BRAIN AND MIND;

OR,

MENTAL SCIENCE CONSIDERED IN ACCORDANCE WITH THE PRINCIPLES OF PHRENOLOGY,

AND IN

RELATION TO MODERN PHYSIOLOGY.

BY

HENRY S. DRAYTON, A.M., M.D. and JAMES McNEILL, A.M.

ILLUSTRATED.

Sixth Edition.—Revised and Extended.

"The greatest friend to Truth is Time, her greatest enemy is Prejudice, and her constant companion is Humility."—COLTON, *Lacon.*

"Phrenology is establishing itself wherever its immense value has been rightly understood."—SIR G. MACKENZIE, F.R.L.S.

NEW YORK:
FOWLER & WELLS CO., PUBLISHERS,
27 EAST 21ST STREET.
1892.

thors to meet an existing want, viz: that of a treatise which not only gives the reader a complete view of the system of mental science known as Phrenology, but also exhibits its relation to anatomy and physiology as those sciences are represented to-day by standard authority. The literature of Phrenology is not by any means lacking in fresh contributions from the pens of competent observers in Europe and this country, but none have given more than a passing glance at the bearing which recent experiment and observation by leading physiologists have upon our subject, notwithstanding the fact that certain of the results which the experimenters have announced are "confirmations strong" of old phrenological principles.

Appreciating the immense importance to society of a correct system of mental philosophy, and being in a thousand ways cognizant of the great value of sound phrenological teaching to each member of society, the authors present this volume to the reader, asking only that it be perused in a spirit of candor, and with due respect for truth.

NEW YORK, *December*, 1879.

INTRODUCTION.

A SURVEY OF ANCIENT AND MODERN PHILOSOPHY.

PHRENOLOGY then, stands exactly like the other sciences of observation upon the basis of phenomena and their observed correspondence with a theory which is deduced from them.—SILLIMAN.

FOR more than two thousand years the study of mind has engaged the attention of the best intellects of every generation. What is the substance or essence of mind? Is it material or immaterial, mortal or immortal? How is it connected with the body? Has it a special seat in any particular organ? If so, in what part of the body does it reside? Or is it equally diffused through every part? Is it an entity which exists separate from the body, and entirely independent of physical organs in its manifestation? or has it a habitation within the body, and particular parts of the body, for particular modes of manifestation? How many, and what are its faculties? Are these innate in the mental constitution? or is the mind a blank at birth? And are its various faculties developed by education and other adventitious circumstances? These

Edinburgh school comprised such men as John Hutchinson, Thomas Reid, Dugald Stewart, Lord Kames, and Thomas Brown, who contended against the skeptical views of the German writers of the period. Kant, deemed by many the most notable of these, in his "Critique of Pure Reason," says: "All our knowledge begins with sense, proceeds thence to understanding, and ends with reason, beyond which nothing higher can be discovered in the human mind for elaborating the matter of intuition and subjecting it to the highest unity of thought." The Hegelian philosophy is a jumble of speculation, in which belief in intellectual intuition is rejected. What is regarded as the German school of metaphysics owed its origin mainly to the teachings of the famous Descartes, whose inquiries into the nature of self-consciousness produced a revolution in scholastic philosophy, and yet merely changed the current of speculation.

"From the days of Aristotle to the present time," says Mr. George Combe, "the most powerful intellects have been directed with the most persevering industry to this department of science; and system after system has flourished, fallen, and been forgotten in rapid and melancholy succession. To confine ourselves to modern times, Dr. Reid overturned the philosophy of Locke and Hume. Mr. Stewart, while he illustrated Reid, yet differed from him in many important particulars; and recently Dr. Thomas Brown has attacked, with powerful eloquence and philosophical profundity, the fabric of Stewart, which already totters to its fall. The very existence of the most common and familiar faculties of the mind is debated among these philosophers. Mr. Stewart maintains Attention to be a faculty; but this is denied by Dr. Brown. Others, again, state Imagination to be a primitive power of mind; while

Mr. Stewart informs us that 'what we call the power of Imagination, is not the gift of nature, but the result of acquired habits aided by favorable circumstances.' Common observation informs us that a taste for music, and a genius for poetry and painting, are gifts of nature bestowed only on a few; but Mr. Stewart, by dint of his philosophy, has discovered that these powers, and also a genius for mathematics, 'are gradually formed by particular habits of study or business.' On the other hand, he treats of Perception, Conception, and Memory as original powers; while Dr. Thomas Brown denies their title to that appellation. Reid, Stewart, and Brown admit the existence of moral emotions; but Hobbes, Mandeville, Paley, and many others resolve the sentiment of right and wrong into a regard to our own good, perception of utility, and obedience to the Divine command."

Thus, after the lapse and labor of more than two thousand years, philosophers are not yet agreed concerning the existence of many of the most important principles affecting the intellectual powers of man.

If we inquire into the causes of these conflicting theories, and the barren results which have attended the study of mind in the past, we shall find its explanation in the methods of investigation which have hitherto been employed. Anatomists and physiologists have dissected the human body, analyzed its various systems, and discovered the functions of nearly all its parts. The knowledge which they have obtained of the physical system by material appliances is precise and definite; so that there is now a general agreement in regard to the fundamental principles of physiology. But the mind is not subject to such methods of investigation. They who taught that the brain is the seat of three general faculties of the internal sense, were

never able to discover by dissection either common-sense, or phantasy, or memory slumbering within its ventricles. Nor were those who taught that the passions had their seat in the thoracic and abdominal viscera ever able by dissection to find any traces of courage in the heart or anger in the liver. No anatomist, by the most skillful use of the scalpel and the microscope, has been able to discover the function of an organ from an examination of its substance. Lay before an anatomist the nerves of the five senses, and by nothing in their structure or substance would he be able to determine which was the nerve of taste, which of hearing, which of smelling, which of sight, or which of feeling. He might, indeed, after having learned the purposes which the eye, the ear, the heart, or the stomach subserved in the animal economy, be able to trace out in its form and structure its complete adaptation for its purpose, but never would he be able to discover its function from a mere examination of its material parts. How utterly impossible, then, must it appear to discover the nature and powers of a subtile, intangible principle, a thought, an emotion, from an examination of the cerebral tissue!

Philosophers have pursued the study of mind by different methods, but generally have endeavored to shut out the material world, and to shut the mind in upon itself, and thus make its personal phenomena a study. By reflection on consciousness, they have attempted to analyze the mind and resolve it into its elements. But reflection on consciousness can not reveal the function of an organ, the processes by which thought and feeling are elaborated, or the means by which the internal operations of the body are performed. Consciousness does, indeed, localize the mind in the brain, but it gives us no idea of the functions of its different parts. We will to move an arm, but we are not

conscious of the nervous influence being transmitted to and from the brain along the nerves of feeling and motion. We see, we taste, we smell, we hear, but consciousness gives us no knowledge of the location or the condition of the nerves of the senses, nor does it reveal the changes which they undergo in the performance of their functions. If we ignore the influence of organization in the mental manifestations altogether, and undertake to resolve the mind into its elements by reflection on consciousness, the imperfections of the individual mind of each philosopher would naturally appear in his system.

This is actually the case; most of the writers on mental philosophy have given to the world systems or doctrines which are little more than reflections of their individual modes of thought and feeling; hence the great diversity of opinions which characterize their works.

Whatever may be the original powers of mind, or their means or mode of manifestation, it is evident that men differ widely in disposition and capability. Some are selfish, others are generous; some are penurious, others are liberal; some are passionate, others are mild and pacific; some are ambitious, others are deficient in aspiration; some have a delicate sense of truth and justice, and others are influenced by these sentiments in only a feeble degree.

We observe also that one individual has a peculiar talent for mathematics, another for music, and another for drawing and penmanship. One is able to express his ideas with great fluency, and another passes for a dullard in society because of his inability to give his thoughts expression. The style of one is concise, harmonious, and abounding in well-chosen illustrations; that of another is dry, diffuse, obscure, and lacking in grace and beauty. One loves to reflect upon the deep and hidden things of nature, and to

CHAPTER I.

GENERAL PRINCIPLES.

PHRENOLOGY—composed of two Greek words, φρην signifying mind, or the reasoning faculty, and λογος, discourse—is a system of mental philosophy founded upon the physiology of the brain. It assumes as its fundamental principle that the brain is the organ of mind just as the eye is the organ of vision, the stomach of digestion, or the heart of circulation.

It was long a disputed point among physiologists what function the brain performed in the animal economy. Hippocrates and Astruc thought the brain was a sponge; Aristotle considered it a bloodless mass which tempered the heat of the heart; Praxagoras, Plistonicus, Philotinus, and others regarded it as a mere excrescence of the spinal marrow; Misticelli called it an inorganic mass; Malpighi thought it was a collection of confused intestines; Sabatier and Boyer considered it a secretory organ; Galen and many others imagined that it secreted vital spirits, and distributed them through the arteries of the body; and Bichat thought it an envelope to protect the parts beneath. It is now generally conceded by the leading physiologists that the brain is the organ of mind. As, however, there are those who are disposed to dispute the correctness of this opinion, it may be well for us to bring forward some of the proofs by which the truth of this proposition is established

1. ***Size and Intelligence.***—A low degree of mental power invariably accompanies a marked deficiency of brain. In the lowest class of idiots the horizontal circumference of the head, above the ears, measures from 12 to 13 inches; in a full-sized head the circumference is 22 inches. In such idiots the distance from the root of the nose, measured over the top of the head to the occipital spine, is but 8 or 9 inches; in a full-sized head it is 14. The heads of barbarous or savage races are smaller than those of the civilized; the negro skull has a brain capacity averaging 82

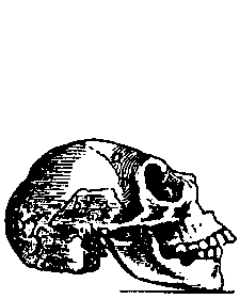

Fig. 1.—LOW TYPE, IDIOT SKULL.

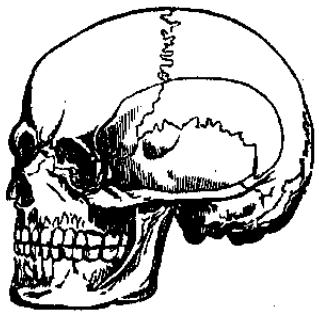

Fig. 2.—WELL DEVELOPED SKULL.

cubic inches; the higher tribes of American Indians, according to Prof. S. G. Morton, like the Seminoles and Oneidans, have a brain-measurement of about 90 inches; while the measurement of the English and German encephalon internally is placed by the best authorities at over 100 cubic inches. In a table derived from 405 autopsies of white and negro brains, recorded by Prof. Austin Flint, of New York, the average weight of the white brain is given at 52 ounces, and that of the negro at 46.9; these negro specimens, however, were of men who had been associated

CHAPTER II.

OF THE TEMPERAMENTS.

THERE are great differences among men in the substance and quality of their organizations. Some, like the wood of the palmetto tree, are porous, spongy, and weak; while others, like the oak, are dense, firm, and strong. There are small horses which will outwork large ones; and a small man very frequently displays greater physical strength and endurance than one of a much larger size. These differences are referable to what is termed the *quality* of the organization. It pervades the whole body, imparting its influence to the brain and nerves, as well as to the muscles; and thus, through the material instrument of the mind, affecting mental manifestation. This quality is so intimately related to the physical organism that a knowledge of the temperaments which enter into its constitution is most important in the study of mind.

Temperament may be described as a certain state or condition of the body depending upon the relative energy of its different functions. According to the ancient doctrine as promulgated by Hippocrates, the "father of medicine," there are four temperaments depending upon what he considered the four primary components of the body: the blood, the phlegm, the yellow bile, and the black bile. According to the preponderance of any one of these, the individual was known as, respectively, of the sanguine, the phlegmatic, the choleric, or the melancholic temperament.

In this classification, the brain is not considered as exerting any special influence, although its function is now conceded to be the most important in the animal economy. The attention of Drs. Gall and Spurzheim was directed to this fact, and they perceived the necessity of considering the brain as the basis of a special temperamental condition.

Spurzheim's Classification.—According to the classification adopted by the first teachers of phrenology, there are four temperaments, the Lymphatic, the Sanguine, the Bilious, and the Nervous, each depending upon the predominating influence of the stomach, the lungs, the liver, and the brain respectively. These different temperaments are indicated by external signs which are open to observation.

The Lymphatic Temperament, depending upon the predominance of the stomach, is characterized by a pale skin, fair hair, roundness of form, and repletion of cellular tissue. The vital action is languid, the flesh is soft or plastic, and the circulation feeble and slow. The brain, partaking of the general systemic condition, is slow and feeble in its action, and the mental manifestations are proportionately weak.

The Sanguine Temperament, in which the lungs, the heart, and the blood-vessels are constitutionally predominant, is indicated by moderate plumpness of parts, tolerably firm flesh, light or chestnut hair, blue eyes, fair complexion, and ruddiness of countenance. There is great activity of the arterial system, fondness for exercise, and an animated countenance. The brain, in correspondence with the general state, is active.

The Bilious Temperament, having the liver for its basis, is marked by black hair, a dark-yellow or brown skin,

black eyes, moderately full, but firm muscles and strongly-expressed physical outlines. All the bodily functions are characterized by great energy of action, which extends to the brain; and the countenance, in consequence, has decided and strongly-marked features.

The Nervous Temperament, depending upon the predominant influence of the brain and nervous system, has,

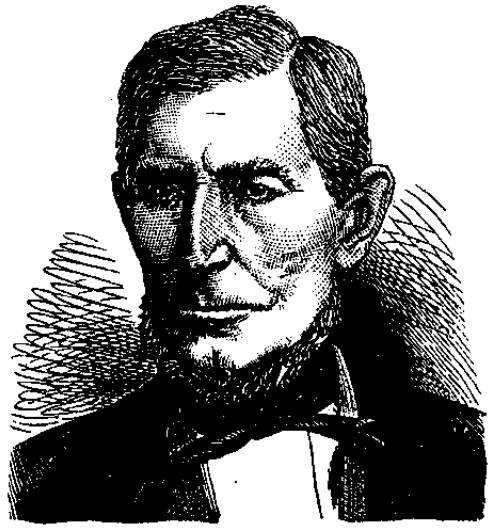

Fig. 3.—Motive Temperament. Gov. W.

as its external signs, firm and rather thin hair, thin skin, paleness of countenance, small muscles, and often delicate health. The sensations are lively, and the muscular actions rapid. The whole nervous system, including the brain, is extremely active, and the mental manifestations are proportionally vivacious.

The Later Classification.—The classification of the temperaments used by early phrenologists, although correct and valuable in a pathological point of view, is not founded entirely upon a healthy state of the constitution, two of the temperaments—the lymphatic and the nervous—being traceable to abnormal conditions of the bodily organs. We therefore prefer a later classification, which can claim a physiological basis, and is also more simple and comprehensive.

Fig. 4.—Motive Temperament. Miss H.

The human body is made up of three grand systems of organs, each of which has a distinctive general function in the physical economy. They are known as the Motive or Mechanical System, the Vital or Nutritive System, and the Mental or Nervous System.

The Motive or Mechanical System, composed of the bones, the ligaments, and the muscles, forms, by the combination of these three sets of organs, an apparatus of levers through which all the mechanical movements of the body

are effected. The predominance of this system of organs in any individual gives rise to the special expression in the organization of what we call the Motive Temperament.

The Vital or Nutritive System, in like manner consists of three classes of organs—the Lymphatics, the Blood-Vessels, and the Glands—which, through their functions of absorption, circulation, and secretion, are the instruments of the body's nourishment and purification. Where this

Fig. 5.—Vital Temperament. Dumas.

system of organs is predominantly active, a physiological condition is induced which is known in the new classification as the Vital Temperament.

The Mental or Nervous System, forming the medium of connection between the soul, or psychic principle, and the external world, and through which thought and feeling are manifested, is likewise made up of three classes of organs—the organs of Sense, the Brain, and the Nerves. A preponderance of these three sets of organs gives rise to the Mental Temperament.

We have, then, under this classification three temperaments, each of which is indicated by external signs in the physical organization, and exerts a specific influence in the manifestation of mind.

CHARACTERISTICS OF THE TEMPERAMENTS.

The Motive Temperament, depending upon a superior development of the osseous and muscular systems, is mark-

Fig. 6.—Vital Temperament. Queen of Spain.

ed by a figure tall and striking, and tending to angularity. The bones are large, and generally long rather than broad; the face is oblong, the cheek-bones high, the neck rather long, the shoulders broad, the chest moderate, and the limbs long and well jointed. The muscles are hard and firm, the complexion and eyes are generally dark, and the hair dark, somewhat coarse, and abundant. The features

are strongly marked, and their expression is striking This temperament gives great bodily strength, energy, and love of physical exercise; and its possessors have strongly-marked characters, and are inclined to take the lead in pursuits which employ largely the bodily forces. They are observers rather than thinkers, are firm, self-reliant, executive, and persevering. They are not easily turned aside from their purposes, and often pursue their ends with a reckless disregard of their own physical welfare or that of

Fig. 7.—Mental Temperament. F. A. C.

others. In this temperament the mental organs of Firmness, Combativeness, and Destructiveness are usually large or specially active, and the perceptives generally well developed. (See Figs. 3 and 4).

The Vital Temperament, depending upon the predominance of the organs of nutrition and assimilation, is necessarily marked by breadth and thickness of body, rather than by length. Rotundity is its prevailing characteristic. The shoulders are broad, the chest full; the

abdomen well developed; the limbs are plump and tapering, and the hands and feet are relatively small. The neck is short and thick, and the head and face incline to roundness. The eyes are generally blue, the hair light or auburn, the complexion florid, and the expression of the countenance pleasant and often mirthful. Mentally, persons of this temperament are characterized by activity, ardor, impulsiveness, enthusiasm, and often by vacillation.

Fig. 8.—Mental Temperament. Miss W.

They possess more versatility than firmness, more diligence than persistence, and more brilliancy than depth. They often give way to passion, but are as easily calmed as aroused, and are generally possessed of a cheerful and genial disposition. They are usually fond of good living and jovial company, and through these are often led away into excessive indulgence in stimulants and the pleasures of the table. (See Figs. 5 and 6).

The Mental Temperament, depending upon the predominance of the brain and nervous system, is characterized by a frame relatively slight, and a head relatively large, an oval or pyriform face, a high and pale forehead; bright eyes and expressive countenance, and delicately-chiseled features. The hair is soft and fine, the skin delicate in texture, the voice flexible and somewhat high-keyed, and the expression of the countenance animated and full of intelligence. Persons of this temperament are

Fig. 9.—Combination of Temperaments. Lord Derby.

refined and sensitive in feeling, possess excellent taste, great love of the beautiful in nature and art, and are vivid and intense in their conceptions and emotions. The mind is active and acute and disposed to literary and artistic pursuits. (See Figs. 7 and 8).

Combinations.—These primary temperaments, uniting with each other in different proportions, form combinations almost as numerous as the individuals of the human

race. A purely motive or vital or mental temperament can not be found; and in accordance with its predominance there is necessarily a departure from symmetry of development. The best temperamental condition is that in which these three primary elements are harmoniously blended. In this we have perfection of physical constitution, and the best condition for harmony in the mental manifestations. (See Figs. 9 and 10). To estimate correctly the relative proportion in which these temperaments combine in

Fig. 10.—Combination of Temperaments. Mrs. Mott.

any individual, requires considerable observation and practice; and their influence is so powerful in the mental character that they must be taken into account by the student who would obtain correct views of the relation of the physical organism to mental expression.

Sanitary Influence. — Another important influence which modifies the effect of size is health. Every bodily organ is liable to diseases, peculiar to itself or otherwise,

which impair the integrity of its function. The brain, as an organized part of the physical system, forms no exception to this liability to disease, but is subject to abnormal conditions, which either diminish or intensify its action, and which it is very essential to take into account in estimating the power of mental organs. And not only are the mental manifestations affected by disease of the brain, but the body being an organism in which every part exists for every other part as well as for itself, the energy with which the brain performs its function will be largely dependent upon the health and vigor of the other bodily organs. Instances are met with of great mental vigor conjoined with a feeble body and ill-health, but such cases are rare and are due to extraordinary activity of the mental organs themselves, which seem to be capable, in a measure, of rising above the influence of bodily weakness. Yet such persons usually become exhausted suddenly, and their cases by no means militate against the general law, that a sound and vigorous body is essential to the manifestation of a vigorous mind. Were these minds lodged in sounder bodies, there can be no doubt that their activity would be better sustained and efficient.

Exercise of the mental organs, in like manner, is an important element in modifying the effect of size. The gymnast, by judicious bodily exercise, not only increases the size of his muscles, but their strength and vigor in a much greater degree. They become supple, dense, and firm by well-timed exercise. The brain coming under the general law of organic development, is affected by exercise in a manner similar to the muscles. When any mental faculty is called into activity, the blood is determined to that portion of brain upon which its manifestation depends, and it is invigorated and strengthened; its size will thus be

increased by the stimulating influence of the blood, but its energy and facility of action in a greater degree. Hence in estimating the power of a mental faculty from the size of its organ, it is important to know something of the extent of its previous activity. In the proposition as usually laid down with reference to the mental organs, that size, *cæteris paribus*, is the measure of power, these three conditions, *quality*, *health*, and *exercise*, are what are comprehended by the term, "other things being equal."

CHAPTER VI.

OF THE INTELLECT.

THE faculties composing this order take cognizance of the existence, qualities, and relations of external objects. They correspond with the "knowing faculties" of the metaphysicians. First, we would call the reader's attention to the Perceptive group, of which one of the most important elements is

INDIVIDUALITY.

This organ is situated in the first frontal convolution, at the anterior extremity of the frontal lobe, and lies contiguously to that part of the cranium immediately above the root of the nose. (See Fig. 17–1). It imparts the disposition to examine things as individual existences, without any reference to their qualities or purposes. Dr. Gall first named it the Sense of Things, and Dr. Spurzheim subsequently called it Individuality. It is the specializing faculty, taking cognizance of things—a tree, a house, etc., as a simple existence. The other perceptives give us our notions of the qualities of objects, as their form, size, weight, color, etc. Individuality may be termed the *noun*, or object faculty; while Eventuality is the *verb* faculty, and specially concerned with the movements, changes, and history of objects.

The great differences in the power of observation exhibited by men, depend chiefly upon the development

of this faculty. Some are able to give an accurate description of objects which they have seen in their daily movements; and others can scarcely afford an hour's entertainment in recounting the things which they have observed in a month's travel.

Through its power of individualizing, this faculty is an important element in a practical character, supplying the disposition to attend to the details and minutiæ of a subject. Those writers and artists who have it well-developed,

FIG. 87.—LAVATER. INDIVIDUALITY LARGE.

are able to give a distinctness and vividness to their conceptions, which never fail to command attention. Robinson Crusoe and Gulliver's Travels may be instanced as books remarkable for distinctness of detail in narration; and in the heads of De Foe, Swift, and also of Dickens, this organ was greatly developed.

When large, Individuality imparts projection and breadth to the part of the forehead between the eyebrows, and in those persons who have it small the eyebrows are

This faculty is essential to the draughtsman, portrait-painter, the designer, and to all occupations which have to do with a knowledge and judgment of shape. In Michael Angelo it was extraordinarily large; in William Cobbett, the English author, it was small, and but moderate in Byron.

The Chinese are remarkably endowed with this faculty, which corresponds with their well-known mechanical dexterity and capacity for mastering a language which has a different character for nearly every word.

Fig. 30.

In animals this faculty gives them the ability to distinguish their masters, or those who have been kind to them, and to remember them even after a separation of years. All the animals of a herd know each other, and it is said that when a strange bee undertakes to introduce himself into a hive, composed of from twenty to eighty thousand bees, he is recognized, and driven out or killed. Children with large Form learn to read much more easily than those

in whom the organ is small, and are better adapted to the ordinary mechanical trades than the latter.

SIZE.

The size of a thing is obviously a quality very different from its form. Two eggs, for instance, may be exactly alike in form, but differ greatly in size; and as one of these

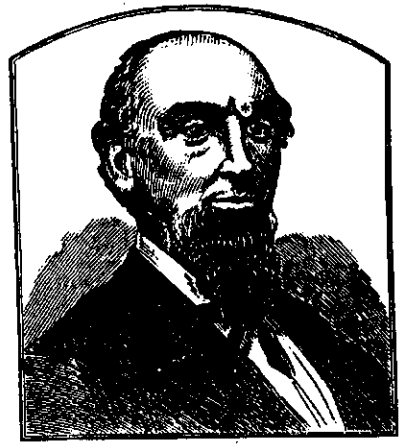

Fig. 31.—Size Large.

kinds of knowledge is conceivable without the other, it is not unreasonable to suppose that they may originate in different cerebral organs. This fact has been demonstrated by numerous observations, which have established the location of an organ, called Size, adjoining Form, on each side of Individuality, at the internal extremity of the arch of the eyebrow. (See Fig. 17–S). Its function is to give the idea of dimension, distance, and space in general. It is essential to the landscape painter and the draughtsman,

organ. Savage races are generally lacking in Mirthfulness, as they are also in Ideality. The American Indian's forehead is characterized by narrowness in the upper part, while it retreats rapidly, leaving the perceptive organs strikingly conspicuous.

The size of Mirthfulness is not always indicated by the breadth of the forehead, because Comparison and Causality, when both large, may impart considerable expansion to the upper part of the brow. If, however, we take the center of ossification in the frontal bone, which is also the center of Causality, and observe the expansion of the head outwardly from that point as well as the distance of the region from the opening of the ear, being careful to allow sufficient space for the development of Causality, we shall be guided to a correct estimate of the organ.

Fig. 60.—A Civilized Indian.

CHAPTER VIII.

THE ORGANS OF THE SOCIAL AFFECTIONS.

AMATIVENESS.

The most careful researches have indicated the cerebellum as the seat of the procreative instinct. The position of the cerebellum is shown in Fig. 11 lying directly under the posterior lobes of the cerebrum. (See also Fig. 17–1). Its size is measured by the peripheral expansion of the cranial parts below the occipital spine and between and backward from the ears.

A faculty or disposition is obviously essential to the continuance of animal life in its successive generations, and it is the function of Amativeness to inspire the sexual feeling incident to such continuance. In the normal activity of this faculty there is nothing that is base or lewd. On the other hand, it exerts a pleasing and refining influence upon the minds of the sexes in their association; awakening in each a kindly interest in all that concerns the other. "In this quiet and unobtrusive state of the feeling," says Mr. Scott, "there is nothing in the least gross or offensive to the most sensitive delicacy. So far the contrary, that the want of some feeling of this sort wherever it appears is a very palpable defect and a most unamiable trait of character. Its action softens all the proud, irascible, and anti-social principles of our nature in

mother dotes with fondest delight on her infant in the first months of its existence when it presents fewest attractions to other individuals; and her solicitude and affection are bestowed longest and most intensely on the feeblest member of her family."

This organ, as a rule, is much larger in women than in men, and in the females of all animals than in the males. There are, however, notable instances of deficiency of this organ even in women. Dr. Gall relates the case of a lady of Vienna who loved her husband tenderly, but who sent

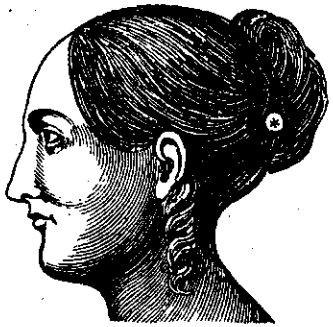

Fig. 63.—PHILOPROGENITIVENESS LARGE.

Fig. 64.—PHILOPROGENITIVENESS SMALL.

from home as soon as they were born all the nine children to whom she gave birth and for years never asked to see them. She was unable to account for this want of affection toward her offspring, and was somewhat ashamed of it. To satisfy her conscience, she insisted on her husband seeing them every day and taking charge of their education. Drs. Gall and Spurzheim found the organ deficient in twenty-five out of twenty-nine infanticides whose heads they had occasion to examine.

The skulls of the Esquimaux present a great prominence

in the region of this organ, and many Arctic travelers have made mention of the extreme ardor of affection which they manifest toward their children. Captain Parry says, in speaking of these people: "Nothing, indeed, can well exceed the kindness with which they treat their children; and this trait in their character deserves to be the more insisted on because it is in reality the only very amiable one which they possess."

Fig. 65.—A NATIVE OF ZANZIBAR.

Crantz's testimony is equally strong as to the manifestation of this faculty by this people. He says that "While you will scarce find a Greenlander do good to one another without the mercenary hope of some speedy retribution, there are, on the other hand, traces of a stronger love between parents and children and the many passions arising from it than there are among other nations. A mother

can not suffer her child to be out of her sight, and many a mother has drowned herself because her child hath been drowned."

Like the inhabitants of the Arctic zone, the negroes of the torrid are remarkable for their parental affection, and the negro skull is equally remarkable for its occipital elongation or fullness. On the other hand, some of the uncivilized tribes show a decided lack of consideration for their young. Rev. J. G. Wood states that the native Sandwich Islanders are indifferent to their children, often leaving them to hunger and exposure through negligence. In the skull of this race the organ of Philoprogenitiveness is but moderately indicated, and signally deficient when compared with its development in the negro.

Dr. Spurzheim, in his discussion of the anatomical relation of this organ, says: "In mammiferous tribes the cerebral crura are evidently divided into two parts, namely, an anterior and external and a posterior and internal mass; two superficial furrows mark their limits respectively. They bear no regular proportion to each other in the human kind. The anterior and external portion composes two-thirds at least of the entire crura; but in the lower animals, the posterior is by much the more considerable portion of the two."

Dr. J. P. Brown argues from this as follows: "Now, since it is anatomically certain that these posterior and internal divisions pass on to form the posterior lobes of the brain after having acquired a great augmentation of bulk in their passage through the thalami, and as these divisions of the crura and also of the thalami are proportionately much larger in the lower animals than the anterior, which go to form the frontal and superior lobes, it follows that these lobes which are supposed to be wanting in these

creatures must not only exist, but be even larger in relation to the anterior and superior portions of the brain than is the case in the human kind, wherein the anterior divisions of the crura compose at least two-thirds of their whole bulk. These anatomical facts explain the relative superiority as to size of the frontal lobes of the brain in mankind and their relative inferiority in the brains of all the lower animals, not excepting the orang-outang, chimpanzee, or gorilla.

"But the presence of these unequal divisions of the crura can not belong to mammiferous animals alone, for birds and reptiles possess the crura, and also parts closely attached to these, which Spurzheim positively avers to be strictly analogous to the thalami and corpora striata. The posterior lobes of the brain, of which the larger divisions of the crura are the nucleus in animals that suckle their young, must, therefore, exist in birds and other animals that are not mammiferous. A similarity of function in all of them must be the necessary consequence, and long experience proves infallibly that the degree of ardor evinced by animals in taking care of their young depends upon the greater or less development of the central part of the posterior lobes of the brain."

Even birds exhibit a marked disparity in this feeling. The cuckoo lays her egg in another bird's nest and takes no further care of it. The skull of the cuckoo is about the same size as that of the partridge, which is always most solicitous for the welfare of her young; but there is a marked difference between the two skulls in configuration of that part in which the posterior lobes lie. In fact, there is a palpable depression in the skull of the cuckoo and a marked protuberance in that of the partridge in that part of the head which lies immediately above the cerebellum.

Several interesting cases of disease in this organ are recorded. Dr. Andrew Combe mentions a patient, who, during a temporary alienation of mind which lasted for three days, expressed continual solicitude for her children; imagining that they were in distress or murdered, carried away and exposed to every calamity. She complained on recovery of having had a pain in the back part of her head; and in indicating the place, laid her finger on the organ of Philoprogenitiveness.

INHABITIVENESS.

The discovery and location of this organ are due to Dr. Spurzheim, who was of the opinion that some space in the

Fig. 67.—INHABITIVENESS LARGE.

Fig. 68.—INHABITIVENESS SMALL.

occipital lobes on the mesial line between Philoprogenitiveness and Self-esteem should be allotted to it. (See Fig. 17–4). Mr. Combe concluded from a series of observations that a part of the space, at least that bordering on Self-esteem, was the organ of a faculty which gave a tendency to concentrate the mind within itself, and to give continuity to impressions, and deeming the evidence in

favor of Dr. Spurzheim's discovery insufficient to warrant the acceptance of Inhabitiveness as an independent organ, did not include it in his classification. We are of opinion that the organ is fairly demonstrated, and entitled to be accepted by mental philosophers even in preference to Concentrativeness, although the latter has the support of so acute a reasoner as Mr. Combe. Our reasons for this opinion will appear when we come to discuss that faculty.

The function of Inhabitiveness is to give a love of home, or an attachment to the place where one was born or has lived; since all men can not inhabit one place, or choose their abode in the most favored localities, it contributes to contentment and satisfaction with our dwelling place, although its location may possess many positive disadvantages. A great English poet* writes:

> "The shuddering tenant of the frigid zone
> Boldly proclaims that happiest spot his own;
> Extols the treasures of his stormy seas,
> And his long nights of revelry and ease.
> The naked negro, panting at the line,
> Boasts of his golden sands and palmy wine,
> Basks in the glare, or stems the tepid wave
> And thanks his gods for all the good they gave.
> Such is the patriot's boast, where'er we roam—
> The first best country ever is at home."

This faculty is not only manifested by man, but by nearly every variety of animals. Birds return to the same spot, year after year, to occupy the same nest, to deposit their eggs and to rear their young; and when the chilly winds of autumn blow, they fly away again to their winter home. Even fishes, after spending the winter in the trackless ocean, make their way back to the same stream in which they were hatched, or where they have deposited their eggs.

* Pope. "Essay on Man.

CHAPTER XI.

HOW TO EXAMINE HEADS.

In the analysis of the mental faculties which we have just concluded, we have indicated the location, anatomically and otherwise, of the several organs. For the assistance of the student in his examination of the living head, we deem it fitting now to indicate a few points of departure by which the location of the organs may be ascertained.

The opening of the ear is taken as the general starting-point, and a line traced from that upward to the great *fontanelle* (or the place of common junction in the top-head of the two parietal bones with the frontal bone), which is usually indicated by some bony roughness or irregularity proceeding from the sutures, and at which, as we have seen, the organ of Veneration is located, will pass over in succession Destructiveness, the back part of Acquisitiveness, Sublimity, and Hope. Following the median line from the fontanelle forward, Benevolence and Human Nature are passed over; and then, in order as we proceed down the center of the forehead, Comparison and Eventuality—which occupy the middle of the forehead—and next Individuality, situated directly at the root of the nose. Taking now the superciliary ridge as our guide, the situation of the perceptive faculties respectively may be easily determined. Again, starting from Veneration, and following the middle line of the top-head backward, we pass over Firmness, Self-esteem, Inhabitiveness, and reach the occipital spine, at which Philoprogenitiveness is situ-

ated. Below this last organ we find Amativeness. Causality and Cautiousness are two organs whose location may be easily distinguished, the former being situated at the *frontal eminences* in the upper part of the forehead, on each side of Comparison, and the latter in the posterior side-head, at the centers of parietal ossification, or upward and a little backward from the ears. If a line be traced horizontally from Cautiousness to Causality, it will pass over in succession Sublimity, Ideality, and Mirthfulness. The space upon the top-head, between the organs on this line and those on the mesial line of the head, is occupied by another range of organs, viz.: Approbativeness, between Cautiousness and Self-esteem; Conscientiousness, between Firmness and the forward part of Cautiousness; and Hope, Marvelousness, Imitation, and Agreeableness, between Veneration and Benevolence on the one side, and Sublimity, Ideality, and Mirthfulness on the other. Another line traced from the center of Eventuality to a point in Philoprogenitiveness, just above the occipital spine, will pass over in succession Locality, Time, Tune, Constructiveness, Acquisitiveness, the upper part of Destructiveness Combativeness, and the lower margin of Friendship. Secretiveness lies between Cautiousness and Destructiveness, and back of Acquisitiveness. The locations of Vitativeness, Destructiveness, Alimentiveness, and some of the organs just named, may be easily determined from their relation to the ear. The diagram, Fig. 17, may be referred to as a guide in tracing their relative situation, it being remembered that in attempting to represent upon a plane surface the position of organs occupying places in a spheroidal or convex mass, much apparent irregularity must result. The student should fix in mind the locations on the cranium of the anterior and posterior fontanelles, the mas-

toid processes, occipital spine, parietal eminences, frontal eminences, superciliary ridges, and zygomatic arches, and observe the relation which certain organs bear to them respectively; he will thus be greatly assisted in determining the location of the others and their degree of development.

A good phrenological bust, having the organs marked on one side, and the different regions of the brain on the other, will be found an almost indispensable adjuvant, since the organs differ in form and extent, and these qualities can be best indicated on a bust.

An Illustration.—Given a subject, the first matter to be considered in estimating character from external forms is the general size of the head. The fundamental principle that size, other things being equal, is the measure of power, demands attention; for while it is of the greatest importance to consider well the conditions which modify the effect of size, we may rest assured that a large brain is an indispensable requisite to great mental power. On the other hand, although keenness and even brilliancy of mind may result from the great activity of a brain of moderate volume, yet it will fail to manifest that power and force which give to the large brain its commanding influence in society. Men of large brain readily impress us with their power. The comprehensiveness of their minds, and the ease with which they can sustain large responsibilities, inspire us with confidence, and we almost instinctively accord to them positions of influence and authority. There appears to be little difference of opinion now among observers with respect to the importance of a large brain. That sharp critic in mental philosophy, Alexander Bain, writes:

"It can not be maintained that size is the only circumstance that determines the amount of mental force; quality is as important as quantity, whether in nerve, muscle, or any other portion of the human structure. But just as largeness of muscle gives greater strength of body as a general rule, so largeness of brain gives greater vigor of mental impulse."*

Dr. Delaunay, an eminent French physiologist, says in a recent paper: "Bismarck and Moltke measure more around the crown than the Emperor William. Inferior races have smaller heads than Europeans." In our intercourse with men of small brain, on the other hand, the want of commanding force of character will be felt. They may possess talent in some respect which will excite our admiration, and we may defer to their judgment in matters which lie within the range of their special talent, but they rarely impress us with confidence in their capability as leaders and directors of affairs of importance.

The size of the body, also, should be taken into the account in estimating the general power of the mind. Into this the matter of Temperament necessarily enters, as has been shown in the chapter "On the Temperaments," and the proportion of the mental, motive, and vital elements in the organism should be carefully estimated. The body is the source whence the brain is nourished, and if it be feeble or exhausted, it must fail to sustain properly the brain in its activity, and the mental manifestations are fitful and weak in consequence. The premature decay of many men of brilliant intellect lies just in this want of balance between the physical and the mental powers. Their proneness to mental activity causes the brain to consume the vitality of the body faster than the organs of nutrition can

* "The Senses and the Intellect," p. 11.

computation as original faculties of the mind, nor as depending upon distinct cerebral organs. They treat of perception, conception, sentiment, memory, judgment, etc., as original powers of the mind; but our philosophy teaches that these are only modes of mental activity common to many different faculties. The organ of Form, for instance, enables us to perceive the shape of an object; Size, its magnitude; Weight, its density; Color, its hue; Order, the arrangement of its parts; Calculation, their number; and Locality, the place which it occupies. Each of these distinct modes of mental activity may be correctly termed perception. Each of these organs, in like manner, when internally active, may present to the mind ideas corresponding with its function without the visible presence of an object which is naturally adapted to excite it to activity. This mode of action is properly termed conception, and is common to all the intellectual faculties. Memory, also, is a term applicable to nearly every faculty of the intellect, and is not itself a distinct power of mind. For it is well known that an individual may have a good memory of faces, but a poor memory of names; a good memory of colors, but a poor memory of tunes; a good memory of places, but a poor memory of dates; a good memory of facts, but a poor memory of principles or theories. Were memory a separate power of the mind, these phenomena could not occur, for it would then be capable of recalling with equal facility, every class of ideas which had once been a part of the mind's experience.

Now it is clear, if the phrenological theory be the true one, that any rules laid down for the cultivation of perception, conception, memory, etc., as primitive or independent faculties of the mind, must be exceedingly partial and indefinite. If a metaphysical professor were to say to his

pupil, "Your faculty of perception, or your faculty of conception is weak; in order, therefore, to strengthen it, please give it exercise," the pupil would be at a loss to know where to begin, or how to proceed. But if the phrenological theory of the organs and faculties were explained to him, together with the principles which govern their activity, he might enter upon the improvement of his defective mental faculties with intelligence. He might then find, perhaps, that his deficiency in perception was only partial; that while his perception of forms, proportions, or colors might be imperfect, his perception of harmony in music and melody might be excellent. In memory, also, he might find that he could easily recall principles, while facts and circumstances would be remembered with difficulty; that while his verbal memory might be good, his memory of the places which he had once visited might be weak; that while being able to recall dates and figures easily, the faces and names of persons would be retained with difficulty. These remarks apply with equal force to many other *original* faculties of the old systems of mental philosophy, and serve to illustrate the partial, unreliable, and impracticable results which flow from an imperfect—because scarcely more than hypothetical—method of mental investigation.

APPLIED IN THE EDUCATION OF CHILDREN.

Turning our attention to the propensities and sentiments, we find that our philosophy furnishes equally precise and practical information in regard to the training of the disposition and the development of character. Many fond parents refrain from correcting their children in the early period of their existence under the impression that they are too young to appreciate moral training, and that when

they become older, their intellects will enable them to distinguish between good and bad conduct; and that then they may be addressed, and a reform effected, through the reason. But our philosophy teaches that while the intellect may exert a reforming, because enlightening, influence over the conduct, its power to do so depends in general upon its development as compared with that of the propensities and sentiments. Phrenology refers the violent temper, the stubborn, willful, and perverse disposition, the tendency to deceitfulness, etc., to the primitive faculties of the mind, and shows that in order to modify the disposition, the material organs through which the faculties are manifested must be reached, and our influence exerted directly on them, either to restrain the bad or to call forth the good, in accordance with the laws of their organization.

What these laws are may be easily apprehended. Every mental organ is naturally related to a certain class of objects which, when presented to it, excite it to activity, and by this activity it grows in strength and facility of action, just as a muscle grows in size and power by exercise. Thus, danger and objects of terror are the natural stimulants of Cautiousness; praise, of Approbativeness; opposition, of Combativeness; food, of Alimentiveness, etc. Now, Alimentiveness, Combativeness, and Destructiveness come into activity almost at the beginning of the child's existence, while Cautiousness, Approbativeness, and Firmness may be very influential elements in the disposition long before the intellect has been sufficiently developed to enable it to judge wisely in regard to conduct. "Let it not be forgotten," writes Spurzheim, "that from the earliest age, the feelings as well as the intellectual faculties may be educated, and that young children show

no less difference in their characters than in their talents They are patient or obstinate, indolent or lively, timid or courageous, attached to, or careless about others," etc.*

If, therefore, parents allow the propensities of their children unrestrained activity during their infancy under the belief that when they are older, they may be reasoned out of their evil tendencies, they commit as great a folly as would the husbandman who should allow weeds to grow up among his corn, under the impression that when it was well grown, it would better bear their eradication. The weeds smother the corn and obstruct its growth from the very beginning, and the longer they are allowed to grow, the more difficult becomes their extermination.

Three Methods Indicated.—In the training of the propensities of children three methods may be pursued: first, physical restraint; second, a withdrawal from them of their natural stimulants; and third, their arraignment before the intellect and moral sentiments, as the powers naturally adapted to exercise authority over them. Alimentiveness is naturally the first propensity which comes into activity. It responds to the body's need of nourishment, and when instructed and unperverted, is a reliable guide as to the kind and amount of food necessary for the maintenance of the physical system; but this organ, in accordance with the laws of hereditary descent, which govern every part of the body, is most surely liable to be transmitted from parents to children with an excessive degree of energy, so that in the very commencement of the child's existence it may give a desire for a much greater amount of food than is necessary to supply the needs of the system. Unless this desire be restrained within reasonable bounds, it is clear that it will be likely

* "Education Founded on the Nature of Man." J. G. SPURZHEIM.

to work much injury to the health of the child by imposing on the stomach an excess of work, and clogging the system with a superabundance of food-material. The organ itself increases in size and vigor by unrestrained indulgence, and thus becomes more and more a source of evil and unhappiness to its possessor. Many parents are so ignorant in regard to proper methods of training, and so biased in their judgments through a foolish fondness inspired by the unregulated activity of Parental Love, that they not only allow their children an injurious indulgence of the appetite, but even make it a means of securing their obedience. They quickly perceive what a powerful influence it gives them over their children, and it is appealed to on every occasion as a chief means of discipline. A sugar-plum, a stick of candy, or a piece of cake is, with such persons, the current payment for obedience, and thus the gratification of an inferior propensity is trained to hold the high place of a motive to conduct, which should be occupied only by the moral sentiments.

Furious Anger arises from the unrestrained activity of Combativeness and Destructiveness, while Self-esteem and Firmness are the sources of a willful and stubborn disposition. If a child be allowed uncontrolled liberty of action, and is permitted to have its own way and to carry its point in the face of opposition, these organs may acquire a fearful ascendency in its disposition, manifesting themselves in a pettish, willful, and headstrong temper, and in an impatience of restraint which is the occasion of the most violent and ungovernable passion. Some children, from a larger original endowment of the organs on which these characteristics depend, are naturally prone to a high temper, and an obstinate, headstrong disposition. These must be treated with special care. All manifestation of

passion in dealing with them should be avoided; for it is a law of the mental organs that they are excited to activity by the manifestation in their presence of the same characteristics which it is their function to manifest. A proud and haughty manner exercised toward an individual naturally excites his pride in return. Stubbornness in one individual calls up the same trait in another, as is abundantly illustrated in the common affairs of life, where we see men contending over trivial matters, actuated by no other principle but a determination not to yield a single point so long as their opponents refuse to do the same, and engaging in expensive litigations in which the stake at issue is unimportant compared with the expense of gaining it. A balky horse is a good illustration of this disposition. Whipping and harsh treatment only make him the more stubborn, while kindness will often render him tractable and obedient.

In dealing with a headstrong and passionate child, the parent should be gentle, firm, and self-possessed. His manner toward it should result from the dictates of the intellect and the moral sentiments. The manifestation toward it of these higher faculties will naturally excite to activity the corresponding organs in the child; while the absence of passion and unreasoning obstinacy in the parent's conduct offers no excitement to the inferior faculties of the child. Such treatment will be conducive to that true mental development in which the intellect and moral sentiments exercise the authority which rightly belongs to them over the other powers.

An illustration of wise management on the part of a mother is seen in the following extract from a letter received lately by a well-known teacher of Phrenology in New York from a lady residing in the West, viz:

"I have been at Mount C., Mich., taking baths, and the lady I boarded with told me about taking her little child, then four years old, into your office for an examination. Among other things, you said, 'When this child has fits of passion, don't punish him, but draw his attention as quickly as possible to something else.' The child was subject to most violent fits of passion; would upset and throw everything he could lay his hands upon, although he knew he must restore things to their proper places in the end. The way you suggested was one she had never tried, and she found it to work admirably.

"Sometimes she would pick up a book and begin to read poetry, of which the child was very fond, and soon he would steal up to her side and lay his head on her shoulder, completely subdued. At other times, and always without noticing him, she would begin to talk about some subject of special interest to him, and he would forget his rage. Patiently working in this manner, the gentle Christian mother has won her reward in one of the most dutiful, thoughtful, pleasant-tempered, and affectionate of sons. You said that he would make either a very good man or a very bad one, and now, at fourteen, he promises fair to be a very good one. H. L. M."

Bribes and Threats Improper.—Cautiousness and Approbativeness are often developed to a prejudicial extent through wrong training. The element of fear is generally one of the most influential among the mental traits of young children, and on this account is frequently made use of as a means of discipline. Ignorant nurses and servants, as well as ignorant or injudicious parents, are prone to make use of the easiest means of governing children. They purchase obedience by bribing the appetite or

by bestowing upon the child extravagant praise, or by exciting its fear through threats of terrible punishments. It is too often the practice to frighten children by absurd, hobgoblin stories. Thus the organs which are already overdeveloped, and should have their activity repressed, are stimulated to further excesses of activity. Cautiousness is perhaps more frequently abused in this way than any other faculty. From inexperience and undeveloped reason, children are exceedingly credulous. They readily believe the most absurd stories of goblins and witches; and threats to shut them up in the dark, where they will see raw heads and bloody bones, or to cut off their ears, or to call the rats or a big dog to devour them, will excite terror in their minds in proportion to the degree in which the organ of Cautiousness is developed. A severe strain is thus often produced on the nervous sensibilities of children which is exceedingly prejudicial to their physical health, and sometimes proves the cause of morbid nervous conditions and even of insanity.

Praise.—A child whose Approbativeness is largely developed, will be very sensitive to praise and to blame. This faculty, indeed, is seldom deficient in children, and is frequently rendered excessively active by injudicious praise. A child is often flattered by its parents through over-fondness. It is flattered by visitors to please the parents, as well as to gratify the child. Whatever "smart" thing it says or does is rehearsed in its presence, and its improprieties are even excused on the score of its age or the discovery in them of some element of supposed talent. Under such constant stimulation, the love of praise soon comes to be the chief motive of the child's conduct, and unless the intellect and moral sentiments are powerful enough to rise above this false training, vanity and a vulgar love of

sources of their conduct. How much domestic infelicity might be avoided if the real character of those about to unite in matrimony were laid open to view, and each were enabled to dissect and analyze the mental traits of the other with the critical and dispassionate eye of science! What severe and mortifying disappointments would not many an individual be spared if, when about to choose his life pursuit, he would listen to the voice of science as interpreted by a competent phrenologist, and choose his calling in accordance with his natural endowment. Through ignorance of physiology and the constitution of the mental faculties many parents seem to think that a child may be molded into any form that their fancy may dictate, just as a sculptor would carve an image from a block of marble; and so they place their children under the tutelage of instructors to be developed into successful doctors, lawyers, divines, or men of science. The sculptor can chisel the inanimate marble into any form which may be desired, and the beauty of the image will depend upon the skill of the artist. With the living human subject, however, the law of his being determines the form without. Skillful training may accomplish much for any one, but its influence is limited to developing what already exists as a native endowment. It can not create a single faculty; it can only work on the material which nature has already supplied, and in accordance with the laws which she has imposed upon it. Hence the importance of making use of every means in our power to ascertain the qualities and faculties which nature has bestowed, that we may co-operate with her in the production of perfect mental forms, and that we may not be found wasting our resources in a futile attempt to mold a colossus out of the material of a pigmy.

To the teacher, the lawyer, the doctor, and the clergy

man, a knowledge of this science will be found especially useful. The peculiar vocation of the teacher is to train and develop the youthful mind. In order to be successful in this, it would seem to be of the highest importance that the elements, or faculties, of the mind should be definitely known, and that the laws which govern their activity should be thoroughly understood. Children differ greatly in their mental constitutions, hence the same modes of instruction and discipline can not be employed with equal success in all cases. The teacher should be able to estimate and appreciate this difference that he may adapt his method of instruction to it, and thus act in harmony with nature, and not in antagonism, as one is likely to do who is not conversant with the laws of human organization.

Much of the lawyer's success depends upon his ability to read and comprehend the motives or sources of human conduct. He should be able to discern readily the faculties which are most influential in the character, that, like a skillful general who knows thoroughly the position of the enemy, he may determine when and where to move his forces that they may prove the most effective. Patrick Henry's success at the bar was due, in a large measure, to his intuitive knowledge of human nature. He studied the faces of jurymen that he might discern the effects of his arguments, and learn how his appeals should be urged in order to win them over to his views.

The clergyman, for many reasons, will find a knowledge of this science highly advantageous to success in his avocation. An individual's religious character is not something which is stamped upon his life by external influences, but results from the calling into activity of powers which the Creator has already implanted within him. "Besetting sins" result more from the unregulated activity

of the physical and passional elements than from the influence of circumstances. To teach his people how to overcome these, as well as how to develop their moral faculties, a correct theory of mind is indispensable.

One of the most eminent of American pulpit orators was once asked whether or not Phrenology had aided him in his profession as a preacher, and he promptly replied: "Suppose I were on an island in mid-ocean, and permanently cut off from obtaining anything from the rest of the world, but having all the tools and machinery for raising crops and manufacturing other useful things; and suppose some night pirates should land and rob me of all they could carry off, and burn my books, tools, and machinery, and leave me, despoiled and desolate, to construct such rude tools as might be possible under the circumstances. Without Phrenology and the aid it gives me in treating of mind, I should be as much at a loss how to proceed effectively in my vocation as I should to carry on farming with my appropriate implements destroyed."

These remarks are applicable in a greater or less degree to every pursuit where mind comes in contact with mind. To know how to meet men, to avoid exciting their disagreeable characteristics, and to call into activity their kind and amiable qualities, will greatly facilitate our intercourse with them, and prove highly advantageous in promoting our individual interests. Any philosophy which professes to unfold human nature as it is, and to lay open the secret springs of human conduct, is surely worthy of our consideration. And in proportion as such a philosophy is practical and adapted to the every-day needs of men must it be valuable.

The venerable John Neal, long known among American

authors of eminence, wrote the following emphatic statement a few years before his death:

"I am asked what I have to say about Phrenology in this age of the world. To which I answer, first, that I look upon Phrenology as now understood, by experts and professors, not only as a science worthy the name of science, but as one of the greatest discoveries, and one of the most beneficent and useful, if rightly employed, that was ever made by mortal man. There was a time when it would have passed for inspiration. But what has it done —what is it doing for mankind? Much every way—infinitely more than the people have an idea of. It is modifying our whole system of education. It is changing all our notions of insanity, and leading to new treatment in our hospitals and courts of justice."*

* Am. Phrenological Journal, Sept., 1866.

would address language similar to that of Spurzheim when, on one occasion, he said to an assembly in Boston, Mass., shortly before his memorable death in that city: "I do not want you to believe what I propose to you; I only want you to hear what I have to say; and then go into the world and see, and judge for yourselves whether it be true. If you do not find it true to nature, have done with Phrenology; but if it be true, you can not learn it one minute too soon."*

No matter what the department of literature, phrenological truth now pervades it, and is essential to its practical appositeness where it concerns education and moral reform. The reader who is familiar with the writings of our most eminent essayist, Emerson, will recall many passages in which doctrine is introduced like that enunciated in this book. For instance, "People seem sheathed in their tough organization. Ask Spurzheim; ask the doctors; ask Quetelet, if temperaments decide nothing? or if there be anything they do not decide? . . . . How shall a man escape from his ancestors, or draw off from his veins the black drop which he drew from his father's or his mother's life? . . . . At the corner of the street you read the possibility of each passenger, in the facial angle, in the complexion, in the depth of his eye. His parentage determines it. Men are what their mothers made them. You may as well ask a loom which weaves huckabuck, why it does not make cashmere, as expect poetry from this engineer, or a chemical discovery from that jobber. Ask the digger in the ditch to explain Newton's laws; the fine organs of his brain have been pinched by overwork and squalid poverty, from father to son for a hundred years."†

* "Biography of Spurzheim." By Nahum Capen, LL.D., p. 147. Ed. 1833.
† "The Conduct of Life—Fate." By Ralph Waldo Emerson.

Mr. Alexander Bain has devoted a volume to the consideration of Phrenology—and he discusses it as a metaphysician—as a rationalist, not as an observer of the actual phenomena of mental action; not as a recorder of objective data—yet he finds much to approve in the phrenological system, and is at least willing to admit its claim to be "a *science of character*."* As a metaphysician, he finds occasion here and there to criticise the Phrenology of Mr. Combe, in his ascription of certain properties, or modes of activity to a faculty or organ, and often it seems to us he merely adopts the method of old philosophers who differ so much in their definitions and reasoning, and formulates opinions which appear to be founded chiefly upon his own mental introspection.

Our intention in this concluding part of our treatise is to show by a few examples how very common the use of the terms and philosophy of Phrenology has become in the writings and sayings of those who supply our reading matter. Just as the books and publications of Greece, two thousand years ago, when letters reflected the high culture of her people, contained frequent allusions to the characteristics symbolized or indicated by face and form in man or woman; when artists, poets, and essayists illustrated the prevailing belief of the people in a science or system of physiognomy: so to-day, our best general literature abounds in interpretations of the appearance and conduct of men which are referable to standards whose demonstrations may be scarcely found outside of phrenological formulas. Many authors hesitate not to use the terms and *ipsissima verba* of Phrenology; but most are contented

* "On the Study of Character." Alexander Bain, M.A., p. 24, *et. seq.* Ed. 1861.