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Publication/Creation

Glasgow : Published by J. & G. Goyder, 1844.

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OUTLINES OF PHRENOLOGY,

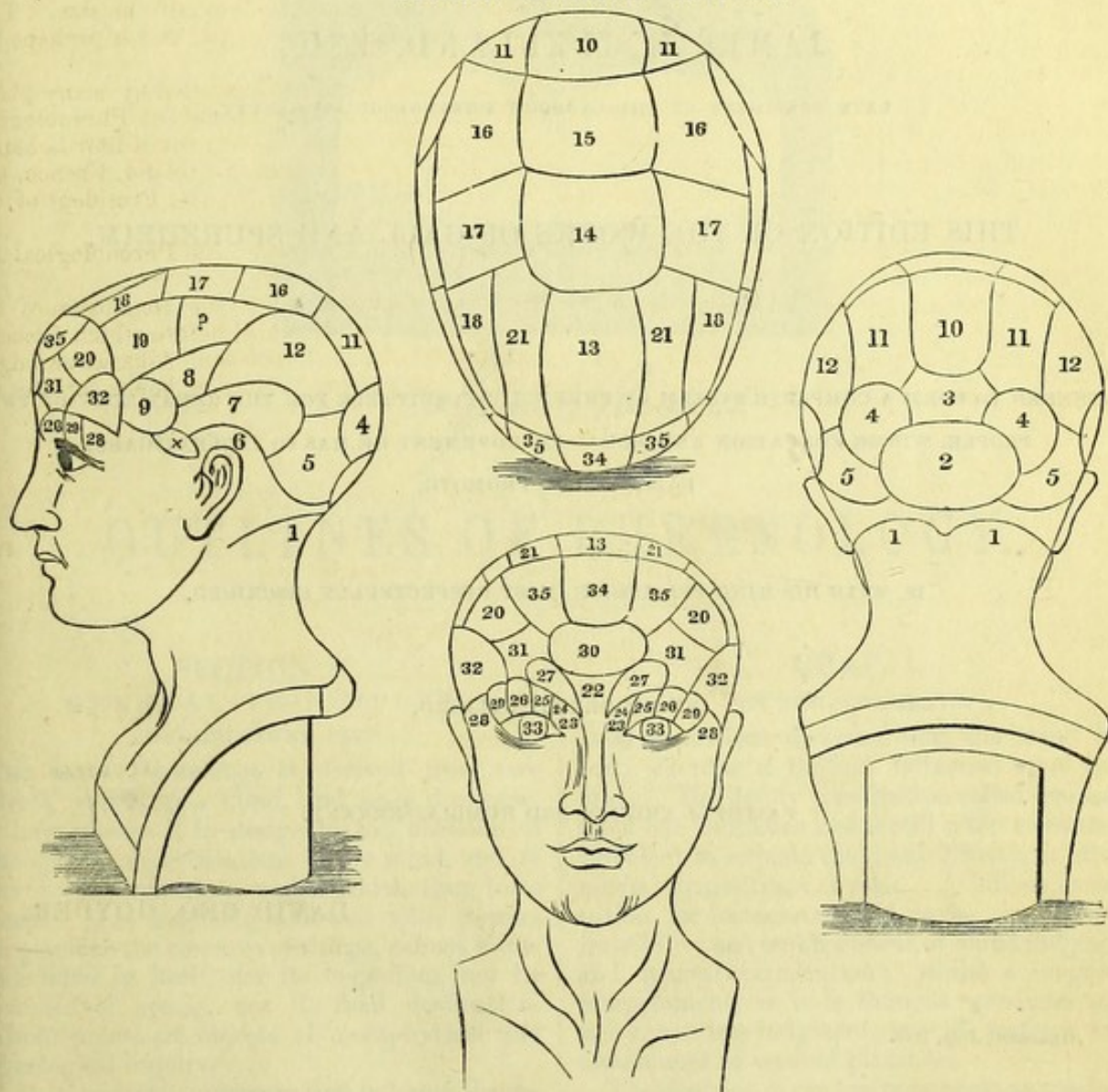
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BY THE LATE J. G. SPURZHEIM, M.D.,

OF THE UNIVERSITIES OF VIENNA AND PARIS, AND LICENCIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

REVISED AND REPRINTED FROM THE FOURTH AMERICAN EDITION, PUBLISHED AT BOSTON, 1836.

SECOND ENGLISH EDITION.



GLASGOW:

PUBLISHED BY J. & G. GOYDER, PHRENOLOGICAL INSTITUTION,
104, BRUNSWICK STREET;

J. MENZIES, EDINBURGH; MACHEN & CO., DUBLIN;

J. S. HODSON, 112, FLEET STREET, & Wm. NEWBURY, 6, KING STREET, HOLBORN, LONDON;
AND OTIS CLAPP, BOSTON, U.S.

MDCCCXLIV.

TO

JAMES M'CLELLAND, ESQ.,

LATE PRESIDENT OF THE GLASGOW PHRENOLOGICAL SOCIETY,

THIS EDITION OF THE WORKS OF GALL AND SPURZHEIM,

&c., &c.,

INTENDED TO FORM A COMPLETE SYSTEM OF PHRENOLOGY, SUITABLE FOR THE GREAT BULK OF THE
PEOPLE, WHOSE EDUCATION AND MORAL IMPROVEMENT HE HAS SO INDEFATIGABLY
LABOURED TO PROMOTE,

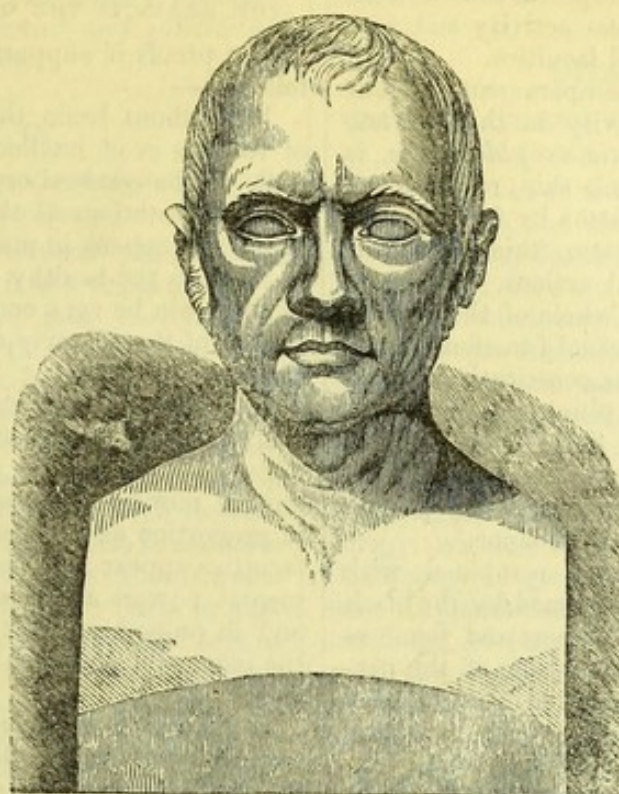
IS, WITH HIS KIND PERMISSION, MOST RESPECTFULLY INSCRIBED,

BY HIS DEEPLY OBLIGED,

FAITHFUL FRIEND, AND HUMBLE SERVANT,

DAVID GEO. GOYDER.

GLASGOW, *July*, 1843.



Spurz Kun

OUTLINES OF PHRENOLOGY.

SECTION I. GENERAL PRINCIPLES. INTRODUCTORY VIEW.

THE name *Phrenology* is derived from two Greek words, *φρην* mind, and *λογος* discourse. I have chosen it to designate the doctrine of the special manifestations of the mind, and of the bodily conditions under which they have place. Man not being endowed with powers to perceive the essences of things, cannot know the mind in itself, nor its beginning, nor its manner of acting, nor its final destination. These points are objects of metaphysical and theological inquiry.

It is evidently necessary first to know the nature and extent of phrenological principles, before their usefulness and practical application can be conceived. Considerations of that kind, therefore, are reserved for the last section. I here merely state that Phrenology concerns the most important element in the nature of man: the manifestations of his affective and intellectual faculties; and that it seems impossible to point out any object more interesting to natural philosophers, anatomists, physiologists, physicians, teachers, moralists, and legislators.

CHAP. I.

ON TEMPERAMENTS.

It is an ancient doctrine, that the mind and body exercise a mutual influence upon each other. The bodily constitution called temperament has long been and is still often considered sufficient to explain the great differences of the mental dispositions of man. A bilious constitution, for instance, is said to be the cause of irascibility and stubbornness, of sound judgment and mental penetration; whilst a sanguine temperament, as it is thought, produces memory, but less judgment, amiable feelings, and attachment to sensual pleasures.

The doctrine of the temperaments as producing determinate powers, may be easily refuted, since there is no regular and constant relation between the temperaments and mental functions. Every sort of talent, and every kind of feeling, may be observed along with every variety of temperament. In Phrenology, however, it is admitted that more or less activity in the digestive, circulatory, respiratory, secretory, and other systems, greatly modifies the whole constitution of the body in general, and that of the brain in particular, but it is denied

that the special or primitive manifestations of the mind, result from the corporeal constitution. This only gives more or less activity and perfection to the fundamental faculties.

I admit four different temperaments, as four different degrees of activity in the powers. The first, styled *lymphatic* or *phlegmatic*, is recognized by a pale thick skin, round form, repletion of the cellular tissue by fatness, softness of the muscular system, thick lips, fair hair, and by languid vital actions, with tardiness and weakness in the whole of the vegetative, affective, and intellectual functions.

The second, or *sanguine* constitution, is distinguishable by moderate plumpness of person, and tolerable firmness of flesh, light hair inclining to chesnut, blue eyes, fair complexion, great activity of the blood-vessels, easy perspiration, and an animated countenance.

The *bilious* temperament, combined with still greater energy, is proclaimed by the black hair, dark skin, moderate fulness and firmness of flesh, harshly expressed outline of the person, and by the strong, marked, and decided countenance.

The *nervous*, and the most active temperament, is characterized by fine thin hair, delicate health, thin skin, emaciation of muscles, quickness in muscular motion, and vivacity of sensations. In my work on Characters, Pl. I. each of these four temperaments is exemplified by a portrait.

It must be added, that these temperaments are seldom pure and distinct, but mostly mixed.

CHAP. II.

ON THE INFLUENCE OF THE VISCERA ON FEELING.

A great number of philosophers and physicians derived the feelings from different viscera of the chest and abdomen. It is true that man and animals when affected by strong feelings of joy, fear, anger, and so on, feel some motion in the viscera. But it may be answered generally that from various phenomena exhibited by different parts of the body, it is impossible to infer that the primitive causes of the sensations are inherent there. The activity of one part commonly produces different phenomena in others on account of their connexion. Sorrow makes the tears flow, but who asserts that sorrow resides in the lachrymal gland? The viscera and the brain are under mutual influence. Indigestible aliments occasion headache, and strong emotions of the mind disturb the functions of the viscera. There is neither in animals nor in man any relation between their viscera and affective tendencies. The influence of the viscera on the mental phenomena is only mediate.

CHAP. III.

THE BRAIN IS THE ORGAN OF THE MIND.

The proofs in support of this position are as follows:—

1. Without brain there is no manifestation of feelings or of intellectual functions.

2. If the cerebral organization be defective, the manifestations of the mind are also defective; as happens in many idiots from birth.

3. If in the healthy state the development of the brain be very considerable, the manifestations of the affective and intellectual powers are very energetic.

4. The manifestations of the mind follow the ordinary or extraordinary growth of the brain. This organ is pulpy in young children, and the mental powers are scarcely perceptible; but in proportion as it becomes perfect, the mental faculties appear; in its state of maturity, the mental powers arrive at the greatest energy, and in proportion as it grows old and weak, the energy of the mental faculties diminishes also.

5. Certain faculties are more active in women, others in men; the cerebral organization of both sexes, presents differences that coincide with those varied manifestations.

6. The feelings and intellectual faculties are hereditary in the same proportion, as the cerebral organization is propagated from parents to children.

7. The manifestations of the mind are deranged if the respective organs in the brain be injured.

OBJECTIONS.

There are, however, several objections, more or less plausible, against the first principle of Phrenology. Metaphysicians, for instance, say, that the manifestations of the mind cannot depend on bodily conditions, since the mind is not conscious of its organs. It must be answered, that the mind does not know the instruments, by which it manifests its feelings and intellectual powers, precisely as it is unconscious of the muscles by means of which it executes voluntary motions, or of the nerves on which sight, hearing, tasting, and smelling depend.

There are also many cases that record injuries of the brain, and losses of portions of its substance, whilst the mental faculties continued to be manifested.

Another objection has been founded on the disease called hydrocephalus, in which the brain was said to be wanting, or disorganized, or dissolved by water, at the same time that the mental functions continued unimpaired.

It has also been asserted, that ossification of the brain has not hindered the mind from manifesting its powers.

These objections are answered, to full extent, in my work on Phrenology, and are beyond

the reach of this elementary work. I think that the first principle of Phrenology, *the brain is the organ of the effective and intellectual functions*, stands unshaken.

CHAP. IV.

OF THE ABSOLUTE OR PROPORTIONATE SIZE OF THE BRAIN.

A great number of natural philosophers, convinced that the brain is the organ of understanding, have concluded that its functions must be proportionate to its absolute size. More exact observations, however, show this conclusion to be erroneous. The ox has more brain than the dog, and the elephant more than man, &c. It is indeed impossible, in animals of different species, and even in various individuals of the same species, to estimate innate mental dispositions by the absolute size of the brain in general, or of its parts in particular; because the size of the cerebral organs is not the only condition to the greater or less energy of their functions.

Others, therefore, endeavoured to show that the powers of the mind are indicated by the proportionate volume of the brain to the size of the body.

Experience, however, proves that this mode of measurement is also inexact. Small singing birds have larger brains, in proportion to their bodies, than man and the elephant. According to the manner of judging stated, the elephant would be a very stupid animal; but this is far from the fact. In mankind, it may be well to add, that middle-sized persons have commonly the largest brains.

From the preceding considerations it results, that something else must be done in order to establish a doctrine of the mind, in relation to the body.

CHAP. V.

PLURALITY OF MENTAL POWERS AND OF CEREBRAL ORGANS.

The *second* principle of Phrenology is, that the mind manifests a plurality of faculties, each individually by means of a peculiar organic apparatus. Phrenologists name *faculty*, each species of feeling and thinking; and they give the name *organs* to the apparatuses by means of which the faculties of the mind are manifested.

The doctrine of the plurality of mental faculties and the necessity of special organs is very ancient. As soon as philosophers studied the human mind and its manifestations, they found it indispensable to admit several powers. Phrenology, it is true, establishes a greater number of primitive faculties of the mind than any school of philosophy has yet done, and many faculties demonstrated by Phrenology are different from those hitherto admitted.

It also proves every proposition by positive facts.

CHAP. VI.

MEANS OF DETERMINING THE FUNCTIONS OF THE BRAIN AND ITS PARTS.

Anatomy shows that the brain is composed of two halves, and that each half is an aggregation of parts developed in different degrees; but anatomy does not reveal the functions of any organ whatever, consequently it can neither show the functions of the brain generally, nor of its parts in particular; just as it is impossible to infer from the structure of the muscles that they are contractile; or from the texture of the optic nerve, that it is destined to propagate impressions of light. Yet physiology without anatomy is imperfect, and Phrenology is greatly supported by anatomy, since its anatomical and physiological branches are found to harmonize. Were it possible to prove the absence of differences in the brains of animals whose powers differ;—or to show that all parts of the brain increase simultaneously;—or that large hydrocephalic heads, exhibiting intellectual faculties, are without brain, &c., Phrenology would be completely undermined. But as the anatomical discoveries made in the brain are in harmony with the phrenological ideas of its functions, that science stands on more solid ground.

Several natural philosophers have endeavoured by mutilations, viz., by cutting away various parts of the brain, to discover their functions. These means have been pursued without fruit, and will remain useless. They are too violent, and several faculties might be retained without being manifested; at all events, they cannot teach more than may be ascertained in the healthy state.

The best method of determining the nature of the cerebral functions, is that employed by Phrenologists: it is to observe the size of the cerebral parts, in relation to particular mental manifestation, and it is the third principle of Phrenology, that in *the same individual*, larger organs show greater, and smaller organs less energy. It is, however, important to remark that, though the size of the organs is sufficient to discover the nature of their functions, it does not alone produce their different degrees of activity. Their internal constitution, their exercise and mutual influence also contribute to this; for which reason Phrenologists cannot compare the same organ in different species of animals, nor even in different individuals of the same species; but must judge of each animal or man individually; but then they run no risk of erring, for in the same individual larger organs always show more activity than those that are smaller.

Gall, to whom is due the great merit of having laid the foundation of this doctrine, com-

pared particular cerebral parts with determinate characters and particular talents, and according to these gave names to the organs he discovered: thus he spoke of the organs of haughtiness, of ambition, of cunning, of benevolence, of religion, of theft, of murder, of the mechanical arts, of music, of painting, of poetry, of mathematics, of metaphysics, &c.

It became necessary, however, to modify this manner of considering Phrenology, as it appeared that actions, talents, and determinate characters, result from the mutual influence of the primitive faculties. I therefore undertook to specify the nature or elements of the fundamental powers, and to name them independently of any action or outward application. I also discovered several new organs, established a new division of the mental powers according to their inherent natures and modes of action, and separated that which belongs to each power itself from what depends on its combinations with other faculties.

The nomenclature, introduced by Gall, was not only incorrect, inasmuch as it indicated determinate actions, or results of combination among the powers,—but it was further objectionable, as several organs were even named from abuses of their primitive functions. Disorders, however, are the effect of predominance of powers, on account of the disproportionately large size or over excitement of their organs, but are not to be confounded with the regular operations of the faculties. Gall, it is true, was right in stating that, in *inveterate* thieves and murderers, certain portions of the brain are large, but he erred in speaking of an organ of theft and of another of murder, because the primitive faculties which lead to such criminal actions are not given for that commission; though they may be abused like every primitive power. The aim and the disorders of every faculty, and the influence of its inactivity on the functions of the other active powers, must be distinguished from each other and specified.

CHAP. VII.

CRANIOLOGY.

It is certain, and may be admitted as the fourth principle of Phrenology, that from birth and through mature years, up to the period when the faculties fall into decay, the size and form of the brain and its parts may be determined by the size and form of the external head. The skull, though its two tables are not uniformly parallel, does not vary in thickness so much as to invalidate the accuracy of the above position; for the organs occupy large spaces, offering great varieties in point of size, and the appreciation of very minute differences is not indispensably necessary.

The science of Phrenology, however, has its difficulties, as well as every other. It is neces-

sary, for instance, to estimate the different thickness of the skin and muscles that cover the head;—to know the bony masses which do not indicate any cerebral development, such as the mastoid process behind the ear, the crucial evolution of occiput, the zygomatic process before the ear, and the situation of the longitudinal sinus in the mesial line of the head. It is also difficult to determine the size of the cerebral parts around the orbits and at the basis of the forehead, since the organs in these situations are small, and lie behind the frontal sinus and the eyeballs. These points are examined in my work entitled Phrenology.

The size of the organs is to be considered in all dimensions, in length and in width: the cerebral organs are long or short, and slender; and long or short and thick. Their length disposes to frequent action, whilst their thickness gives more intensity. Phrenologists attend too little to the latter dimension, and too much to the elongation of the organs.

It will also be well to state, that the general size of the organs is of more important consideration than protuberances. Protuberances occur, if one organ be more developed than those in its neighbourhood, but if all organs in the vicinity be equal in length, the surface is smooth. Now this may happen in heads of all sizes.

It must further be remarked, that the organs of the mind are not confined to the surface of the brain; the mere peripheral expansion of each organ, and of some a portion only is in contact with the skull. Each part, however, as experience proves, is in relation to its whole mass.

Finally, all organs are double, even those that are marked single in the mesial line of the bust and plate.

Phrenologists also admit, that in old age, when the mental powers have lost their energy, and in chronic cases of insanity, the external shape and size of the head are no certain indication of the cerebral development; for it frequently happens that the external head remains the same in appearance, whilst the brain diminishes and the skull becomes thicker. Such skulls are shown by opponents, but the particulars just mentioned are overlooked.

I shall make another and final remark. For the practice of Phrenology it suffices to know that the nature of the cerebral functions can be ascertained by the size of the organs, and that the development of the brain can, in general, be determined by the external configuration and size of the head. It is not a duty on the part of the Phrenologists to conclude concerning the cause of the size and form of the brain and its part: whether they depend on an innate power of growth; on the skull; the muscles; or even whether they be the effects of artificial means, such as the pressure said to be employed by savages. For the details of these

points I refer the reader to my work on Phrenology.

CHAP. VIII.

PHRENOLOGY IS ESTABLISHED BY OBSERVATION AND INDUCTION.

In Phrenology that faculty is considered as fundamental, primary, or special—

1. Which exists in one kind of animals and not in another;
2. Which varies in the two sexes of the same species;
3. Which is not proportionate to the other faculties of individuals;
4. Which is not manifested simultaneously with the other faculties, that is, which appears or disappears singly, at earlier or later periods of life;
5. Which may act or rest singly;
6. Which is propagated in a distinct manner from parents to children;
7. Which may singly preserve its proper state of health, or be attacked by disease. Finally,
8. Its existence is placed beyond doubt, if its peculiar organ be made known by repeated observation.

Phrenology, like every other physical Science, is established by observations repeated both in the positive and negative way, (1.) in individuals; (2.) in both sexes; (3.) in different nations; (4.) in criminals; (5.) in insane persons. It is confirmed by anatomy, comparative phrenology, and by the natural language.

CHAP. IX.

ORDER IN WHICH THE ORGANS MAY BE TREATED.

The organs, it is plain, can only be examined in succession. Gall changed the order in which he considered them frequently. He was, however, always guided by their localities. He began at the basis of the head and ended at the top. Never having allowed any essential difference in the modes of action of the primary powers, he consequently deemed it sufficient to take the mere situation of the respective organs to indicate the order of his descriptions. I, on the contrary, admitting different modes of action in the special faculties of the mind, conceive it possible to divide, and to classify them according to their primitive functions. I arrange the mental powers into two orders;—a division admitted from the remotest antiquity, and known under the names soul and spirit;—moral and intellectual faculties;—understanding and will;—heart and head. I prefer designating them respectively,—feelings and intellect, or better by the terms, *affective* and *intellectual* faculties.

Both orders then may be subdivided into several genera, and each genus into several species. Certain affective powers produce desires

or inclinations only, the activity of which in animals is called instinct. These I denominate by the general title *propensities*. There are other affective powers which are not confined to mere inclination; their actions have something superadded that may be called *sentiment*. All propensities are common to man and animals, but the sentiments—the title I propose for the second genus, are partly common to man and animals, and partly proper to man.

The second order of mental powers is destined to make us acquainted with the existence of the external world, and to cognize the physical qualities of objects and their relations. I call the faculties included in this order *intellectual*, and subdivide them into three genera. The first comprises the functions of the external senses and of voluntary motion;—the second, those of the internal senses which make man and animals acquainted with external objects, their qualities and their relation. These powers may be called *perceptive*. The third genus comprises the faculties which act on all the other sensations and notions, and these I name *reflective* faculties.

Each genus of faculties, both affective and intellectual, consists of several species, and each species offers several modifications or varieties, even idiosyncrasies. The essence, however, of every faculty is always perceptible; it is proclaimed even in its diseased state. The essential nature of each primary power is one and invariable, and no organ can produce two species of tendencies.

Marked busts are in general use to indicate the situations of the individual organs. Though the order in which these are numbered may vary in different casts, the organs of the primitive powers still remain the same. The place of secretiveness, for instance, is invariable, whether it be marked and referred to as the 7th or 9th organ of the brain. Now as different numerations are used by different Phrenologists, it is advisable never to speak, or to make remarks, in numbers, otherwise confusion will be unavoidable.

CHAP. X.

BEST MANNER OF STUDYING PHRENOLOGY.

Self-conviction depends on self-observation. Whoever, therefore, wishes to form an opinion concerning the reality of Phrenology must make himself acquainted (1.) with the situation of the special organs; (2.) with the true meaning of each fundamental faculty of the mind, as adopted in Phrenology; (3.) with the different temperaments as giving more or less energy to the function of the organs; (4.) with the relative development of the four regions of the head; occipital, lateral, frontal, and sincipital; (5.) with the proportionate size of the basilar to the coronal portion, and with the proportionate size of the three great divisions

of the inferior feelings, superior sentiments and intellectual faculties; finally, (6.) with the relative development of the special organs in each individual.

As the development of the special organs differs in different individuals, Phrenologists should determine on certain terms to indicate the relative size of the cerebral parts. The Edinburgh Phrenological Society makes use of the following expressions: very small, small, rather small, moderate, rather full, full, rather large, large, and very large. It is difficult to study a great number of degrees, or a very detailed scale of development. Beginners may be satisfied with being able to distinguish four degrees, viz., predominant, large, moderate, and small.

Assisted by this knowledge, every one will be able to convince himself that the special powers of the mind are manifested by the instrumentality of individual parts of the brain.

SECTION II.

SPECIAL FACULTIES OF THE MIND.

ORDER I.—FEELINGS.

The most essential points concerning the feelings, or affective faculties in general, are as follow: they have their origin from within, and are not acquired by any external impressions or circumstances. They must be felt to be understood, for they cannot be taught; in themselves they are blind and without understanding,—they do not know the objects of their satisfaction, and act without reflection.

GENUS I.—PROPENSITIES.

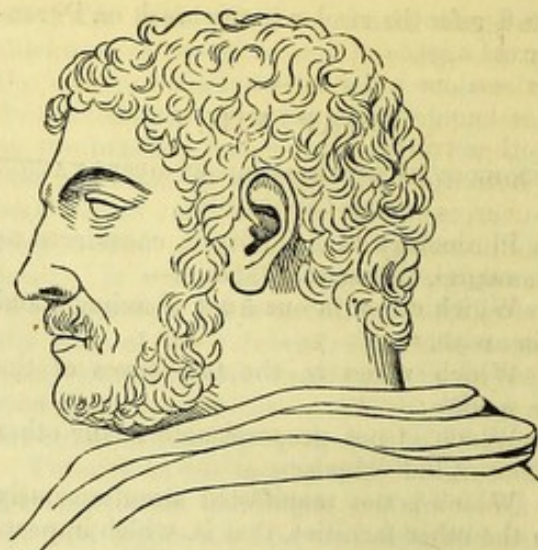
There are several propensities, but each has a specific nature; they all exist in animals and in man.

* **VITATIVENESS.**—A special instinct or desire to live seems to me highly probable, and I look for its organ at the basis where the middle and posterior lobes of the brain meet each other, at the internal border of combativeness.

† **ALIMENTIVENESS.**—The instinct to take food is commonly attributed to the nerves of the stomach, but I think this instinct or appetite may be distinguished from the sensation of want of food. Now according to Phrenology every sort of instinct depends on the brain. Observation shows that the desire to feed is in relation to the anterior portion of the middle lobes. This cerebral part is developed in early age, and larger in youth than in adult age; it is very large in those who delight in an excellent dinner, and who find it hard at table to abstain from eating of every dish.

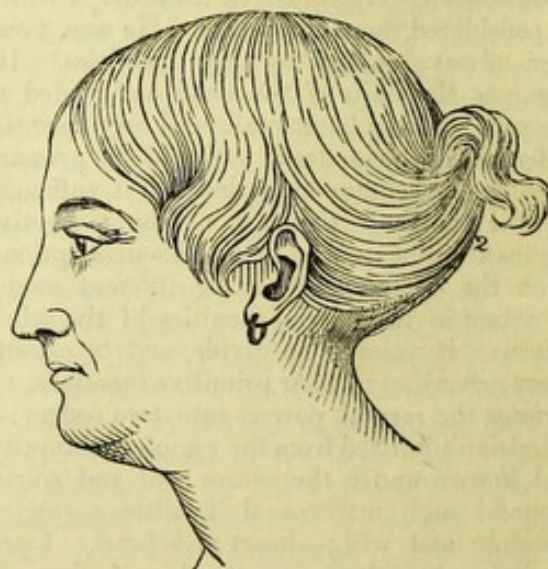
The organ is situated before the ear, behind and above the zygomatic process.

1. **AMATIVENESS.**—In the special faculty designated amativeness, inheres that feeling which is called physical love; its manifestation de-



pends on the cerebellum, because the appetite appears with the development of this part, and is in relation to its size. In children, for instance, the cerebellum is smaller than in adults, and in women and females generally it is less than in men and males. It generally attains its full growth between sixteen to twenty-five years of age, and frequently diminishes in old age. In some adults it is exceedingly small, and in others moderate, and in others again very large. Sometimes it is of great magnitude in children, and then its special function, the propensity we treat of, appears in early life.

The cerebellum is situated in the neck, between the mastoid process behind the ear, and the occipital spine in the middle of the lower and back part of the skull. The space between these two elevations indicates the extent of the organ in man, and its general size, viewed in relation to the other organs, may be compared with the energy of its primitive function in each individual of the human species.



2. **PHILOPROGENITIVENESS.**—This word designates a primitive feeling that prompts the beings possessed of it to take care of their offspring. It does not inhere in certain creatures, as insects, reptiles, and fishes; these resign

their eggs to chance, and the influence of some external agent. Of some kind of animals the females alone are attached to their young; the males being perfectly indifferent about them. Of other tribes again, the males and females are both fond of their progeny; the feeling, however, is still more energetic in the females than in the males. Among the animals too, both sexes of which tend the young, there are females which do not feel the propensity, and males who experience it strongly. Certain women also consider children as a heavy burden, whilst others deem them their greatest treasure and chief source of happiness. This happens quite indiscriminately, among the rich and the poor, among those of good and those of bad breeding.

The organ of the propensity of parental love occupies the portion of the occiput immediately above the middle part of the cerebellum. Its size coincides with the energy of this feeling in individuals, in the sexes, and in nations. In women and females it is commonly larger than in men and males.

There is a striking analogy between the heads of each of the sexes both in man and animals, and the two preceding organs in their different degrees of development, suffice to distinguish the skulls of males from those of females of the same species. The former have the cerebellum, and the latter the organ of philoprogenitiveness the most pronounced. The whole configuration of the head too of each sex differs, those of men and males being commonly shorter and broader, those of women and females longer and narrower.

3. **INHABITIVENESS.**—In examining the manners of living of different animals, it is obvious that particular kinds are attached to different and determinate localities, regions, and countries. Some seek the water from the moment of their existence; the turtle and duck, as soon as they are hatched, run towards it. Certain species, as the chamois, wild goat, ptarmigan, &c., select elevated regions for their haunts, others prefer low countries and plains. Among the inhabitants of the air, some species hover principally in the upper regions; others, although their power of flying is great, live in lower strata, or on the banks of rivers. Some birds build their nests on the tops of trees, others at the middle branches, others again in the holes of their trunks, or on the earth.

In conformity with all these considerations, I admit a primitive faculty and special organ which determines animals in their dwellings. This power, however, is modified in different animals. It varies in land and in water animals, just as the senses of smell and taste vary in herbivorous and carnivorous animals.

Man also has received the feeling to be attached to certain local situations, particularly to his native land. Some savage tribes are

wanderers, whilst others were settlers even in the earliest period of their civilization. The organ of inhabitiveness is commonly large in mountaineers; it is also generally larger in women than in men. Nature, by implanting this propensity has provided for the inhabitation of all regions and countries by animals and man.

The organ of inhabitiveness is placed above that of philoprogenitiveness, at the upper end of the occipital bone.

4. **ADHESIVENESS.**—This name designates a special faculty which produces a tendency in men and animals to attach themselves to the beings around them, which binds the individuals of the same species to each other, and gives rise to society. It also appears modified in those species of animals, the males and females of which live together domestically. Another of its modifications is friendship. The existence of this primitive feeling is ascertained by all the proofs of the plurality of the fundamental faculties and organs. It is stronger in women than in men. It forms an essential and prominent feature in the female character.

The feeling of adhesiveness in itself is of an inferior nature, that is, common to man and animals; it has been often observed very energetic in criminals, who have borne the severest tortures, even destroyed themselves, rather than betray their companions in guilt. Persons in whom the propensity is weak, have a tendency to live as hermits.

Its organ is situated outward, and a little higher than that of philoprogenitiveness, under the middle of the lambdoidal suture.



5. **COMBATIVENESS.**—This power produces active courage and the tendency to fight: if very energetic, it leads to attack, and feels pleasure in fighting. Its existence is necessary as soon as animals are attached to offspring, to dwelling places, and stand in need of food. Some entire species of animals and individuals of every species, avoid fighting, others are fond of it. The bull-dog and the game-cock evidence the existence and activity of this propensity in a remarkable manner. There are horses that are shy and timid, whilst others are sure and bold. This feeling bearing no regular pro-

portion to muscular power, cannot originate from bodily strength. Men and animals with small and feeble muscles will often fight and often discomfit others endowed with larger and stronger muscles. The game-cock, for example, is smaller in size than the common dunghill fowl. Phrenology proves that the propensity to fight depends on a portion of the brain, situated at the posterior inferior angle of the parietal bones behind the ear and above the mastoid process.

The heads of courageous men and animals are much developed between and behind the ears. It is remarkable, that the ancient Greek artists have given to the heads of their gladiators the greatest mass of brain in the situation of the organ of combativeness.

6. DESTRUCTIVENESS.—Observation shows



that violent death is an institution of nature; that the propensity to kill exists beyond a doubt in certain animals, and that this disposition is more or less active in particular kinds, and also in some individuals of

the same species. Man, it must also be admitted, is endowed with the same propensity, for he kills almost every variety of animated beings either to procure food or to supply his wants, while the carnivorous tribes of creation confine their destructive powers to a comparatively small number of kinds, and this merely to supply themselves with nourishment. Moreover, in man, this propensity offers different degrees of activity, from a mere indifference to destruction, to pleasure in seeing animals killed, and even to the greatest desire to kill.—The sight of public executions is insupportable to some individuals and delightful to others. Some highwaymen are satisfied with stealing, others show the most sanguinary inclination to kill without necessity.

Idiots and the insane sometimes feel an irresistible desire to destroy all they lay hands on. Some of the insane thus affected, manifest the strongest aversion to the deeds they would do, and even thank those who coerce and keep them from mischief.

The primary nature of this propensity is a simple impulse to destroy; it does not consider the object of its application, nor the manner of destroying. It uses indifferently pointed and cutting instruments, poison, water, and fire to accomplish its desires. It is indispensable to animals which live upon flesh. I do not, however, think that it determines the taste for this kind of aliment. The faculty is commonly more active in children than in adults, yet children generally prefer fruits and vegetables to meat.

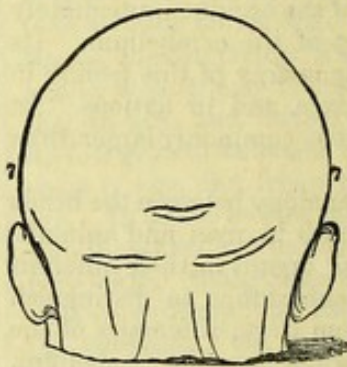
Besides the necessity of this instinct to procure animal food, its employment in self-de-

fence is not only permitted by justice, but is even rewarded as a virtue. A sword is one of the emblems of state. If the faculty, however, cause the destruction of aught that should not be destroyed, it produces disorders, as when it punishes trifling crimes with death, assassinates, murders, administers poison, or sets fire to houses.

If we place two skulls, the one of a carnivorous, the other of a herbivorous animal, horizontally, and trace a vertical line through the opening of the external ear, we shall observe that there is more brain over the ear in the carnivorous than in the herbivorous animal.

The organ of destructiveness lies in man and animals immediately above the ear, and is covered by the temporal bone.

7. SECRETIVENESS.—This power gives the



propensity to conceal without determining the object or the manner of concealing. It disposes to be secret in thoughts, words, and deeds. By its influence, the fox is careful not to be observed; the dog hides the bone he cannot eat; and the

cunning man conceals his intentions, and sometimes professes opinions opposite to those he really entertains. It may be applied in an infinite number of ways, and employed under many varieties of circumstance and situation. If not directed by justice and the other moral feelings, it disposes to dissimulation, intrigue, duplicity, hypocrisy, and lying. It finds pleasure in all kinds of underhand doings and clandestine manoeuvres. Whenever concealment interferes, be it for good or for evil purposes, this feeling dictates the course pursued.

The organ of secretiveness is situated in the middle of the lateral regions of the head, immediately above that of destructiveness.

8. ACQUISITIVENESS.—This faculty reduced to its elements, consists in the propensity to covet, to acquire, and to gather together, without determining either objects to be acquired, or manners of acquisition. It covets property, money, animals, land, cattle, any thing, and every thing upon earth. If it be very active, it gives a perpetual craving after larger possessions. It is this propensity that prompts that frequent question among mankind: What is this good for? It produces selfishness and the love of riches. It also disposes men and animals to make provisions for the future, but the objects collected, and the manner of getting them together, whether by industry, commerce, gaming, or stealing, depend on other faculties, and on the situation in society, and the circumstances in which the collector is placed.

This feeling is undoubtedly one of the greatest obstacles to the practice of morality: it divides society in all its fractions; it arms individuals against individuals, families against families, and nations against nations. The reason, therefore, is easily conceived why the Christian code judges its abuses with so much severity.

The most common of its disorderly acts is stealing; a vice that occurs among individuals of good and of bad education, among the rich and the poor, in the state of health, and in that of disease; for it is a frequent symptom in insanity.

The organ of acquisitiveness lies at the upper part of the temples, beneath the anterior and inferior angle of the parietal bone.

9. CONSTRUCTIVENESS.—This faculty produces construction of every kind. By means of it birds build nests for their young, rabbits dig burrows, and the beaver makes its dwelling. By its means too, man constructs, from the huts in his savage state, to the palaces of kings, and the temples of God. All kinds of architecture, and varieties of mechanism are its offspring. It builds the engines of commerce, manufactures, and war,—ships, fortifications, machinery, instruments, furniture, clothes, fashionable trinkets, and toys; it is essential in the arts of drawing, engraving, carving, writing, and sculpture. It gives dexterity in the use of tools generally, and directs skilful workmen of every description. It guides the practical part of construction, but does not determine the objects to be constructed. Combined with the organs of configuration and size, it produces accurate drawings; and with the addition of colouring and imitation, it paints good portraits. In union with the intellectual faculties that cognize objects, and their physical qualities, it gives a bent towards mechanics.

The seat of the organ of constructiveness is anterior to that of acquisitiveness, and lies under the place where the frontal, parietal, and sphenoidal bones unite. Its appearance and situation vary according to the development of the neighbouring organs, according to the basis of the head, and the size of the zygomatic process. If the convolutions in the situation indicated, project more than the external angle of the orbit, then the organ of constructiveness may be admitted as large. If the basis of the skull be narrow, it lies a little higher than in heads which are very broad in the basilar region, and across the zygomatic processes. Moreover, it is covered with one of the masticatory muscles; this must therefore be examined by the touch, before the exact size of the organ in question can be distinguished.

GENUS II.—SENTIMENTS.

These faculties join to a propensity an emo-

tion, or a feeling of a specific kind. Several of them are common to man and animals and others are peculiar to man.

SENTIMENTS COMMON TO MAN AND ANIMALS.

10. SELF-ESTEEM.—This feeling is generally



considered as factitious, or as the result of social circumstances; but Phrenology proves that it is fundamental. A vast opinion of their own persons is sometimes observed in individuals, who have no claims to influence over others or to particular notice, either by birth, fortune, or

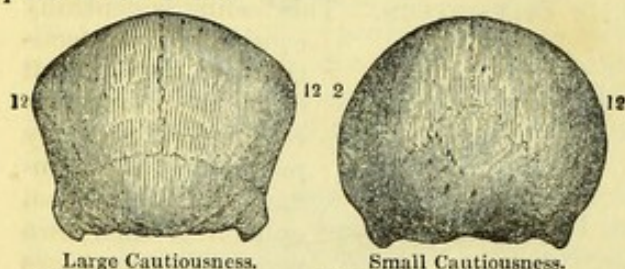
personal talents. Pride is a sentiment that is commonly more active in men than in women. By the influence of its organ, the insane fancy themselves great geniuses, kings, emperors, ministers of state, and several even the Supreme Being. The horse, peacock, turkey-cock, &c., manifest feelings analogous to pride. Its great activity in society gives arrogance, self-conceit, pride, haughtiness, and an authoritative behaviour. Combined with superior sentiments and intellect, it contributes to true dignity and greatness of mind: its deficiency disposes to humility.

The organ of this sentiment is placed at the top, or crown of the head, precisely at the spot from which the priests of the Roman Catholic Church are obliged to shave the hair.

11. LOVE OF APPROBATION.—This feeling makes us attentive to the opinion entertained of us by others; it blindly desires and courts approbation. It may be demanded on the score of trifles and unimportant acts, be claimed for great and useful deeds, or be required for criminal and pernicious doings. The direction which it takes, depends on the general faculties with which it is combined. In children, its agency appears in emulation; and in maturity of years, it is proclaimed by the love of glory, of fame, and of distinction. Ambition is the title its activity receives, if the object aspired to be important; vanity designates it, if endeavours at distinction be made through little things, such as gowns, ribbons, &c. It is the cause of every kind of showy and polite behaviour; it induces us to make ourselves agreeable to others, and gives the tone to fine and polished manners in society; if it predominate, however, and be not under the guidance of superior feeling, it renders man the slave of fashion, in opposition to morality and reason. This sentiment is more active in women than in men; its difference is frequently very apparent in cases of insanity. Its deficiency makes us indifferent to the

opinions of others, to compliments, and to every kind of showy appearance.

The organ is situated on either side of that of self-esteem, at the posterior upper and lateral part of the head.

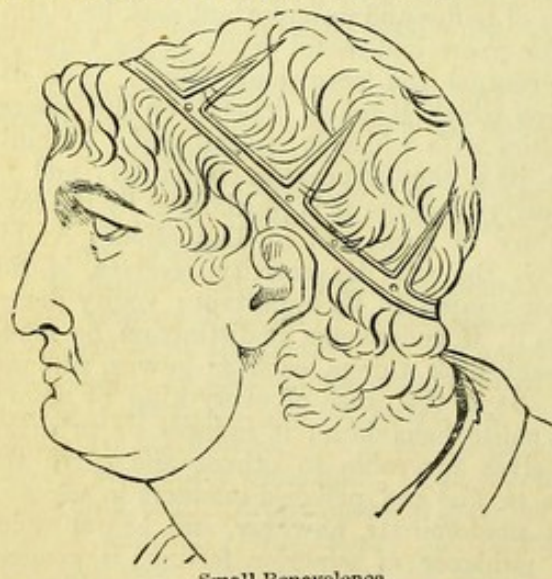


Large Cautiousness.

Small Cautiousness.

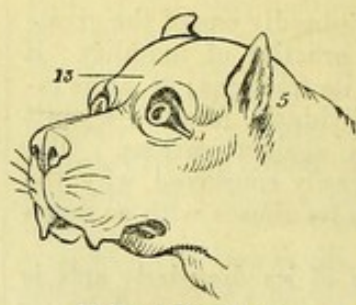
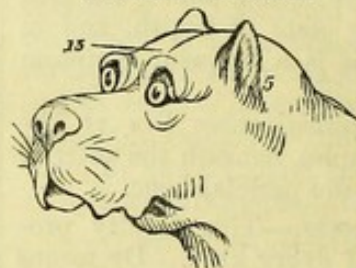
12. CAUTIOUSNESS.—This sentiment prompts animals and man to take care, to be cautious. In due quantity, it makes us apprehend danger and consequences, and gives prudence; in large proportion, however, it occasions doubts, irresolution, uncertainty, anxiety, and the host of hesitations and alarms expressed by the word *but*; it also disposes to seriousness, melancholy, and sometimes to suicide from disease. It acts in those animals which place sentinels, and in those which, though they see by daylight, do not dare to seek their food except by night: it may be effected in a way called *fear*. Its deficiency disposes to levity and carelessness of behaviour, the other faculties not being restrained by its presence, act according to their own natures and strength, without any shade of reserve or timidity to obscure their functions. This feeling is commonly more active in women and females than in men and males. To the female it comes instead of the strength and vigour of the male, and seems more especially necessary to her, as the safety of the offspring may often mainly depend on her prudence and care.

The organ of cautiousness is situated nearly in the middle of the parietal bones.



Small Benevolence.

13. BENEVOLENCE.—This feeling differs widely, both among children and adults. Some are complete egotists in all—they do and think of themselves alone; others excel in goodness, and devote their lives to the relief of the poor and

13 Benevolence large.
5 Combativeness small.13 Benevolence small.
5 Combativeness large.

fierce, and intractable.

In mankind, the feeling is greatly ennobled, and its sphere of activity augmented. It produces kindness, benignity, benevolence, clemency, equity, urbanity; in short, it leads to the fulfilment of the great commandment, *Love thy neighbour as thyself*.

The deficiency of the sentiment is often made very apparent through the actions of some of the other feelings. Destructiveness, for instance, without the restraint of benevolence, acts in a cruel manner, and so on.

The organ of benevolence lies on the upper and middle part of the frontal bone. This part of the forehead is much higher in the bust of Seneca than in that of Nero, of whom a portrait is prefixed at the head of this article. The skulls of Caribs are flatter than those of Hindoos in the same situation.

SENTIMENTS PROPER TO MAN.

The most important of these feelings are such as are in relation with morality and religion. According to Phrenology, man is, by his nature, a moral and religious being, and is created capable of receiving revelation; this, indeed, only regulates the functions of his inherent and innate sentiments.

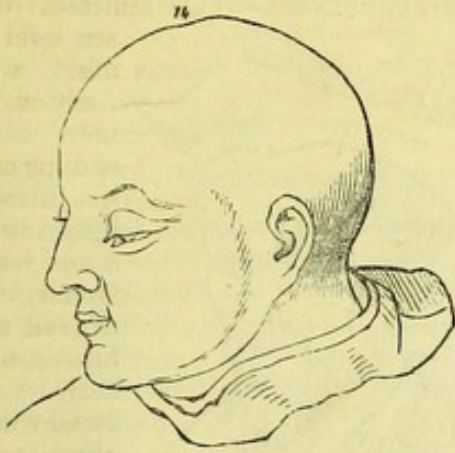
The moral as well as the religious nature of man is compounded of several fundamental powers. I understand by *moral*, those feelings which are given to guide our actions with reference to our fellow-creatures, and by *religious*, those which bring us into relation with supernatural beings, and produce all conceptions of the marvellous and supernatural.

The first of the moral feelings: Benevolence and its organ are already mentioned. I now come to that, the application of which is at one time moral, and at another religious.

14. REVERENCE.—This sentiment produces respectfulness and reverence in general, and when directed to supernatural beings it leads

the afflicted. Whole tribes are mild and peaceable, whilst others are warlike and cruel.

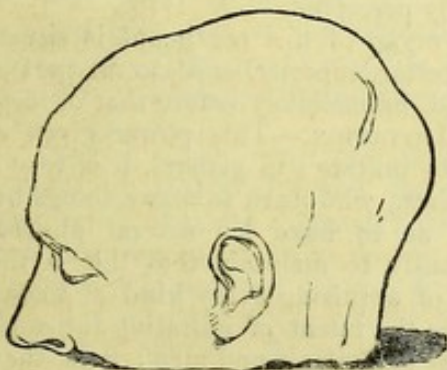
The feeling of benevolence also exists among animals. Several species are naturally meek and good-natured, as the roe and sheep, whilst others are savage and mischievous, as the chamois and tiger. Some dogs, horses, monkeys, &c., are mild and familiar, whilst others of the same kind are bad tempered,



to adoration and worship. It may be applied to all sorts of objects,—to persons, and to things. It does not determine the being or thing to be venerated, nor the manner of venerating. The ancients worshipped many divinities, and the present generation adores the Supreme Being in different ways according to their creeds, and intellectual faculties. The respect we feel for ancestors, parents, benefactors of mankind, and holy things, results from this power.

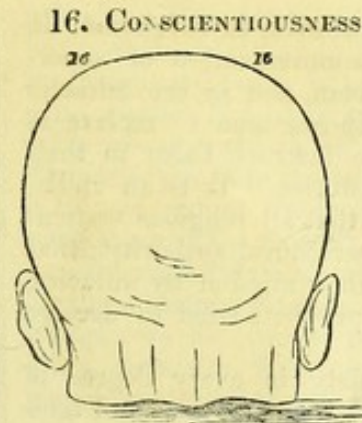
The feeling, when too active, produces great disorders. Applied to ancient opinions, it opposes a formidable obstacle to improvement; for it opposes innovation of every description.

The organ of reverence is situated in the middle of the sincipital region of the head, at the place which corresponds with the fontanel in children.

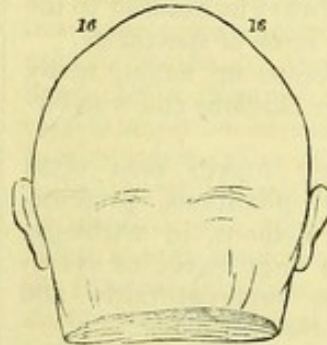


15. FIRMNESS.—It is difficult to define this feeling. Its effects are often called will, and those who have it strong are prone to say, *I will*; but their will is not an act of reflection, a condition necessary to free will and liberty. The meaning of their *I will* is, I desire, I command, I insist upon. This feeling contributes to maintain the activity of the other faculties by giving perseverance and constancy. It also gives a love of independence; its too great activity produces stubbornness, obstinacy, and disobedience. Its deficiency renders man inconstant and changeable. Individuals so constituted have little determination, readily yield in their opinions, and are easily diverted from their pursuits or undertakings.

The organ of firmness is placed in the middle of the upper and posterior part of the sincipital region of the head.



Large Conscientiousness.



Small Conscientiousness.

16. CONSCIENTIOUSNESS.—This faculty produces the feeling of duty, the desire of being just, and the love of truth. It looks for justice, and makes us wish to act justly, but it does not determine what is just or unjust. This determination depends on the combination of the sentiment with other affective and intellectual powers. He who unites conscientiousness with active lower propensities, will call that just which another, endowed with conscientiousness, much benevolence and veneration, and little of the lower propensities, calls unjust. 'All the ways of a man,' says Solomon, 'are clean in his own eyes, but the Lord weigheth the spirits.'

This primitive feeling may be disagreeably affected in a way called repentance or remorse. Its great and general deficiency among mankind is much to be lamented; it is this that occasions, as it explains, the many unprincipled acts that are continually done.

The organ of conscientiousness lies between those of cautiousness and firmness, in a lateral direction forward downward.

17. HOPE.—There is a feeling in the mind of hope generally, or of belief in the possibility of acquiring what the other faculties desire; without, however, being attended by conviction. This depends on reflection. The great energy of hope makes us build castles in the air, and pile project upon project: it is an element in gambling of all kinds; it also prompts the merchant in his speculations. Religiously directed, it forms an item in faith, by producing belief in a life to come, yet it is also necessary in our present state of being, and brings comfort in almost every situation. Its too great activity deceives, and disposes to credulity; its want, particularly when cautiousness is large, is apt to leave the mind overshadowed by gloomy despondency.

The organ of hope lies on each side, but a little backward, of that of veneration.

18. MARVELLOUSNESS.—This feeling disposes man to admire, to be astonished, and to believe in supernatural agents, events, and conceptions. It is pleased with all sorts of marvellous notions, and is the grand basis of all

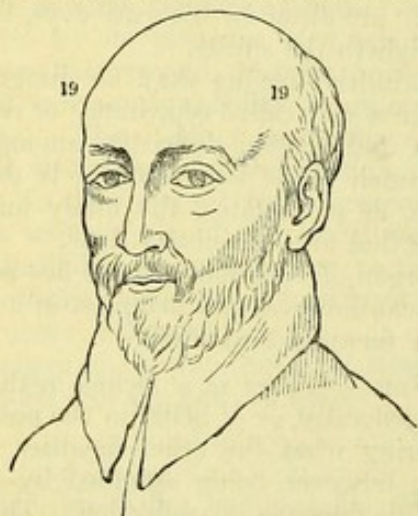
religious faith; it believes in revelation, in providence, in the communication of supernatural beings with man, and in the miracles done by those it disposes men to receive as sent from heaven to instruct them in their moral and religious duties. It is an undisputed historical fact, that all religious systems are supported by supernatural authority; that all prophets proved their mission by miracles, and that even false prophets tried to deceive by the same means.

All classes of society in every degree of civilization, are amused with fictions and tales of supernatural events. Upon the stage, supernatural beings are always introduced to the satisfaction of the great mass of spectators.

This sentiment also keeps up among many nations the belief in their fabulous and wonderful origin.

Its too great energy makes men often believe in inspirations, phantoms, presentiments, dreams, ghosts, demons, in astrology, magic, or sorcery. Its want leaves us everyday beings, and strips supernaturality and marvellousness of all their charms.

The organ of this feeling is situated before that of hope, under the upper and lateral portion of the frontal bone, near the coronal suture.



19. IDEALITY.—This primitive sentiment exalts the other powers, and makes us enthusiasts, gives warmth to our language, energy to our actions, and fires us with rapture and exultation, or poetic imagination, fancy, and inspiration, as it is termed.

Poetry, it is evident, neither consists in versification, nor in rhyming, since prose writings may be full of poetry, and verses show none of its glow or its colouring.

This feeling makes man aspire after perfection, and look for things as they ought to be. In the arts, it causes the taste for sublimity.

The want of this feeling leaves the mind to operate by the means of its other elements, and deprived of exaltation.

The organ of ideality lies above the temples, in the course of the temporal ridge of the frontal bone.

20. MIRTHFULNESS.—This sentiment diffuses over the mind a disposition to view objects and events in a ludicrous light, in the same way as ideality tends to exalt all its functions. It may be combined with the affective as well as the intellectual faculties. If



along with the higher powers it be applied to ideas and conceptions of importance, its agency is called *wit*; directed to common events, and lesser notions, it appears as *humour*; in union with constructiveness and configuration, it produces caricatures, and pictures, in the manner of Hogarth and of Callot; acting, unattended by benevolence, particularly if combativeness and destructiveness be large at the same time, it originates satire and sarcasm. In short, jest, raillery, mockery, ridicule, irony, and every turn of mind or action that excites mirth, gaiety, and laughter, result from this sentiment. In the writings of Voltaire, Rabelais, Sterne, Prior, Boileau, Swift, &c., its activity is clearly perceived.

The organ of this sentiment is situated at the anterior, superior, and lateral part of the forehead, immediately before that of ideality.

21. IMITATION.—This power gives a tendency to imitate; in general, it is very active in children, who learn so many things by imitation, as to have led several philosophers erroneously to maintain that this is the sole means of acquiring every kind of knowledge. It gives the talent of imitating the voice and gestures of animals and men; it is, therefore, an essential faculty in actors; in the arts of painting, engraving, and sculpture, it gives what is called expression. Those who possess it strong, easily acquire the accent of foreign languages.

The organ of imitation lies on either side of that of benevolence. If both of these organs be larger, the superior, anterior portion of the head is elevated in a hemispherical form, or at least presents a level surface; but when the organ of benevolence alone is large, and that of imitation small, there is an elevation in the middle, and a declivity on the sides.

Thus, positive facts prove, that the affective powers of the mind are numerous, and that each of them is manifested by means of a particular portion of the brain. These faculties, it is also to be remarked, act spontaneously, by their own inherent and internal

power; they are, farther, involuntary and quite independent of understanding, the light of which they require to act to good purpose, for by themselves they are blind, and all, without exception, liable to err.

ORDER II.—INTELLECTUAL FACULTIES.

The essential nature of these faculties is to *know*; they make men and animals acquainted with their own, and the existence of external objects, and with the physical qualities and relations of these. They may be subdivided into *external senses, perceptive faculties, and reflective powers.*

GENUS I.—EXTERNAL SENSES. GENERALITIES.

Since the time of Locke, the greater number of philosophical systems rest upon the axiom of Aristotle, that the first notions come into the mind by means of the external senses. According to this hypothesis, the perfection of the mental functions depends on the perfection of the external senses. This, however, neither holds good in the case of animals nor of men. Many animals have the senses more active and more perfect than the human kind; no animal, however, equals man in understanding. Many idiots have the external senses healthy and energetic; but this is no remedy against their deficiency of understanding. A most conclusive proof of the innate dispositions of the mind, is found in the case of the Scotchman, James Mitchel, and Julia Brace, who, deprived of sight and hearing, and without education of any kind, displayed from the earliest age great capacities, both as the affective and intellectual functions of the mind are concerned.

The external senses, then, are merely the instruments by means of which the internal faculties, acted upon by external impressions, manifest their activity. They do not acquire any knowledge of external objects, or of their qualities and relations; the eyes, for instance, do not judge of colours; the ears do not appreciate or produce melody, neither do they invent any verbal language; the smell does not possess local memory, nor does the touch give rise to the instinctive labours of animals, or the mechanical arts of man.

The hypothesis, according to which talents are derived from external instruments, is easily refuted. Many animals have those instruments to which peculiar faculties are ascribed, without the corresponding functions. Monkeys have hands adequate to put wood on a fire, but they have not understanding enough, by doing so, to guard against the cold. Insects, crawfish, lobsters, and especially the cuttlefish, have no idea of geometry, though they have numerous and perfect instruments of touch.

External instruments, too, are often similar, while the offices performed by them differ

entirely. The hare and rabbit have similar feet, yet the hare lies in the open field, whilst the rabbit makes a burrow. On the other hand, similar functions are performed by animals whose instruments are quite different. The proboscis is to the elephant what the hand is to man and to the monkey. The hands of monkeys and the feet of squirrels and of parrots are very different, yet all hold their food by these instruments when they eat. Finally, if man owe his arts to his hand, why do not idiots invent? Why do painters drop the pencil, sculptors the chisel, and architects the rule and compass, as soon as their understanding is fatigued or deranged? And why do individuals often produce stupendous and admirable works by the assistance of crippled hands or of stumps? Who can measure the capacities for the mechanical and imitative arts by the conformation of the hands?

The external instruments, however, it must be allowed, are very useful and important. There is even some relation between them and the internal faculties. Without external instruments, the internal powers could not manifest their activity. Carnivorous animals, for instance, could not destroy without claws and teeth, but the propensity to destroy must be derived from within. The instruments, then, are what the name indicates: means of performing actions dictated by internal faculties.

The external senses being frequently the mere instruments employed by internal powers, their functions must be divided into mediate and immediate. The mediate functions cannot be explained by their instrumentality alone; the particular parts of the brain aid in their production, while the senses themselves suffice for the performance of their immediate functions.

It is very difficult to point out the special or immediate functions of the external senses, as they are so intimately connected with those of the internal faculties. This intimate connection is necessary on account of the mediate functions of the senses. The nerves of motion and feeling, for instance, assist all the internal powers; they are consequently in communication with the whole of the cerebral organs.

Phrenologists endeavour, however, to specify the immediate external as well as the primary internal senses. In doing so, they must keep in mind that each sense performs only one sort of immediate function, that each has its power inherent in itself, and that the functions of each depend on the state of its appropriate organ, and on the observance of certain positive laws. If the organization be perfect, the functions are perfect also; if the organization be diseased, the functions are likewise disturbed, notwithstanding all preceding exercise.

Much has been said of the mutual rectification of the senses. This expression cannot

mean that one sense acquires the power of performing its functions from another. Philosophers, it is true, say that a rod, which, plunged into water, appears crooked, is proved by the touch to be straight.—But even though the mind does know the contrary, the eyes must still esteem the rod crooked, because they cannot see but according to the laws of the refraction of light. In the acceptance, however, that each sense cannot produce the same sensations, or make us acquainted with the same bodies, or with the same qualities of external objects, there is, it must be admitted, a mutual rectification among the senses. The eyes, in this way, may rectify the touch, and the contrary. If, without our knowledge, a piece of thin paper were placed between two of our fingers, we might not feel it, but we should see it. Many liquids look like water, and it would be impossible to distinguish them as any thing else by the sense of sight or touch, but the smell or taste detect the difference at once. Thus, the external senses, rectify each other only to the extent of their several capacities of perceiving peculiar impressions. In natural history, therefore, in order to become exactly acquainted with external objects, they are examined by the aid of all the senses. Qualities are then detected by one which had escaped another.

PARTICULARS OF THE SENSES.

It now remains for me to specify the functions of the external senses.

Since 1815, in my lectures and publications, English and French, I have constantly maintained that the nerves of motion differ from those of feeling, and I have adduced anatomical, physiological, and pathological proofs in support of my position.

FEELING.—The sense of feeling is the most extensive of all the senses, being continued not only over the whole external surface of the body, but also over the intestinal canal. It produces the most general perceptions of pain and pleasure, of temperature, and of dryness and moisture. All its other functions are mediate, that is, internal faculties perceive the numerous impressions it propagates.

TASTE.—The sphere of activity of taste is confined to the perception of savours; it is particularly useful to nutrition.

SMELL.—The sense of smell procures the sensations of odour. All its other functions are mediate. By its means the world begins to act upon man and animals from a distance, odorous particles being detached from external bodies, and affecting the olfactory nerves. This sense informs animals of the existence of their food, and of the approach of friends and enemies.

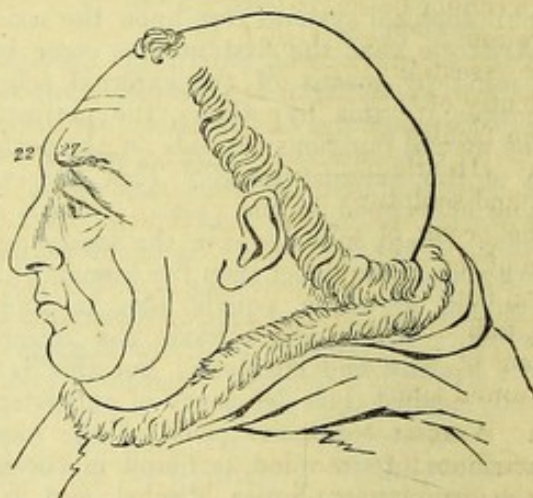
HEARING.—The immediate function of the sense of hearing is the perception of sound; but it assists many of the internal, more especially of the affective powers.

SIGHT.—The sense of sight perceives light and its different degrees of intensity; it also informs man and animals of remote objects by means of an intermedium.

Sight and hearing appear commonly later after birth than the other senses. Some animals, however, come into the world with perfect ears and eyes. Others are said to learn to hear and to see, that is to say, they come into the world with imperfect organs of sight and hearing.

GENUS II.—PERCEPTIVE FACULTIES.

They are destined to make man and animals acquainted with existences, with the physical qualities of external objects, and with their various relations.



22 Individuality. 27 Locality.

22. INDIVIDUALITY.—This power produces the conception of being or existence, and knows objects in their individual capacities. When very active, it is fond of knowing individual objects, and takes pleasure in personifying even mere events and phenomena, and persons endowed with it in a high degree, are apt to confound phenomena with beings or entities. The substantives of artificial language correspond to the knowledge this faculty acquires.

The organ of individuality lies behind the root of the nose, between the eyebrows.

23. FORM.—This faculty procures know-



ledge of configuration, one of the first qualities of external objects which the mind considers. It makes us attentive to figures, and enables us to recollect persons and forms we have seen before; combined with acquisitiveness it leads to the collection of portraits. Crystallography also depends on it.

The organ of configuration is situated in the internal angle of the orbit; if large, it pushes the eyeball outwards and downwards towards the external angle; and thus separates the eyes from the root of the nose, and from each other.

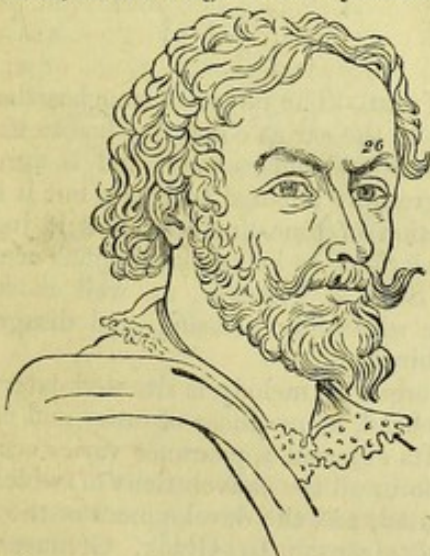
24. **SIZE.**—Another physical quality considered by the mind in external objects is size in all its dimensions. Sight and feeling are not sufficient to conceive notions of this kind, which cannot be confounded with ideas of configurations. These two kinds of conception differ essentially, and may be acquired independently of each other.

The faculty of size measures distances and space. In arts of drawing, painting, architecture, and sculpture, it presides over proportion.

The organ of size is placed in the internal angle of the orbit, above that of configuration, and on both sides of individuality. It is, however, difficult to point out the organ, partly on account of its smallness, partly on account of the frontal sinus.

25. **WEIGHT.**—Notions of this kind cannot be attributed to the sense of feeling, though their determinate application requires previous impressions to be made on the muscles; they are the result of an internal operation of the mind. This faculty is proved to be special by the reasons which demonstrate the plurality of the faculties and organs in general.

The organ of weight lies in the vicinity of that of size, in the ridge of the eyebrows.



26. **COLOURING.**—This faculty presides over our knowledge of colours; these it recollects, judges in their relations, and determines as to their harmoniousness or discordancy. It is by no means proportionate to the power of perceiving light. There are individuals who appreciate all the other qualities of external objects, ac-

quired by the medium of sight, with perfect accuracy, but who cannot distinguish one colour from another, green, for instance, from red or brown.

The faculty of colouring is necessary to painters, dyers, enamellers, and to all who are in any way occupied with colours. It is through its agency that we are charmed by the beauty of the flower-garden, and the variously tinted landscape, and show good taste in the choice of colours for our dress, and the furniture of our houses.

Of this faculty, as of all others, it is important not to confound *great* with *perfect* activity. There are individuals, and whole nations, who are fond of showy colours, but have little taste in their arrangement, or little feeling for their harmony or discord.

Animals may possibly feel the harmony of colours, though they have no painting; for there is a great difference between the capacity of producing, and that of perceiving. Animals have the senses of smell and taste, but they cannot procure gratifications for these senses by artificial means.

The seat of the organ of colouring is in the middle of the eyebrow; if large, this part is either strongly arched, or it is prominent, and gives a peculiar appearance of fulness to the upper eyelid.

27. **LOCALITY.**—This faculty conceives and remembers the situations and the relative localities of external objects. It thus enables the beings endowed with it to find their dwellings again, to know the places in which they had been before, and was therefore in the order of nature to man and animals, as they must quit their habitation frequently in quest of food for themselves or their young. Some animals possess this power in very high perfection, and excite amazement by the strength of their local memory; others again are almost destitute of it. One dog, having scarcely gone out, loses its way, another finds its usual abode and an old master from an enormous distance.

This power also produces the desire to travel, and to see localities; it further disposes many animals to migrate, and directs them in their courses. Migratory animals not only return at certain periods of the year to the same clime or country, but even to the same window, bush, chimney, or tree, they had formerly inhabited.

These migrations, it is certain, are not occasioned by want of food alone, though this may unquestionably influence them; migratory animals, though confined, and fed abundantly, become unquiet at the period the species to which they belong takes its departure.

This faculty makes the traveller and geographer; it is also essential to astronomers, geometricians, and landscape painters.

The organ of locality is situated above that of size; it spreads laterally and reaches the

middle of the forehead. The frontal sinus seldom extends to this part; observations on it are therefore made with less difficulty than on the organs of size and weight.

28. CALCULATION.—This faculty embraces whatever concerns number, unity, and plurality. Its object is numeration and calculation in general; hence algebra, arithmetic, and logarithms belong to it. It may be applied to size, configuration, colour, tune, and the no-



tions acquired by the other intellectual faculties. Some individuals, even children, excel in the talent of calculating, whilst they are inferior in almost every other respect.

The organ of calculation is placed at the external angle of the orbit; if it be large, this part projects, and appears full.

29. ORDER.—Order supposes plurality, but a number of objects may exist without order. Idiots are sometimes fond of order, and like to see every thing at its place; mankind at large offer the greatest diversities in regard to the exhibition of this faculty. It may be applied to various other powers, as to form, size, weight, colour, words, tones, and things. It gives method and order, and produces physical arrangement. The arrangement, however, which this faculty originates, must not be confounded with philosophical classification, according to reason and logical inference. This depends on the reflective faculties.

The organ of order lies externally of colouring.

30. EVENTUALITY.—This faculty acquires the knowledge of events, occurrences, or phenomena; its essential nature is expressed by the infinitive mood of the part of speech styled verb. It is attentive to all that happens, observes the activity of the other primary faculties, excites their activity, and desires knowledge of their functions. Historical knowledge also belongs to it.

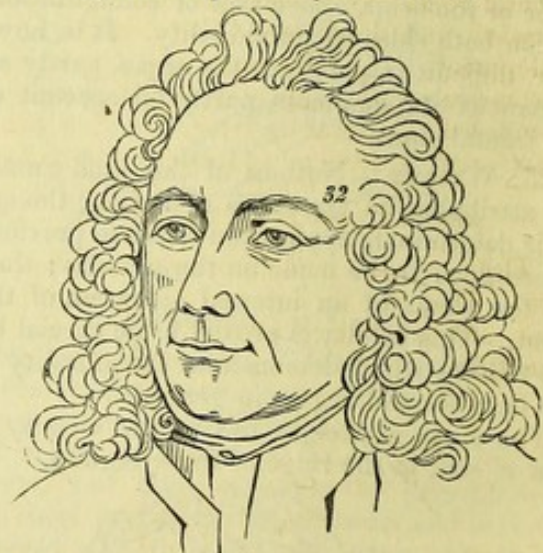
The organ of eventuality is situated above that of individuality. It is proportionately larger in the young than in the adult. Youth requires it, particularly in order to gain experience in the world.

31. TIME.—The mind has notions of the succession, of the duration, and of the simultaneous occurrence of events, that is, of time. This power cannot be confounded with that of calculation, nor with that of order, though it may be combined with both, either severally, or in union. Yesterday, to-day, to-morrow, the day after to-morrow,—this constitutes a succession and duration, without any regard to number of days.

This power is essential in music, as it measures the duration of tones. In the study of history it presides over chronology with reference to the duration and succession of events; the dates of their occurrence are remembered by the faculty of calculation.

In reflecting on the combinations of time, number, and order, there appears more connection between number and order, than between time and number. Time, too, is rather in relation to events, order to objects.

The organ of time is situated above and before that of order, between those of eventuality and melody, with the functions of which it is intimately and importantly connected.

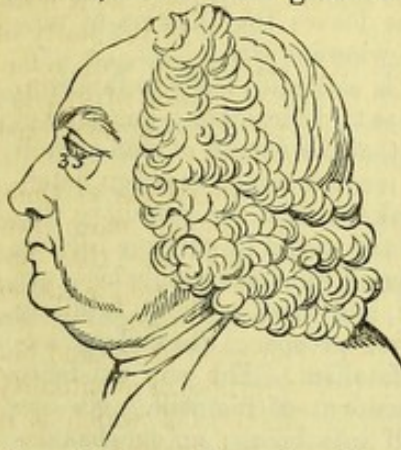


32. TUNE.—The power of tune has the same relation to the ear as colouring has to the eye. The ear apprehends sounds, and is agreeably or disagreeably affected by them, but it has no recollection of tones, neither does it judge of their relations, as being harmonious or discordant. Sounds, however, as well as colours, may be separately pleasing, and disagreeable in combination.

The organ of melody is situated laterally in the forehead, above those of order and calculation. Its external appearance varies according to the form of the convolutions of which it is constituted, and the development of the neighbouring organs. In Gluck, Gellineck, and Hadyn, it has a pyramidal form; in Handel, Dusseck, Viotti, and Cherubini, the external corners of the forehead are only rounded and enlarged.

This organ exists in singing birds, and its different development is very conspicuous in the males and females of the same species.

33. LANGUAGE.—This faculty acquires knowledge of artificial signs, and arranges them according to natural laws, in the same way as the power of colouring or of melody does colours or tones. The power of knowing artificial signs must not be confounded with the individual faculties which produce the sensations and ideas indicated by, or which invent those signs. One individual may have many notions, and feel the greatest difficulty in expressing them, and another may possess words in abundance and very few ideas.



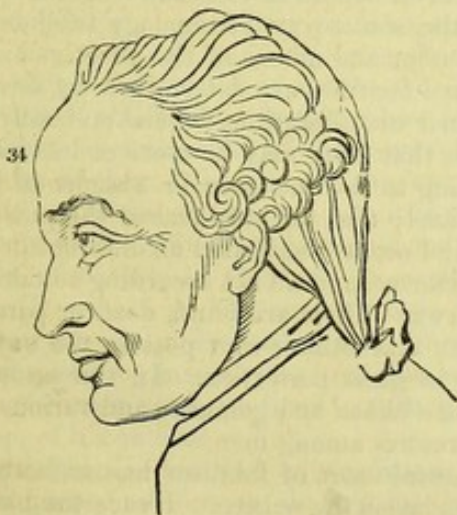
and another may possess words in abundance and very few ideas.

The organ of language is in the lower and back part of the anterior lobe of the brain, and lies transversely upon the orbital plate of the

frontal bone. It pushes the eyes more or less forward and downward, according to its development. If it be large, the under eyelid assumes a swollen appearance. It seems to be composed of several portions, one of which, in particular, is destined to learn proper names.

GENUS III.—REFLECTIVE POWERS.

These powers constitute what is called reason. They are applied to all the other faculties, and contribute to direct them in their functions.



34. COMPARISON.—Each other intellectual faculty compares its own appropriate and peculiar notions. Melody, for instance, compares tones; colouring, colours; configuration, forms; calculation, numbers, &c.; but this special power compares the functions of all the other primitive faculties, points out resemblances, analogies, identities, and differences. Its essential nature is to compare; it is therefore fond of analogies, in the same way as

melody likes the harmony of tones, and colouring the harmony of colours; but it also appreciates differences, just as melody and colouring feel discords among their respective impressions. Differences, in fact, are the discords of the faculty of comparison. This power produces discrimination, generalization, abstraction, and induces the mind, wishing to communicate unknown ideas, to refer and to illustrate by such as are known, or to speak in examples. It is destined to establish harmony among all mental phenomena.

By the influence of this power, artificial signs become figurative; the nations, consequently, who have it active, have a metaphorical language.

The organ of comparison is placed in the upper and middle part of the forehead; it presents, when it is large, and the surrounding organs moderate or small, the figure of a reversed pyramid outwardly.

35. CAUSALITY.—Individuality makes us acquainted with objects, eventuality with events and occurrences, comparison points out their identity, analogy, or difference, and this power gives the idea of connection, as between causes and effects. It forces us to think that every event has some cause, and thus by successive steps we arrive at the conception of a first cause of *all*. The idea of God or the Supreme Being therefore depends on the causality. This power applied to actions, make us look for motives, and prompts us on all occasions to ask *Why?* Combined with individuality, eventuality and comparison, the truly philosophic spirit results; conclusions and inductions are drawn, and principles and laws pointed out. Causality is to the understanding what conscientiousness is to the feelings; it forms the essential part of reason, as this does of morality.

When very active causality attempts to explain every thing, it then acts without the support of data, or it draws inferences from single facts, or it endeavours to penetrate things that must remain unknown to man in this life, such as the origin, nature, and end of things, the nature of God, the state of the soul hereafter. When we wander thus far we must believe, but we cannot conceive. Man knows only the succession of events, and if one be seen uniformly to succeed another, the precedent is considered as the cause, and the succedent as the effect.

The organ of causality is situated by the sides of comparison.

The primitive powers and their respective organs, being demonstrated by observation and induction, never will be rejected by reasoning; they must be admitted as the will of *Him* who made every thing. This is the only answer to be given to those who, either from timidity or improper motives, take up objections to Phrenology. Let them understand themselves

when they say their prayer, '*Thy will be done on earth as it is in heaven*,' and in acknowledging the functions of the brain they will submit to the laws of the Creator.

SECTION III.

USEFULNESS OF PHRENOLOGY.

In this Section I shall confine myself to some general reflections, the details of which are examined in separate works. I shall first show that Phrenology is not contrary to moral and religious considerations, and then add some remarks on its importance in the study of philosophy, in that of insanity, in social intercourse, and in directing education.

I. PHRENOLOGY IS NOT CONTRARY TO RELIGION AND MORALITY.

Incontestable facts prove that the affective and intellectual faculties are inherent in the nature of man, and that their manifestations depend on the cerebral organization; but several oppose Phrenology, and find it more convenient to cry out against its dangerous consequences, than to examine the facts on which the doctrine is founded. This in all ages has been the reception every discovery and every invention has encountered. Some become adversaries from ignorance, others from malice; those of the latter class sometimes have recourse to truths, generally venerated, but which they themselves deride, to make an impression upon the bulk of mankind. Phrenology in particular is accused of leading to Materialism and Fatalism.

With Bishop Butler, I most firmly believe that 'there is a much more exact correspondence between the natural and moral world, than we are apt to take notice of.' How indeed should it be otherwise, since the same Creator must be the cause of both kinds of existences or entities? Whatever is, is, and must be considered as the will of our Maker. Phrenology, however, is most unjustly labelled in the particulars mentioned. Phrenologists place truth above every other consideration, but maintain such propositions only as may be demonstrated by observation. They show, that the manifestations of the mind depend on the brain; but in saying that each of its faculties manifests itself by means of a peculiar portion of that organ, they are no more materialists, than are all anatomists, physiologists, philosophers and moralists, who admit the mind's or soul's dependence on the whole of its mass, or even on the whole body. They do not maintain that there is nothing but matter, they declare belief in the existence of mind, though they make no inquiry into its nature; and they only understand by the expression *organ*, an instrument by means of which some faculty makes itself known. The muscles are the organs of voluntary motion, but not the mov-

ing power; as the eyes are the organs of sight, but not the faculty of seeing: in the same way are the cerebral parts, the organs of the affective and intellectual faculties of the mind, but not the faculties themselves. According to Phrenology, man is endowed with faculties fitted only to observe phenomena, and the conditions under which they exist and appear, but not to perceive either the beginning, the end, or the essence of any thing under the sun. Thus this doctrine leaves the question of materialism exactly where it was.

Phrenology, it is also said, leads to fatalism. This expression has two meanings; one kind of fatalism implies, that the nature of man as well as of every other created being, has been determined by the Maker; that the primitive dispositions of vegetative and of phrenic life are unequally distributed, that invariable laws are dictated to man, and that, without fulfilling them, he can never prosper: Phrenology admits this sort of fatalism. The very existence of man is independent of his will. No one has called himself into being; no one has determined his sex; no one has chosen to be the eldest or youngest born; to have come from strong or weak, from healthy or diseased parents; to live under this or that system of government and of religious worship; no one can change the laws of nutrition or the functions of the viscera; what is poison by nature can never be changed into food.

The external senses are the effect of creation, their functions depend on positive conditions, and take place according to determinate laws. It is impossible to see as large that which is small, or to behold as red that which is blue.

In the same way Phrenology teaches that the number and nature of the affective and intellectual faculties are determined by creation, that their manifestations depend on bodily conditions, that they may be more or less perfect according to the existence or absence of these conditions; that for this reason the powers of the mind occur distributed of different degrees of excellence, and all act according to determinate laws. There are blind, deaf, or paralytic persons, and others who possess the external senses in great perfection. In the same way there are idiots, and geniuses, and various sorts of characters among men.

A certain sort of fatalism has undoubtedly its foundation in nature. Hence the philosophers of China, Hindostan, and Greece, the eastern and western Christians, and the followers of Mahomet, have all blended a certain fatalism with their religious opinions. Phrenology also teaches fatalism in so far as it exists; and such a doctrine instead of being dangerous to man, like truth in general, is rather useful. Showing our nature, and the conditions necessary to success in any undertaking, we may be disposed to submit to them, and thus to prosper; whilst with ignorance and erroneous opin-

ions as our guides, we are not only prevented from aiding our happiness, but even bring down misery upon our heads.

Phrenology, however, includes no doctrine of predestination, nor of irresistibility of actions. It only recognizes the mental powers to be innate, and dependent on conditions, and acting according to laws. It is therefore interesting to examine how fatalism and liberty, are blended together, since both must be acknowledged in man.

The faculties are given to animals and man, and they are numerous, but all are not active at the same moment, and none drives irresistibly to action. Without muscles we could not move, but with muscles we are not forced to walk or to dance; without eyes we could not see, but with eyes we are not compelled to look at every thing. We suppose that animals, though determinately endowed with powers, are free to act or not to act, else it would be the height of cruelty to punish them to prevent their repeating certain actions. Who has not felt that he has combated particular inclinations by other motives? Neither in animals nor in man then are actions irresistible. God in giving the power has not inflicted the necessity.

Let us now see to what extent, and under what conditions, animals and man are free. Freewill cannot be unbounded in a created being, and neither divine nor civil legislation has ever supposed liberty without motives. Such liberty would in itself be contradictory, for there would be no cause for acting reasonably or unreasonably, justly or unjustly, in one or another way; moreover, education, moral and religious precepts, punishment, rewards, &c., would all be inefficient and useless. Were such absolute liberty recognised, we might expect indifferently from our best friends and worst enemies, hatred or benevolence, perfidy or fidelity, hypocrisy or candour, vice or virtue. On the other hand, admitting man to act by motives, then is he subjected, like the rest of nature, to the law of cause and effect. This idea of liberty has alone been upheld by ancient philosophers; such liberty is alone supposed by morality and religion, which furnish the most noble motives to man in the guidance of his actions.

Liberty then is founded on conditions, and in consequence, differs in degree in individuals; sometimes it is entirely wanting or suppressed, as in idiotism and insanity. There are three conditions necessary to freewill: 1. understanding; for will begins with the perceptive and reflective faculties. In order to decide for or against, or to have will, I must know what has occurred, what will happen, and I must compare and draw inferences as to results. Will is the decision of the understanding, and this decision takes place according to motives. Now the will of man has the

greatest extent, because the will is proportionate to the understanding, and man acquires more knowledge than any other animal; he has traditions, compares with most facility the present with the past, and foresees future events, since he knows the relation between cause and effect. Freewill increases also in proportion as the understanding is cultivated.

The intellectual faculties, however, are not given up to chance. They act according to laws, and cannot decide indistinctly in favour of every thing, nor esteem all motive alike.

Will, then, is very different from inclination. Every mental power being active gives desire; this may be very strong, and yet reason dictate its contrary. Will and desire are frequently in opposition; and we do not act by freewill, because we experience an internal satisfaction, but solely when we act according to the laws of reflection.

The second condition to liberty is a plurality of motives. This is required to permit a choice among them. Now it must be remembered that the strongest motive does not constitute freewill. This, as already stated, requires the decision of the understanding, which unfortunately is so often overpowered by the feelings, that we can seldom flatter ourselves that we act according to its dictates in opposition to our inclinations.

The second condition to liberty, viz., plurality of motives, like the first, varies in different persons, and establishes different degrees of freewill.

The third condition to liberty, is the influence of the understanding upon the instruments by means of which we act. The feelings start into activity independently of the will, but this can regulate the instruments of voluntary motion, the assistance of which is indispensable to outward deeds. If voluntary motion be abstracted from the influence of the will, liberty ceases. This sometimes happens in insanity; the inclinations are so strong that the understanding loses all power over the instruments of voluntary motion.

This is a true idea of liberty, but we have still to define in what the morality of our actions consists. Phrenology not only shows the plurality of the faculties, but also determines those which are common to man and animals, and those which are proper and peculiar to man; moreover, it proves the faculties proper to man as superior to all the rest; and therefore destined to direct them in their actions. Hence, according to phrenological views, natural morality depends essentially on the faculties proper to man; whatever is done in conformity with their dictates, is morally good; whatever is done in opposition to their voice, is morally evil.

It is obvious that the faculties in themselves can neither be called good nor bad; these expressions being applicable only to their functions.

II. PHRENOLOGY IS THE TRUE PHILOSOPHY.

The very object of Philosophy is to specify the fundamental powers of the mind. Now it is obvious, that the primitive powers admitted in phrenology differ widely from those hitherto recognized by the schools of philosophy; and I may at once remark generally, that all the notions entertained by philosophers of ancient and modern times in reference to the mental powers, concern modified actions principally or effects of the primitive powers, such as they are established in Phrenology.

Desire, for instance, is often considered a primary mental power, whilst Phrenology treats it as an effect of the activity of each special faculty. Desires, therefore, are as different, and as various in kind, as the primitive faculties. A person may thus possess one sort of desire very strong, and another very weak, according to the activity of the peculiar powers that desire respectively. One may be desirous of acquiring, and careless of being conscientious; one may desire friendship, without showing anxiety about religious ceremonies, &c.

Affections, too, are generally spoken of as mental powers, whilst they are but different modes of the special faculties being affected. They are *general*, that is, take place in every primitive faculty, or *common* to several powers, or *special* in single powers. *Pleasure* and *pain*, for instance, are general affections. Every faculty, being active and satisfied, is pleased, or procures pleasure; and every faculty being active and not satisfied, is disagreeably affected, or produces pain. Hence, it is easily understood that there are as many kinds of pleasure and pain as primitive faculties of the mind, and that each sort must vary in energy according to the activity of the faculty on which respectively it depends.

Among the primary intellectual faculties, philosophers commonly reckon *attention*. This, however, is an error; for attention is the consequence of the activity of the special intellectual faculties, whether aroused by their own inherent powers, or excited by a feeling or by an impression from without. Every faculty being active attends to the object with which it is in relation, and its activity accompanied with cognizance is called attention.

Perception, too, is but the cognizance of its function, which every intellectual faculty acquires. There are, therefore, as many sorts of perceptions as special intellectual faculties of the mind.

Neither is *memory* a primitive faculty; it is only an effect of a higher degree of activity of every intellectual power, and consists in a reproduction of previously acquired perceptions or notions. A person may, therefore, possess an excellent memory of one kind, be very deficient in another, and be without a third entirely. The memory of the faculty of

eventuality, in particular, is styled reminiscence; it arises from the repetition of the former perceptions by this power.

Imagination has two meanings, but in no sense does it indicate a fundamental power. Each intellectual faculty may act spontaneously, and search for the objects with which it is in relation. This degree of activity, then, leads to invention, and is called imagination; there is, therefore, no primitive general faculty of invention. The great musician composes by a particular power, the great mechanic invents machines by special talents, and the poet bodies forth conceptions and describes by another combination of peculiar powers. Imagination, therefore, considered as the faculty of invention, is as different as the mental powers themselves.

Imagination is also employed to signify exaltation, and is then the result of the primitive faculty of *ideality*.

Judgment is no more fundamental than perception or memory; it results from the perfect, or more or less imperfect state of activity of the intellectual faculties generally. Each of these is in relation to certain objects, and acts according to primitive laws. The power of melody is destined to know and to feel the relation of tones to each other. The result of the perfect operation of this power is called good judgment. An individual, therefore, may possess a good judgment in music, and not judge the perfect performance of other mental functions, with the same accuracy; he may, for instance, be very inferior in the talent of feeling the harmony or discord of colours.

The more or less perfect activity of the *perceptive* powers, is called taste as well as judgment. Good or bad taste or judgment for music, for painting, for architecture, &c., is consequently spoken of.

The perfect action of the reflective powers constitutes the true philosophical judgment; it is, however, much assisted by the harmoniously combined action of all the primitive faculties, particularly of individuality and eventuality.

Finally, *association* has been considered as a special power, whilst it is merely the result of the mutual influence of the fundamental faculties. Taking place among the intellectual functions, the name association of ideas, is applied to the mental operation, but it occurs also among the feelings, and among these and the intellectual faculties. Amativeness, or philoprogenitiveness, excites combativeness; self-esteem may be combined with firmness, constructiveness with configuration, size, and calculation. Now we may easily conceive that the powers which often act together, should be apt to associate their activity, that is, readily to excite each other.

From the few preceding and very general remarks it may be inferred that Phrenology is

a new system of philosophy, founded on observation and induction, and on the invariable laws of nature.

III. PHRENOLOGY IS THE FOUNDATION OF A SOUND DOCTRINE ON INSANITY.

It is a mistake to suppose that medical gentlemen are particularly fitted to decide of the truth or falsehood of Phrenology. This science is founded on observation, and they only who observe, have a right to form an opinion. Physicians are neither more nor less capacitated or authorized to judge of the validity of Phrenology, before they have gone to nature and inquired, than any other class of the community. They, indeed, generally deserve especial blame for their neglect of this most important study, every way calculated to bestow honour on their profession. They, too, who in particular devote themselves to the treatment of insanity, ought to consider it as a prime duty to investigate Phrenology, since it is evidently impossible to conceive just ideas of pathology, or of diseased action, without previous knowledge of the functions in a healthy state. Whatever be the doctrine of the mental functions, that is true, it must certainly and necessarily precede sound views on insanity or mental derangement.

Though this matter principally concerns the medical profession, and is examined in detail in my work on Insanity, there are, however, several points which may be interesting to the inquiring and intelligent part of the public, and that are particularly important to judges and jurymen. These I shall mention briefly, and begin with the question: In what does insanity consist?

As insanity deprives individuals of their social rights, and produces inconveniences of the gravest nature, its definition must be given in relation to medical jurisprudence, rather than to the healing art. Insanity is that peculiar state of the mind which is attended with the loss of moral liberty.

The intellectual derangements are the most obvious, but insanity is not confined to them; many insane persons, if we grant their premises, reason with perfect consistency, some even with increased force, so that one sort of insanity is designated by the name *reasoning* insanity. Many are throughout sane, except in one feeling.

Insanity is commonly partial; it is very seldom general. It is also intermittent or continued. The principal point to be insisted on is, that the cause of every sort of insanity is corporeal. The mind being immaterial, cannot be conceived to become diseased; it cannot fall sick any more than it can die. The instruments of its manifestations can alone be deranged. The mind itself is not considered as diseased in blindness, or in deafness, neither can it be so esteemed in idiocy, nor in any

kind or variety of insanity. Indeed, all concurs to prove that the cause of mental derangement is corporeal.

1. This complaint, like many other diseases, is hereditary. Now hereditary dispositions cannot be explained by the transmission of mind itself, but they are easily accounted for by supposing the propagation of the corporeal conditions on which its manifestations depend. Parents and guardians, therefore, in disposing of their children in marriage, ought to know the danger of forming an alliance with a family in which insanity, or any other hereditary disease prevails. Every one, it is true, may become insane, without having inherited the disposition, but the danger with respect to insanity, as to every other illness, is increased by an hereditary cause.

It seems to me a crime to conceal insanity, and to neglect medical advice in the beginning when the disease may generally be cured, and to let it become incurable. It is a horrible prejudice to conceive that insanity is any disgrace. It is no disgrace, it is the most lamentable of all the host of diseases to which man is liable. If other hereditary complaints of a pulmonary, cutaneous, or urinary nature, for instance, be taken care of, insanity, or cerebral illness, certainly the most dreadful affliction of all, should not be neglected.

2. Another proof that insanity is a corporeal disease, lies in the fact of its depending on age. Very young and very old people are less exposed to become insane than middle-aged persons in whom the cerebral organization is the most active; this is between the twentieth and fortieth year.

3. Insanity is more frequent in women than in men. The cause certainly cannot be ascribed to their minds.

4. Insanity is influenced by climate, season, and weather; its remissions and exacerbations correspond with the changes of the atmospheric temperature; hence, the disease depends on corporeal causes.

5. All that excites, weakens, or disturbs the general bodily health, especially the nervous system, influences the manifestations of the mind. Disorders of the digestive functions, intoxication, early dissipation, pregnancy, bad practices, and other circumstances that act solely on the organization, frequently derange the functions of the mind, and produce insanity.

6. Insanity is often accompanied, or alternates with corporeal diseases. The insane often complain of noises in the ears, of habitual headache, of pain over the eyes, a sense of weight, stricture and numbness across the forehead, of dizziness, of indigestion, &c. Insanity sometimes alternates with intermittent fever, with epilepsy, &c.; hence, it must be considered as a disease of the organization.

7. The sleep is often disturbed in insanity, and sleep is dependent on corporeal causes.

Insane, as other patients, are frequently sleepless.

8. Finally, the course of insanity, its beginning, intermittency, periodical exacerbations and remissions, prove its dependency on corporeal causes.

Much has been done to improve the condition of the insane, but still more will be effective for their advantage, as soon as Phrenology is generally understood. Then the monstrous error, founded on ignorance, to say that insanity is a disease of the mind and a disgrace, and to suppose that it is beyond the reach of the healing art, will be abandoned. Then, too, will a good medical treatment be thought of, and all the common considerations upon pathology will be applied to insanity.

IV. PHRENOLOGY GUIDES OUR JUDGMENT IN SOCIAL INTERCOURSE.

Phrenology affords an exposition of human nature generally; it therefore rectifies the errors commonly committed in judging of others. Each takes his own nature as the measure of his likings or aversions, of his praise or his blame; but Phrenology founds all judgment on the knowledge of human nature at large. It proves that the dispositions of all, though essentially the same, still differ in degrees; that some accordingly are slenderly gifted with talents, and others endowed with genius; that no two individuals agree precisely, in their modes of feeling and thinking; hence that none has a right to take himself as the standard of mankind. Phrenologists compassionate mental as well as bodily defects, idiotism and imbecility, as well as deafness and blindness. They deny personal immunities and privileges, treat every one with equal indulgence, and dislike severity. They assert, that actions universally should be in harmony with the powers proper to man, the animal faculties remaining auxiliary and subordinate.

Notwithstanding the endless modifications of mental faculties, there exists a natural sympathy between certain individuals, while there are others who feel a mutual antipathy or aversion to each other. The principles of natural sympathy and antipathy are simple: each faculty when active desires, and being satisfied, procures pleasure; hence, every one likes, or sympathises with those in whose society his active faculties find their gratification, or else he dislikes or feels antipathy for others, who obstruct him in the satisfaction of his powers. The more numerous and energetic the active faculties are, the greater is the sympathy or antipathy according as they are satisfied or not.

V.—PHRENOLOGY IS THE BASIS OF EDUCATION.

The friends of mankind cannot be satisfied with their general condition, either as their

physical, moral, or intellectual, parts are implicated. Much has been attempted to improve the human race, but it is a lamentable truth that hitherto education has effected far less than would have been desirable. Now either the human kind cannot be perfected, or if it can, the true means of attaining the end have not been employed. Let it first be understood, in what the perfectibility of mankind consists. Man can never be deprived of a primitive power, or made to acquire another; Phrenology admits one species of man, endowed with a certain number of fundamental powers; but these individually are more or less active in different races or in different individuals of the same race. Now the activity of the special powers may be increased or diminished, and their actions regulated; and to this, the perfectibility of man is confined.

I think the great causes to which failure of all attempts at improvement may be ascribed, is the ignorance of human nature; in other words, the inconceivable error of considering the minds of children as blank paper, on which every impression may be stamped; and the unpardonable neglect of the natural laws of propagation. The whole system of education will be changed in proportion as the nature of man becomes known. It will then be perceived that he must be perfected like every other created being, under the guidance of experience, or by following the lights of observation and induction.

The education of man comprehends all that conducts to the cultivation of his nature; that is, the faculties of his body and of his mind, from the moment of conception to that of death, in the healthy and diseased state.

Education, as applied to the body, is called physical; to the mind, it is styled moral. As, however, the mental manifestations depend on the body, its influence must be examined in reference to moral functions. In my work on Education, I pass over this division to speak of the conditions which contribute to the greater or less activity of the body and of the mind, and to examine into the means of directing the powers to a certain aim.

The principal points, considered in the first section, are the laws of propagation; of the vegetative functions; of exercise; and those of the mutual influence of the fundamental powers. In the second section I examined the importance of mortality; and shewed that every power tends to action; that there is no action without motive; and that the innate powers essentially the same, but different in degrees, and modified in both sexes, should be attended to. I came to the final conclusion that, if the true means of excitement and those of direction be employed, arts and sciences might be improved, moral evil be diminished, and mankind in general be brought nearer their destination.