conscientiousness, or the love of justice, or in the execution of justice, do we not find that legislators show the disposition which they feel themselves; one is lenient and another is severe. Look at the manner of action of the power numbered 1, and combine it with 2, and you will find a great diversity in the manner of acting. Two mothers may love their children equally strong, and when they do wrong, one will cry for them and the other will punish them. So with Cautiousness and Acquisitiveness: having Acquisitiveness there is the desire to acquire, but shall things be acquired with morality, or in a way not exactly just? You see how difficult, therefore, the study is, and the mistakes made for want of study are almost innumerable.

The study of the combination of the intellectual faculties becomes very important. Suppose I see an individual with certain intellectual powers strong; if I know certain conditions, then I may speak of the application, but without knowing the situation in which the person lives, or of the education he may have received, I cannot speak of their application. I will take the power of Language, as that may be interesting to all. Now, in the study of language, it will be found that there are many signs in a language for the same power in some nations more than others; and in this nation there are less signs for the primitive powers than in some others. In some languages there are many signs for the same power, and on the other hand, you know, that there are several terms which cannot be translated. You cannot translate the English word wit into French; you may say *bel esprit*, or *esprit de saillie*, but that does not exactly express wit. The term modesty is differently used in Great Britain and on the Continent. Therefore in language you will find, that as various powers are more active, so you will find more signs which indicate the activity of the individual powers, and then as these powers are disposed to act in different combinations, so you will find quite a different spirit in the languages. If I speak now of the French language, I know that it admits of a greater number of individual signs than the English or German, in consequence of the composite nature of their words.

Beings are observed, and then they are arranged into species and genera, and so on, as in birds there are many varieties of finches; the name is derived from the German *fink*, but you have a general term for the genus, and modified names to

specify all the varieties. Linnæus was very much assisted in his classification by the German language. There is, in the composition of that language, a disposition to generalize and to specify, and in others there is not so much. Then we infer that Comparison is active, besides Individuality and Eventuality, which gives a spirit to the language. There are nations which like the figurative senses and sciences, and others which do not; so that the study of a language indicates the activity and combination of the intellectual powers, not only in inventing the signs, but also in their construction. If you compare the construction of languages, you will find that they differ very much. Compare the Greek with the English, and you will find they are very different, and the construction is modified by the constitution of the mind. Every one who learns the foreign languages must observe, that the powers follow in one order in one language, and in another order in another. Some begin with the causes, and the effects follow, whilst others begin with the effects, and the causes come after; this is the case in the French language, but it is different in the German; for that compares the facts, and then comes the effect; and this is the result of a combination of the powers of the mind. Observe the operation of the reflective powers; do they go alone? No, they go in combination; give a man Individuality and Eventuality, and you will have a man of facts; but combine them with Comparison and Casuality, and then you will have somewhat more of a philosopher. Let this be sufficient to call your attention to this point, that, in speaking of actions, you must combine the powers, and this is an important, but at the same time, a difficult study. It must be difficult from the number of the primitive powers, seeing that there are thirty-five;* their combinations must be infinite. What a multitude of words will the twenty-four letters of the alphabet produce! Now consider the combinations and then the modifications of each, and you will easily perceive why it is that you can never find two persons exactly alike.

Let the powers which exist be usefully employed, and by their combination you may conceive of a great variety of characters. If you wish to make a study of character, learn to combine, for there is an infinite number of characters; try its degrees. What is very singular, I find more bad names in the dictionaries than good ones, and this shows that the animal powers are more active, because a bad character is the result of the combination of the inferior powers with few of the superior. We have seen, in the physiological considera-

* See foot-note on p. 126.

tion of phrenology, that the lower powers are more developed than the upper. What we call a good character, then, embraces the activity of a greater number of the superior powers, and a bad character the lower.

Suppose I say that there is an individual very good-natured, benevolent, charitable, but who has not great talents, and I come to another who has talents, but is destitute of the other feelings; how can I know this in society? Without entering into particularities of character, if I see that his head is well developed in the anterior and upper part, then I know that he is a good-natured man. If I see another who is developed in this direction (upper and back part), then I would say, take care of him, he is very touchy. Even persons who have made some progress in phrenology have made some errors in their attempts to discriminate characters, hence the great necessity of studying all the circumstances I have mentioned. I shall give you an example: it has been said, that all great artists have Secretiveness; is it true that Secretiveness is a feeling necessary in order to become a great artist? Do you think that it is essential to have Secretiveness in order to become a great actor, or a great painter? I admit of Secretiveness as a fundamental power, but not that it is essential to either of these characters, since we find great artists with and without Secretiveness, and great actors with and without it. In my opinion one power can never produce any great talents; no one power can make a man a good musician, a good painter, or a good poet. Although I grant that several powers are necessary for each, yet I will allow that a good poet cannot describe a cunning character well without having the feeling himself. Shakspeare must have possessed the feelings which he has described so well. A musician must have other powers than those of time and tune, or he will never become a good composer. If a musician has Secretiveness, he will know how to get on in the world, but he is not a good musician because he has Secretiveness; those men who make their way best, and know how to adapt themselves to circumstances and situations, have Acquisitiveness. Hence I say, that those who study the combination of the powers ought to be acquainted with the first principles of phrenology, and one is, that every power is fundamental and has never two sorts of action; and whenever you see a feeling active, you may be sure that that fundamental power exists; and by that fundamental power is meant a peculiar tendency to a certain action, and nothing more, as I hope I have fully shown.

There are other characters who are very touchy, and we must take care of them in society; they are fond of complain-

ing of the world, and fancy they have not received their deserts; they are not satisfied; even their friends say that they do not know why, but that they are very singular. How would you know such a character? He may be a good friend and wish to be good, but he may be easily displeased, and irritable, as we say. I should say of an individual like this (showing a cast), take care. He may be a very reasonable man, but there are feelings hereabout, Self-esteem, Firmness, and Love of Approbation, and he may have Ideality as well, and then he is what is called a conceited character, because Ideality exalts all the other feelings, and therefore he may have the power of Self-esteem so strong as to wish to be considered superior to others. I have never seen an individual possessing this combination who has been pleased with the world.

There are serious and gay characters; there are persons disposed to seriousness; children, when very young, sometimes show a disposition to be serious, and they are commonly too much overlooked. They are fond of thinking, and when they grow up they will often reflect for themselves, and throw off prejudices in which they have been brought up. If I see an individual serious, I know I must encourage that feeling a little to draw him out. Give such an individual Circumspection, Firmness, and a little Self-esteem, and he will keep himself to himself, as they say; he keeps himself shut up. Draw out such a person, and you will find more in him than you expected. There are some who go into the world with half the talents and half the education of others, and they get on; and others of great talents remain long in the back ground, because they have to receive from reason that knowledge of the world which the other acquires from nature. Some men accommodate themselves to the world, whilst others expect the world to be accommodated to them. Give a man Individuality and Eventuality, and he will know the beings around him; and give him a little Secretiveness, and he will make his way; he will accommodate himself to persons and places; he will say, it is not necessary to reason with everyone, no, no, let them go on. Give him the Love of Approbation and see how he gets on then; he will please persons, and wish, by doing so, to be applauded. Such a man has talents to get through the world; he will be inclined to say to every one, "I am your obedient, humble servant."

Dr. Spurzheim concluded the lecture by a brief recapitulation of the principal circumstances to be borne in mind in applying the science of phrenology to the discrimination of character.

Lecture XVII.

We have spoken of phrenology in its application to several of the sciences; I wish now to make an application of it to the medical profession. The question is whether phrenology is useful to the healing art. You will excuse me if any severe expressions escape me, because in this matter it is difficult to remain indifferent with my profession, for in the consideration of the deranged functions of the brain, we consider the most painful situation in which man can be placed; and here I confess that the medical profession has not contributed much to confirm and propagate phrenology; however, I shall propose to them a few motives for doing so.

1st. Do you think that phrenology is founded in nature, and that it has or will become a species of philosophical knowledge? I should like to know whether our profession might not be interested to raise itself as high as possible. If it be ascertained that man must be studied in the same way as other beings, why neglect that part of man which is the most important, a knowledge of which is absolutely necessary if we wish to make any application of our studies to the treatment of disease? The philosophy of mind, we have shown, must be founded on phrenology. Hitherto, physicians have consulted philosophers in the study of the mind, instead of cultivating an acquaintance with nature, as taught by phrenology. Moreover, the question is, can we remain indifferent about the functions of the brain? Must we not know its functions in a healthy before we can treat of them in a deranged state? We acknowledge the importance of anatomy, physiology, and pathology, and of every other part, and admit such knowledge to be necessary before we think of treating a part; why then neglect the brain? As to its anatomy, it has been little understood; it has been sliced down like cheese; its physiology or healthy functions have been unattended to; and as to its pathology or derangements, many of them are never thought of. Shall we go on in this way? If medical men do not feel an inclination to attend to these inquiries, let the public know what they are, and let them be forced to do their duty, or confess their ignorance, because hitherto they have not studied phrenology, but have nevertheless joined in abusing it.

To come to insanity, a most important branch of phrenology in connexion with medical science. What is insanity? Give me a definition of its nature. If we speak of other diseases, we give definitions in conformity with the healing art; if we speak of inflammation of the lungs or of inflammation of the eyes, every medical man knows what to do, and how to treat them. Go through the whole catalogue of diseases, and their names indicate what parts of the body are diseased. What is insanity? Is it a diseased state of the body? Are you sure of that even? Not at all. We speak of diseases of the mind. Can the mind be diseased? The mind is immaterial; can it be diseased? I do not say so; I do not know a more dangerous doctrine than that of the mind being diseased. If you attach any meaning to the expression, what is meant by it? My organization may be diseased, and that disease may continue till it produces death. Can the mind be altered by degrees, and can it be destroyed? There is nothing annihilated in this life, although things change their form. Now what is this? Is there derangement of the mind from any cause without or from within? Shall we go back to the times when insane persons were considered to be possessed of evil spirits? If the cause be evil spirits, or any other cause from without, what have medical men to do with the treatment of insanity? Hence, I repeat, let medical men be forced to confess their ignorance, or take an interest in the study of phrenology. If they say insanity is an affection of the understanding, let the treatment of it be confided to metaphysicians and philosophers, and let them reason with them. We have an influence, as medical men, upon the organic conditions of the body, but we cannot act upon the immaterial existence itself. I repeat, therefore, What is insanity? It is important to give a medical definition of this state the most lamentable man can fall into. An individual being declared insane is deprived of all the rights of society, and is no longer considered answerable for his actions to society; he is treated like an outcast, and is shut out from the society of man. The consideration of insanity, therefore, is important to society at large, and not to the medical profession alone, although medical men are commonly called upon to declare whether a man is insane or not; but how can they do this, unless they are first acquainted with the healthy functions of the mind? Must we not know the healthy state of the functions of the body first? Must not pathology be founded on anatomy and physiology? and these teach us where the derangement is going on. If the respiration be impeded, we know by anatomy and physiology that

respiration is performed by the lungs, assisted by other apparatus, hence we know when the lungs are diseased; and to know when the respiration is deranged, we must know how it is performed in the healthy state. If we give a definition of insanity according to the notions now prevalent in society, we should say, "that it is a state in which an individual has lost his moral liberty; a state in which a man is no longer free, whether the defect lies in the intellectual or effective powers;" but I cannot say that a derangement in the functions of the mental powers is sufficient to constitute a man insane. My eyes may be deranged, I may see things yellow, but I may know the disease, and am not insane; I may have various morbid sensations, but am not therefore insane; I may have my feelings altered, and yet not be insane; as long as I know what is going on in things around me, I am not considered insane; but as soon as one of the three conditions I have spoken of in moral liberty is destroyed, then a man is declared insane. Look at an individual who has an internal sensation; as soon as he thinks that the object drawn in his mind has a true existence he is announced a fool. There are insane people who know that they have deranged feelings, and that these feelings are stronger than they ought to be; they have understanding enough to know that these powers are too active, but not understanding enough to control them. This definition is given by society at large, and is right in one respect, since this state is practically considered in its influence on society, and there is no other morbid state which has the same influence on society as this.

Here is another great difficulty with respect to insanity, and I think it is better for men to confess their ignorance than commit an error here; there is a state of insanity which is partial or intermittent. It happens that individuals for certain minutes cannot rectify their notions; they have certain feelings stronger than others, and cannot resist them; they have, for the time, no free will, and we declare them to be insane. Being declared insane for one single minute is sufficient to prevent a man for his whole life after from doing anything civil or social. Let this be done for the sake of society and I have no objection to it. Cowper was insane at intervals, yet he made fine verses when he was not so; and shall we reject his poetry because he was insane at particular times? I wish to call your attention to the difficulties which exist in this respect in legislation, and there are difficulties in legislation as well as in phrenology. In various diseases the patients know individuals about them, but are you sure that

the mind is perfect because they can do that? Animals can do the same, and so can insane persons; they have their lucid intervals, and can distinguish and recognise persons. I state this to make you reflect on the difficulties which exist even in deciding upon insanity, particularly so, since it is admitted that if they reason well they are not considered insane. Now, some insane persons reason as well as we do upon certain subjects, and not upon others; and phrenology teaches us how this can happen, since it shows that some powers can be in action and others not, and some diseased whilst others remain healthy. In short, the study of insanity is extremely difficult, and it is more difficult to decide upon insanity than is generally considered.

I go on to ask whether any definition can be given of insanity, with respect to the healing art? If we speak of inflammation in general, we know how to proceed and what treatment to adopt; but when the mind is deranged, and the state of moral liberty, both of the conditions under which that state occurs may be very different, and indeed must be so, since we find that the most opposite treatment cures insanity. This state is one and the same as respects the manifestations of the mind, but the conditions of the body may be various, and this is what we want to know. I say, not only to medical men, but to all others who take an interest in phrenology, and who have opportunities for observing patients of this description, that they must proceed here as in the investigation of any other disease; anatomy and physiology must be first studied, and then the derangement of function must be observed. I shall give you on this point a few general notions, since many persons remain yet prejudiced against phrenology, and since I do not see that those who even take some interest in it are sufficiently anxious to oppose popular errors.

In speaking of the proofs of the fundamental powers of the mind, we have said that any power singly may become deranged in its function. The power situated in the cerebellum may become deranged; the love of offspring may become deranged; self-esteem, attachment, cautiousness, any power whatever may become deranged in insanity, and be the cause of the different symptoms we observe in insane persons. In phrenology we can easily conceive how one power may be deranged and how the others may go on in a healthy state, and hence give rise to the various forms of insanity. Some are bold in their insanity, others very fearful and melancholy. Persons separated from their children become insane from the love of offspring becoming too active; others from the feeling

of attachment, and others again on account of religious feelings. If you read the various divisions of insanity given by authors, you will find that they speak of melancholia, mania, dementia, and so on; and then there is the religious melancholy, and various other melancholies; you will find in Arnold's book such divisions, but you cannot be satisfied with a pathological division of that kind.

The most important point which interests us here is to acknowledge that the cause of insanity is corporeal and physical. The proximate cause is seated in the brain, and if you reflect on the state of derangement, it is inconceivable how any man can doubt the cause of it to be physical.

I come now to consider a prejudice respecting insanity; it is said to be hereditary; is that true? Many do not like to have such a disease spoken of. It is considered a disgrace to a family; but I say it is no disgrace, but the most pitiable calamity that can befall anyone. We, as medical men, must say that it is hereditary, as well as many other complaints. There are family faces and family noses, and there are family brains, and there are, as well as peculiar configurations in families, peculiar disorders, such as gout, goitre, apoplexy, &c.; and why should not the affection of the brain be hereditary? Others say it is a disgrace, and a selfish motive comes in, and other families do not like to intermarry with them; that may be very proper; but let us consider the ordinary way in which such persons are treated; they are concealed, separated from society, and shut up. But would you neglect a patient who has inflammation of the lungs and scrofula? will you separate him from society, conceal his disease, and confine him, and not call a physician to treat him? Certainly not; no such proceeding is thought of; but the poor patient who manifests any derangement of the function of the brain is neglected, and a physician is not called in until the disorder is established, whereas, if called in at the beginning, great good might have been done. Unfortunately, medical aid is often called in too late. The longer a disease lasts, the worse it is and the more difficult to cure. It should be known that the brain can fall sick as well as other parts of the body; and it is of the highest importance to seek for advice in the beginning of the malady, and that by doing so its cause may be frequently arrested; and the knowledge of the natural functions of the mind is very necessary to be able to "minister to a mind diseased." Insanity is corporeal, it depends upon a deranged action of the brain. The brain undergoes variations as other parts of the body, and seeing that diseases of the brain follow these variations as in other parts, so we infer that insanity is corporeal.

We very seldom see insanity in children, but very frequently in the adult, and at that period of a man's life in which the mind is most exercised, between twenty and fifty, and after that period there are not many who become insane. It is the result of causes acting from without, and not from causes called moral, but such as act upon the head, as too much loss of blood, too much drinking, and many other causes. Insanity has its fits; it comes on from time to time, and goes off again, and it is difficult to suppose how this could be so, provided the mind were diseased. An inflammation of the eyes comes and goes away again, and it is the same with the brain, producing for the time that state called insanity. As to those fits of insanity, I should like to know how they may be explained. The phenomena of nature are constant in their operations, but they are more active sometimes than others, and what is here said of insanity must be considered as a general law, and will be found useful in every situation. No power is constantly active, but less so sometimes than at others; a man may have attachment strong, he may be a very sincere friend, but his friendship may be more active at one time than another. So our other feelings are not always active in the same degree. There are periods of sleeping and waking in the twenty-four hours; the brain wants rest, and we cannot act with our intellectual or effective powers without rest. Moreover, there are certain varieties in the feelings, even the higher feelings, on certain days. Persons are very little active on certain days, they cannot exert themselves much, and I am sure that anyone who has what is called a nervous temperament is particularly sensible of this; a little thing offends, and he is touchy and irritable, and although his friends perceive it, he does not know it himself; in a few days this goes off and he is as well as before. It is an important thing to attend in common life to mutual forbearance; it is founded in nature as well as commanded by the laws, and medical men particularly are required to pay attention to it in the treatment of certain diseases. I appeal to them whether their patients are not better on certain days than on others, without the influence of medicine. It is the same in this species of insanity, a power is irritable and excited, and we do not know why. We know that such things happen, and that there are a great many changes to which the body is submitted. We know that the body increases for a certain number of years, and then stands still; and there are times of decay, the climactric age.

The influence of education will be considered in the next lecture. All those who take charge of education know how

different the intellectual powers of children are at certain periods. Seeing these facts, and considering the intermissions and exacerbations of insanity, it is impossible not to draw the inference that its cause is corporeal. I am convinced that the cause of all mental derangement is physical, and that its proximate cause is to be found in the brain, and to satisfy yourselves of this you must study anatomy and physiology. When digestion is deranged we know what part suffers, and we know frequently that the circulation is disturbed with it; the heart being affected by sympathy with the stomach. Now we cannot know where the derangement takes place without knowing the functions of the parts in the healthy state, and, therefore, what I have said of the individual organs must be studied singly and combinedly, and then it will be seen that the proximate cause of insanity is in the brain, either immediately originating in the brain itself, or being affected by the disturbance of a distant part by sympathy.

Some persons have said that the cause of insanity is not corporeal, because they have not found derangements in the organization of the brain after death; but if they will study the healthy brain, and examine those afterwards who die of chronic insanity, they may depend on finding a great difference. I have never seen a case in which I could not find a great difference; but this cannot be seen unless the healthy structure of the brain is first well known. Having studied the whole of the configuration of the brain and its functions, some persons have asked the phrenologist, Can you say whether a person will become insane or not? No, our knowledge will never go so far. I may see a person very active, a muscular, agile man, perhaps a tumbler or rope-dancer; can I say to him you will have an inflammation of the lungs, or to another, who has a good appetite, you will have an inflammation of the stomach? Every part of the body may become deranged, and the brain as well as any other part. If I saw certain configurations, such as these before me, I would say that the species of insanity called idiotism goes with them, because they are too small. (Three casts of the heads of idiots were on the table.) Some people have from infancy certain feelings stronger than others, and if we learn that a boy, for example, has always shown great love of approbation, and a desire to command others, you may be generally sure that such a person, if he should become insane, will show the predominance of this feeling. The organ is found large in such a person. I have never known an instance to the contrary. Here is the cast of a person who became insane from excess of pride, and you see how very largely developed the

organs are hereabout. (The upper and back part of the head.) If you know persons who have been serious from infancy, and who by any acquired weakness have become insane, you will be sure to find such indulge in melancholy, and Cautiousness will be found very large. If persons labour under religious derangement, as is sometimes the case, then the organ of Veneration will be found large.

I might speak here of the moral causes of insanity, but there are no moral causes of it. What is meant by moral causes of insanity? If you call moral "the action of the feelings and intellect," I say, yes, I agree with you that there are moral causes; but if you separate from the moral causes the influence of the organization, I say no, there are none such. What are, then, the moral causes? They are merely the activity of the brain: the feelings and the ideas are to the brain what the aliments are to the stomach and the light to the eyes. Give too much food to the stomach and too much light to the eyes, and see if these organs will not become deranged; and give to the brain more than the brain can bear, and it will become deranged also. Religious feelings have too often disordered the mind; if you see religious feelings strong, with great action and exaltation going on, encourage them, and you might soon send them to the madhouse if you liked. What is called the moral cause of insanity is the activity of the feelings. The feelings, becoming too active, are no longer under the control of the intellectual powers, and that constitutes insanity; and it may be so in the lower or in the superior feelings. A man may have Benevolence too active; he may give away everything that he has, and we call such a man a fool. The individual feelings being exalted, it becomes a most important duty to exercise those feelings which are opposed to them, and thus tend to prevent the excesses. Seeing a feeling exalted, shall we go on with it, or shall we take such measures as shall give no opportunity to encourage the action of that power? Suppose the feeling of veneration should be too strong, shall we give the person religious books to read, which are to make him more deranged? So that a medical man requires an absolute knowledge of the human mind in order to treat insanity. I am sure that if persons would pay more attention to the examination of the brain in the healthy state, they would not have any difficulty in detecting changes in its organization in insane persons; it has even been found that the part of the brain has proved to be most diseased which has been the seat of the most predominant feeling during the insanity.

Sometimes there is a single power deranged, at other times there is a combination; the animal powers are sometimes very active, and yet the intellectual powers go on, and this happens in suicide, or suicide combined with murder. An individual wishes to die, and he has not courage to kill himself, and, in his insanity, he does that for which he will be put to death; he arranges all his concerns, and makes a preparation before hand, and he goes away with a determination to kill someone; and I have known many cases of that kind, for which they say the person must be hanged. We see here a case of an individual feeling being deranged, and yet the intellect remaining sound; the man acts so because he wishes to be killed, but justice says we have no right to do so, since we have declared once for ever that we have no right to kill an individual because he is insane. Judges themselves do not yet know sufficiently that individual powers of the mind may become deranged and yet the others remain sound. If I am told that an individual has committed a murder during his insanity, do you suppose that in every case I should look for a large organ of Destructiveness? I would inquire as to the motive, and if I found that a person dispatched another in order to save him eternally, having sent him away that he should sin no more, I should rather look for the organ of Conscientiousness to be large than that of Destructiveness.

Another proof that the brain is the seat of insanity, and that its derangement is the proximate cause, is to be found in the great consolidation and thickening of the bones of the skull, particularly if the insane person had an accute irritation in the beginning of the disease. We know that sometimes the skull becomes as hard as ivory; not a mere absorption of the diploe by which the outer and inner tables approximate, but an absolute thickening and hardening of the skull like ivory. (The section of the skull of a person who had been idiotic ten years was shown.) Altogether, you must be convinced that the cause is in the brain, and if it were not, medical men could have no influence; but as it is they are allowed to have some influence; the sooner they exert it the better, as it happens in this, as in every other case of disease, that if attended to in the beginning it may be materially benefited, if not removed; but if neglected, little or no advantage can be expected from the subsequent treatment.

My object has been to-day to show that the cause of insanity is corporeal and principally dependent on the brain, and that for this reason medical men must find an interest in the study of phrenology, because I hope that by degrees insanity will be taken up as a branch of study by medical practitioners in

general, and not be confined as it is now to a few persons. Why should it not be generally studied?

In the next lecture I shall speak of the application of phrenology to education.

Lecture XVIII.

I come to-day to a very important application of phrenology—namely, to Education.

Look at man in general, and see what a wretched state he is in; he requires to be treated almost as a child, and yet writers have told us that the world wishes for education.

Many books have been written on education, whole libraries have been compiled, various institutions established, yet very little improvement has taken place. Can man be perfected by education, or can he not? It is certain that the improvement is not proportionate to the trouble which some individuals have taken. Therefore, I repeat, can man be perfected or not? Or shall he remain eternally what he is? In speaking of the perfection of man, I do not mean to say that man can, by any power whatever, acquire any one of the fundamental powers of the mind, because the number of them is determinate; but the question is, whether these powers can become more or less active, and whether they can be directed in a way likely to be most useful to the individual? Commonly, in speaking of education, it is divided into two parts, physical and moral. Since we admit that the moral part of man, or, in other words, the mental part, depends upon the organization, and since we do not admit of any influence independent of the cerebral organization, I do not like this division, and, therefore, shall not speak of it.

However, I shall speak of education under two heads. I shall first examine how far it is possible to give more or less activity to the fundamental powers with which man is endowed, since we admit in phrenology that man has received from the hands of the Creator a certain number of powers, and that these powers are manifested under certain conditions. Now we see that many powers are more active than others, and that, in a general way, the animal powers are more active than the powers proper to man. Is it possible to give more or less activity to the individual powers? that will be the first question.

I shall, secondly, examine how far it is possible to direct

these powers. What shall we do if we find persons born more active than others? There are various conditions which must be observed. Man is a created being, and he must be studied in the same way as all other created beings—by observation. Nature makes no exception to her general laws, although we wish to make exceptions much more frequently than is necessary. Although the subject may appear delicate, I shall insist upon it. Man must be improved in many respects, as all other created beings. Are we not sure to have good cattle, a good breed of any description, by attending to certain conditions; but are we sure of having good children? We can calculate, in a general way, that we shall succeed just as we like with animals; but can anyone say I will have such and such children? We are the rulers of nature; man knows that he must submit to certain conditions, for he does not find that he can create; hence he submits to conditions. With respect to his own race, he thinks he is capable of making exceptions, and he is punished for his pride. The matter is delicate, and I shall inquire only into the laws of creation. With respect to our being we must submit to the will of our heavenly Father, but we wish to become the masters. If an agriculturist wishes to cultivate plants, trees, and fruits, how does he proceed? Does he not train his trees and place them in certain situations favourable for his purpose? and he is sure to succeed. To come to animals; we know that they are submitted to certain natural laws, and these laws must be submitted to trials.

I now come to the most delicate point that can be conceived by those who have attended to the laws of the body. It is certain that the whole of the constitution is propagated from parents to children, and you may perceive that I allude to the laws of propagation. This is the most important of anything a man can attend to; and if the time should come when the laws of propagation shall be attended to, more good will be done to perfect man than hitherto has been done by all the institutions and by all the teachers of the present or past ages, not only with respect to individuals but families and nations. The body has its laws, and if the manifestations of the mind depend upon the body, the laws of the body must be observed if we wish to arrive at a perfection of form or of endowments of the mind. The ancient legislators were all aware of this, and the ancient Spartans were celebrated for their symmetry and strength; but I shall not enter into the subject here; I merely call your attention to it to show that we must submit

to certain natural laws. The body, you see, has its laws, and are there not various hereditary diseases? But we look to a fine form and to money, and forget all the other things. People are satisfied with a fine figure and money, I say; very well, do not complain of the consequences even with respect to intellectual powers; but if you regard merely the physical development, something more than money and a fine figure must be attended to. Some beings appear born for each other, but the longer they are together the less they like each other.

I shall merely enter into this matter in a general way. The powers wish to be satisfied, and as some of these powers are active, and find they cannot be satisfied, then the parties are displeased; and even when persons live together in society, and find the powers cannot be satisfied, they are displeased. A villain does not like to see an honest man, and a just man does not like one who is unjust. Every one must know his own powers, and he must look for the same powers in another, and then such persons will live in peace. Moreover, the diseases of the body exist and have an influence on the children; and if every one will reflect for himself, he must see that there are certain configurations propagated from parents to offspring, and if parents have small brains, small brains will come. There are talents in all families; but are there certain faculties more active in certain families? You will, perhaps, be inclined to admit that there are. Now, if you see persons who, in the third generation, have a great tendency to become consumptive, and, perhaps, like their predecessors, die of consumption, do you think that Moses was right in preventing promiscuous marriages with even the third and fourth generations of such families? The ancient legislators attended to the laws of propagation and degeneration. Some families intermarry with each other, and have you been attentive to the result, a result attempted to be guarded against by the Mosaic law? Degeneration is the consequence. What do you do in nature? Does the naturalist continually sow the same seed? Does the same tree thrive in the same soil, or does he find it necessary to change the seed and change the soil? Does he not find it necessary to cross the breed in animals if he wish to preserve the integrity of the race? But nothing of the kind is attended to in man. I might go so far as to ask whether those families, in which the breed is crossed, show more talents than those in which it is not? Or I might, perhaps, even go to nations. Those who have the opportunities of observing will see that the human form is influenced, and

that the feelings and intellectual powers are modified by certain conditions, and thus we arrive at the confirmation of that with which we set out, that the human form does change and must change.

I come to the second consideration, or to that which is commonly called physical education, but since this is spoken of in many books I shall say nothing of it. As soon as a child is born, and even before, the physical education must be attended to, for if proper nourishment be not afforded, the brain will not be developed with vigour no more than other parts of the body. There are some who say that the milk, by which the child is nourished, can give certain dispositions, but I doubt it. I say that if the milk could produce such results, then many adults might be excused if they returned to their original article of diet. You may feed a child with the milk of other animals, but that will not produce in it the feelings of those animals. Perhaps we may presume that the climate has an influence on the constitution. The climate is often spoken of, and in treating of the intellectual powers, I admit the influence of climate in producing peculiarities of organization, inasmuch as some climates are more unfavourable to the growth of the body than others; and that it may encourage the development of certain powers and retard others. I can conceive that in the milder climates the intellectual powers are calculated to act with more activity, and so far I am disposed to admit the influence of climate on that power. Nourishment, then, contributes to the greater development of the individual organs, and as some climates also favour the growth, and since the powers depend upon the organization for their perfect action, we can see how, in a secondary way, the mind depends upon the climate; but climate is not everything. Is it, however, merely climate that makes the difference between the Hindoos and English? or is it done by propagation? The Jews are distributed all over Europe, but have they changed their features? They are so peculiar that they may be known from every other people; and what is rather singular, even the two tribes of Judah and Benjamin may be distinguished from each other, although many thousand years have elapsed since their separation.

How many years are necessary to change the constitution and the powers of man, the laws of propagation being attended to? Perhaps it may be that certain aliments are more congenial to certain parts of our bodies; we observe the influence of various agents on the nervous, vascular, and muscular systems, and this is a point to be attended to: to

see if something more cannot be done for the education of the mental powers, by phrenology, than has hitherto been done.

I come now to another point which is very little understood, although apparently so simple, I mean the exercise of the powers. We must admit that our powers may be exercised, and that they may be made stronger by exercise. We can do so with the muscular actions, and we can do the same with the external senses. Every power being exercised acquires more strength; hence, if we wish to give more activity to the intellectual faculties, let them be exercised and they will become stronger. If they be too strong let them be quiet, and if not strong enough exercise them. But this is not done by the present mode of education; and this serves to show that the fundamental powers of the mind are not understood. Teachers complain that they cannot cultivate the feelings so much as the intellectual powers; that may be; if a proper method only be adapted they may be exercised even more than the intellectual, but not in the way now done. Suppose I see an individual who has a perfect figure and good muscular action, and I wish him to become a rope-dancer; I say to him, Here is a book on rope-dancing, you will learn from this how to exercise your muscles, how to acquire the art of balancing; read it through very carefully, and in the end I hope you will be a good rope-dancer; I would say to another, Here is a treatise on music, read it through, it is a perfect treatise, learn it by heart, and you will become a good musician; to another I say, Here is a work on painting, you will learn from it how to mix colours, and in the end you will become a good painter; but give the would-be rope-dancer no exercise, let the young musician hear no tunes, and let the young painter see no colours, and will the education produce the intended effect?

Again, we have works written upon the feelings; we are told to have charity, to cultivate veneration and benevolence, and children are made to learn them by heart; by doing so the verbal memory merely is exercised, but the feelings remain as before. Exercise is the putting into action. Speak to a child of hunger and thirst, and give him very correct explanations of the terms, yet he will never know what they are by such explanations; but give him little to eat and to drink and he will soon know what they are. Say nothing about benevolence and charity to a child and take him to see poor, suffering beings, and make him suffer a little also, and he will soon learn what benevolence and charity are.

The powers must be put into action; and when you recollect that there are thirty-five powers to be exercised, you will see the importance of attending to this mode of education. In the same way the reflective powers may be exercised. Each power must be exercised for itself in order to perfect it, and it can never be done by exercising another power. In learning by heart, the reflective powers are not exercised, only a mere verbal memory; words are retained without any ideas being attached to them. Now it is an important point in education to know what degree of exercise to give to each power, not too much nor too little, but just as much as it can bear without fatigue; just as some persons can walk two miles, others only one, and others again are fatigued with half a mile. The powers being individually more or less active, let them be exercised according to the degree of their natural strength. We are sometimes astonished at the premature genius displayed by some children; the talent is encouraged too rapidly, it reaches speedily to the highest degree and then as suddenly sinks.

Whenever you see great powers manifested by children take care that you do not too rapidly exhaust them. It is a general rule that the weaker children are the more precocious, and they often die too soon; but the object should be rather to repress that inordinate activity of the talents, and manage the growth and support the animal powers a little more, and then the future man will, with a strong body, display powerfully the manifestations of the mind.

It is a saying of the ancients, *mens sana in corpore sano*, and the body must be attended to, and the period for exciting the intellectual powers must be attended to. All teachers must be aware, that one power becomes active at one period, and another at another; but see here what can be done by education. We have shown that the organs of individuality and sensuality* are first active among the intellectual powers, and we observe how anxious children are to acquire a knowledge of the beings around them. They look attentively to things around them and endeavour to become acquainted with their nature and qualities, and then they begin to pay attention to signs and words; but, in the ordinary mode of education, words and signs are attended to and the meaning is lost sight of. You will see some children amused with learning words, whilst others will look for plants, and stones, and minerals, and so on, and are better pleased with them than books; but then the master comes and punishes them

* Dr. Spurzheim here uses the word sensuality in its primary meaning, namely, that of perceiving through the senses.

for their talent, and makes them go to school to learn Latin and Greek. The powers may each be cultivated by attending to circumstances; and some situations and pursuits are more favourable to the exercise of certain powers than others. A man may study the ancient languages and may succeed very well with them; but must every man be a classical scholar to become a great man? Or can you exercise reason, that is to say the powers of comparison and causality, in any other way than by learning languages? You may see a great mathematician, a man of deep mind, perhaps: will you say that every man must study mathematics in order to obtain a reflective mind? I say that comparison and causality may be exercised in mathematics as well as in languages; but might they not be exercised in any other way, by natural history or various branches of philosophy? Shall we condemn an individual to learn Latin and Greek whose power of language is very small, and who can never therefore become a good scholar?

We should know the value of all the powers and cultivate them, but not make every man cultivate them in the same way. If a man have the powers of language large, let him study the ancient and modern languages; and which are the most useful? I am very sorry to say that we judge of a man, who has received a liberal education, by his knowledge of Latin and Greek rather than if he have cultivated his own language. I should like to know whether the modern languages have the same spirit as the ancient; whether we write English as they formerly wrote Greek. But do not misunderstand me; I have no objection to any branch of knowledge; but my observations are now limited to children. Do not let the useful knowledge be neglected; if there are many powers let them all be exercised, I have no objection to that; but let the powers which exist, provided they are but few, be cultivated, in reference to the future destinies of the individual, by which they may be made most useful to him. Every power must be exercised for itself, but I would ask whether every man must study mathematics to become a preacher of morality and religion, or even become a medical man? If this be true, after the necessary knowledge has been acquired, let the other subjects be studied. Whilst all the books were written in Latin it was necessary to know that language, and if a man wish to read the doctrines of physic in the original language, as by Hippocrates, he must learn Greek, and so it will be necessary to learn the modern, more particularly the French and German; and comparison and causality may be exercised by each.

One observation more with respect to exercise. Is it probable that the individual organs of the cerebral functions increase by exercise? I admit that the brain is an organized part and submitted to natural laws in common with every other part of the body; it is nourished by the circulation of the blood, and there is more blood runs to it than to any part of the body of equal size; and in proportion as any part is exercised, so there is more blood sent to it, and it is found to increase in size; but this is not the most important thing. The faculties show more energy by exercise, and a greater energy if the volume of the organ increases; there is no ratio between the increase of activity of a faculty and the increase in bulk of the organ. The muscular power may be increased wonderfully by daily exercise; and a person may, by exercise, be able to accomplish a journey which he would not at first have dared to attempt; but there is no proportional increase in bulk. The fibres of the brain become also strengthened by exercise. Do not teachers find, when children return from their holidays for four or five weeks, that they are not able to get through the same lessons which they did when they left school? It requires some time for them to come in again, and then there is activity. Exercise has some influence on the development of the organ, but its greatest influence is on its degree of activity. Hence, then, the point should be to attend to the exercise of the fundamental powers, and to exercise each power for itself.

I now come to another consideration which contributes to give greater activity; it is that of the mutual influence of the powers. Many powers are always active by their natural energy, and we may excite others by them. We all know what emulation is; the love of approbation is put into exercise to excite other powers, to give activity to them. The love of approbation may be excited to make a soldier fight; it may be employed to excite benevolence, and even in this way we may employ one power to excite another. The solicitation of the powers belongs, in a great measure, to the science of mnemonics—namely, that of one power exciting another. Now what is memory, according to phrenology, but a higher degree of activity in the individual intellectual powers? Those who teach this art take first one power and then combine it with others. Suppose we see a certain object which recalls to the mind the recollection of something which ought to be done; this is an example of what may be done by mnemonics. I know a gentleman who told me that he could never think of anything without

colour. I should say that, in him, the organ of colour would be the exciting organ for the exercise of mnemonics. Then comes the intellectual powers, and then we have to try how these can be brought together in order to excite or prevent the others, and to do this phrenology must be perfectly understood. Then we have to set the animal feelings against the feelings proper to man ; the feelings against the intellect, and the intellect against the feelings, and the feelings against themselves. These, then, are the four means of giving more or less activity.

Let us proceed to the second part of education, to the direction of the powers. How shall we direct them ? Shall the animal predominate, or shall man at once become the master ? I would say, let the powers be employed under the direction of man, let all the other powers be subservient to such as are proper to man ; these must be guided, or they must guide. Veneration is not to go alone, nor benevolence alone, but they must go altogether. I know that this will be a long time in performing, if it be accomplished ; but I consider that in all situations this direction is important to the happiness of man ; and as long as the animal feelings remain unsubdued so long will the misery of mankind continue. Hence we want to know how it is to be accomplished. We must all be aware that everyone, in infancy, acts by motives ; and if you wish children or adults to act in a certain way, you must present some motive to them. Now although the powers are essentially the same in the mind of every man, yet, as some powers are inclined to be more active than others, the same motives will not succeed with all. To some, the mere justice of an act may be a sufficient motive to perform it ; others must have different motives ; they would not look to conscientiousness only, they would be inclined to act with acquisitiveness, and so with the rest. There are various motives, and these differ in their influence on individuals according to circumstances.

As we are directed by the apostolic maxim to adapt ourselves in our conduct to the capacities of others, and be all things to all men, so it would be of no use for me to speak to anyone of causality. If people were to consider this subject more, much of the time thrown away in education might be saved. We must know that the motives are active according to the degree of the different feelings, then we must know that each power gives a tendency to an action, and that these tendencies must not be confounded with their application. I have seen a child very proud ; the parents prohibited him from commanding the servants,

and told him he must be kind to the servants, and this child has the power of commanding very strong; and when that is the case, I should say take care, and you should take further measures to prevent it. We often lament the influence of vanity in the adult, but we forget that it exists in children; if we praise a child for his fine air, his fine dancing, and accomplishments, do not praise him too much, and do not flatter him too much. It is often by encouraging little things that habits become confirmed. If you see a child inclined to tell lies, or fibs as they are called, in joke, do not encourage such fibs, for, if you do, he will grow up a confirmed liar. A child may begin by stealing an apple, and afterwards other things of more consequence. Do not let the powers, in their direction, be confounded with their application. As soon as a power becomes too active, exercise a check over it, by exciting another power, and then do not confound the power with its application.

Another important object to be attended to in education is, that every individual is endowed with different degrees of faculties, that is, a great study, and that education gives no power, therefore we have to cultivate the powers as they exist. We lament very much in society that so many things are done as they are; we find even that education does not control sufficiently the natural propensities, even in those persons who have strong intellectual talents. It must be borne in mind that the powers are given, and that education, although it may, if properly directed, cultivate the powers, can never create them. Again, the powers, being observed, should be directed into a proper channel, and this can never be done until persons are acquainted with the nature of the fundamental powers of the mind. A man may be a good mathematician but a bad moralist, and yet such a man is brought up to the church; and you know there are many preachers who say You must do as I say, and not as I do. Persons fitted, by nature, for soldiers are brought up to the gown, and the reverse. Employ every individual according to his natural gifts. The priests, who, during the dark ages, had the management of education, knew the importance of attending to this, and they directed the youths submitted to their care into such pursuits as they saw they were best fitted for.

I am obliged to give but a general view of education, and so far I have fulfilled my promise; but, before I take leave, let me remind you of the difference between the dispositions of the mind, of which I have spoken, and the actions of man. As far as examining the dispositions may go, I would

say that you can judge of them by the general size of the head, and by the constitution, and you will be able to judge of their activity by the natural language before described. But, if you dare to speak of actions, as beginners in phrenology are disposed to do, or to arrive at a knowledge of character, then you must not only consider the size and other conditions, but you must take into account all the particulars, such as natural dispositions, exercise their mutual influence, and the exciting causes. Do not confound the powers with their applications, and I am satisfied, that whoever studies phrenology will be convinced that it is a science founded on nature, and will prove beneficial to mankind.

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