

**The twelve qualities of mind, or, Outlines of a new system of physiognomy, no. II / by J.W. Redfield.**

**Contributors**

Redfield, James W.  
National Library of Medicine (U.S.)

**Publication/Creation**

New York : J.S. Redfield, 1850.

**Persistent URL**

<https://wellcomecollection.org/works/w6tdj2yv>

**License and attribution**

This material has been provided by This material has been provided by the National Library of Medicine (U.S.), through the Medical Heritage Library. The original may be consulted at the National Library of Medicine (U.S.) where the originals may be consulted.

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

**wellcome  
collection**

Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
<https://wellcomecollection.org>

THE  
TWELVE QUALITIES OF MIND;  
OR,  
OUTLINES OF A NEW SYSTEM  
OF  
PHYSIOGNOMY,

No. II.

BY J. W. REDFIELD, M. D.

"MAN is in himself the most worthy subject of observation, as he is himself the most worthy observer."—LAVATER.

ILLUSTRATED BY ENGRAVINGS.

NEW YORK:  
J. S. REDFIELD, CLINTON HALL,  
CORNER OF NASSAU AND BEEKMAN STREETS.

1850.

TWELVE QUALITIES OF MIND  
TWO QUALITIES OF MIND  
PART I  
OUTLINES OF A NEW SYSTEM  
LETTER I

---

Entered according to Act of Congress, in the year 1850,  
By JAMES W. REDFIELD,  
in the Clerk's Office of the District Court of the United States, in and for the Southern  
District of New York.

---

~~~~~  
STEREOTYPED BY C. C. SAVAGE,  
13 Chambers Street, N. Y.  
~~~~~

THE  
TWELVE QUALITIES OF MIND.

PART I.

---

LETTER I.

Rock Hill, June, 1850.

FRIEND T—— :

LIKE very many others, you are too much engaged in business to find time for the perusal of a very systematic and carefully-written work on Physiognomy. The favorite maxim of political economy, that "the supply should be equal to the demand," applies with as much force to the department of science and letters as to the department of trade and commerce. The "OUTLINES OF PHYSIOGNOMY," which you have read, were written on this principle. They are nothing more than they claim to be—mere pencil sketches, traced with a free hand, with something of spirit in them, though wanting in perfect accuracy and finish; but on that account none the less adapted to the capacity and improvement of "beginners" in the art of reading character by the face.

Though the face is the chief index of character, it is by no means the only one. Physiognomy has a much more extensive significance than the knowledge of the talents and dispositions by the features and expressions of the countenance. Our attention is directed first to that in which a person's character is most exhibited; that is, his face: and it is by this that we chiefly recognise him. But we recognise him also by the tones of his voice, the form of his body, the contour of his head, the color and texture of his hair, eyes, and complexion, the manner of

his walking, the peculiarity of his gestures, &c. In all these, and in everything belonging to his external man, we perceive something of his character; and we like or dislike him, not on account of these externals themselves, but on account of the traits of character which they indicate to us.

Every faculty of the mind has an exact sign in the face, and is indicated also by exact signs in other parts of the body. The signs in the face indicate the highest action of the faculties; that is, their *voluntary* action; and only this quality of the mind in a degree approaching perfection could entitle the face to the appellation of the "human face divine." The majority of animals have not, properly speaking, faces, but only "heads." Some few animals—those which approximate to man in habits and dispositions, as the monkey tribe—may be spoken of, without any great impropriety, as having faces; but we more naturally say "the head of a horse," "of an ass," &c.; and in speaking of fishes and insects, it would be ridiculous to ascribe to them any faces at all. Yet insects possess very many faculties in common with man, and which are of a higher order, even, than those possessed by the most superior of the inferior animals. They provide for their young, build curious habitations, make provision for the future, and do many other things in which man might well take example from them—and all without any volition or intelligence such as renders man the superior being that he is.

It is evident, then, that there must be different *qualities*, so to speak, of all the faculties; that the quality of the mind indicated in the face is not the same as that indicated in the tones of the voice, and that the quality indicated in the voice is not the same as that indicated in the gestures, and so on. Inquiry into this subject has discovered twelve qualities of the mind, belonging to each of the faculties or to the mind as a whole, and that these qualities have their signs in different parts of the body, and in certain other external manifestations. These qualities stand in a particular order in relation to each other; and in this order it will be well to speak of them in the succeeding letters.

## LETTER II.

THE first quality of the mind, and the foundation, so to speak, of the superstructure, is *Endurance*. This is indicated by the *brain*. The larger the brain, the more there is of endurance, or of the power of receiving and sustaining impressions, and of continuance in action. The brain is called the *sensorium*, because it is supposed to receive impressions through the medium of the external senses, or nerves of seeing, hearing, smelling, &c. It is in reality the *mind* which receives impressions so as to *feel* them, and this property or quality of the mind is *indicated* by the brain, which receives impressions in a literal sense, as does the sheet in a *camera-obscura*.

By the *quality of Endurance* is meant this capability of receiving, bearing, supporting, or sustaining impressions of external objects, or of abstract truths relating to the mind and to all things. Every faculty of the mind, whether perceptive, rational, moral, religious, social, or domestic, has its sign in the brain. The credit of discovering exact signs of character in the developments and configurations of the skull, and of thus laying the *foundation* of a true science of Physiognomy, is due to Dr. Gall. His discoveries commenced where they ought to have done: that is, at the quality of the mind, and part of the body, on which the whole superstructure of the science is based. He was well aware that his observations were physiognomical, and claimed that they were so.\* Had not Spurzheim given another name to the discoveries of his master, the disciples of

\* His language on this point is very decided: "I shall show here that I am nothing less than a physiognomist. I rather think that the wise men have baptized the child before it was born: they call me craniologist, and the science which I discovered, craniology;—but, in the first place, all learned words displease me; next, this is not one applicable to my profession, nor one which really designates it."—*Gall's Works*, vol. i., *Biography*.

that great man would not have had so limited an idea of the indications of the mind in exterior developments. They would not have supposed that the brain was a full and sufficient index of character, and that craniology, taken in connection with their ideas of the temperaments, was in all cases infallible. They would not have been so liable, either justly or unjustly, to the charge of materialism; for who ever thought of charging such a doctrine upon Physiognomy?\* The signs of character in the brain are to be regarded in the same light as signs of character in the face or any other part of the body. They may be removed, to a certain extent, with the same impunity that parts of the face may be cut off, or that portions of the internal organs may be destroyed. The mind is not dependent on the brain, but the brain is dependent on the mind; and the removal of a large portion of it, by disease or accident, does not remove any of the mental faculties, but only some of their signs. This is denied by phrenologists, in the face and eyes of facts that are testified to from time to time, in the records of medicine and surgery, by men celebrated for the accuracy of their observations.

It is familiar to all, that in infancy and childhood the brain is relatively larger than at a more advanced age; and this agrees with the sentiment so often expressed, that the infant mind is

\* Should a man, not content with the simple *fact* that the face is an index of the mind, think it necessary to convince mankind of the truth of Physiognomy by a *theory*, he might say, "This relation [of body and mind] is the same as that of cause and effect; or, in other terms, the physiognomy is not only the image of the interior man, but the efficient cause of it:" and this would be as good a doctrine for Physiognomy, as the dependence of the mind on the brain is for Phrenology. The language here quoted is really that of a German author, who, had he not been a great man, would probably have been laughed at for his folly. Were not such a theory self-evidently absurd, it must be confessed that Physiognomy would be liable to the charge of materialism; but it is hard to believe that even the pride of philosophy could blind a man's eyes to the fact, that the removal of the muscles of his face would not deprive him of the power of thinking and feeling. Nevertheless, the author in question, as quoted by Lavater, boldly asserts, that "the configuration and the arrangement of the muscles determine our manner of thinking and feeling;"—and reasons thus: "A stupid face [is] that whose muscles are conformed or arranged in a defective manner; and as it is upon them that necessarily depends the operation of thought and feeling, this operation must likewise be much more slow and tardy." This language is quite parallel to that of Phrenologists in reference to the brain, its form, size, texture, &c., and the '*consequent* mentality.'

like a sheet of white paper to be written upon; that it is adapted to the receiving of impressions; and that the impressions which are then made are the most indelible. Upon this peculiarity of the mind in childhood its talents, character, and prospective usefulness, are to be built. As Infancy is first in the several stages of life, so is



Endurance the first of the twelve qualities, and youth is most largely endowed with it.

Endurance is one element of strength, but it does not include all others. The strength of a foundation is not the same as the strength of a pillar, and so the strength of Endurance is not the same as the strength of Voluntariness. The ability to receive an impression is the ability to support a pressure, to bear a weight, to carry a burden: and this is Endurance. The mind of a child receives impressions which, in multiplicity, suddenness, and power, would crush the mind of an older person to the earth. Intellectual burdens are laid upon the young adventurer on the stage of life, which, compared with his growth and experience, are greater than those which the mind of a Newton is capable of supporting; and these burdens he bears away like a young Atlas or Hercules.

Infancy is indeed a "tender age" in all respects except Endurance. Without so much of this quality as would be a superabundance in manhood, children could not survive the hardships which Nature lays upon them, to say nothing of those which Fashion has needlessly added. Children with large brains bear the burdens of infancy with less suffering and with more strength, as a general rule, than those with comparatively small ones.

This quality of the mind disposes and capacitates a person



for the bearing of burdens on the head ; for this is of the same nature, in a lower degree, as the disposition and ability to receive impressions on the brain. Children are very fond of piling things—foot-stools, baskets, &c.—on their heads. A boy enjoys the sensation of apples, and of still heavier articles, between the crown of his head and the crown of his hat : when he gets to be a man, the weight of a pocket-handkerchief or a few papers in his hat is disagreeable. If the brain is relatively large above, making a dome of the superior surface of the skull, the disposition as well as the ability to carry weights on the head, is still greater. The Negro has a large brain, high and round on the top in the region which Gall named “Reverence,” but which we consider to be the sign of Subserviency (the same faculty which in its voluntary action is indicated by the two longitudinal folds of skin under the chin, in some people, and seem to be very large in the cock, and sometimes in the dog). The Negro has the quality of Endurance in a superior degree ; and as he retains the disposition to exercise it physically, just as is natural for a child to do, Nature has given him a thick skull and a convexity of the top of the head, together with the love of serving, which this convexity of the skull indicates. His power of sustaining a burden for a long time, and of *continuance* in action, whatever the employment may be, if it have relation to those faculties indicated in the posterior and middle lobes of the brain, is very remarkable.



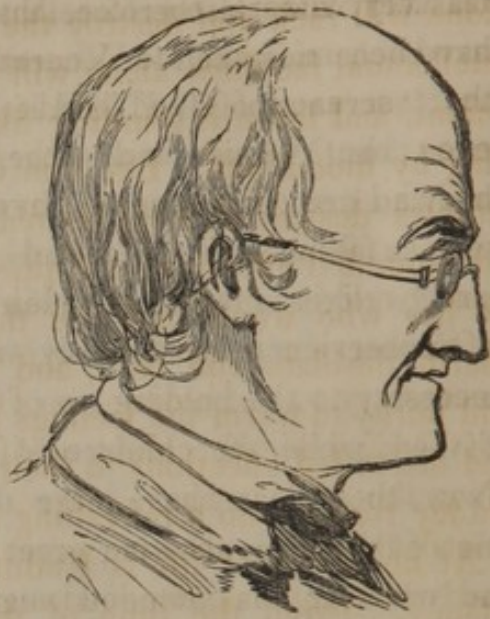
The faculty of Subserviency is associated with the religious feelings, which are indicated also in the superior portion of the brain : hence, to “serve God” is to fulfil our obligations to Him. “Attending service,” praying, fasting, &c., are, with the majority of religious persons, equivalent to serving God ; and it

was very natural, therefore, that the sign of Subserviency should have been mistaken for Veneration. Those who were eminently the "servants of God" had it large, and they had great reverence; but Voltaire and other profane and irreverent persons had, and are often seen to have, a large sign of Subserviency, with a falling off all around it, showing a deficiency of the purely religious feelings, which are necessary to the sustaining of Subserviency in the holy warfare, as Aaron and Hur were necessary to the holding up of the hands of Moses, the servant of God, while the children of Israel strove with their enemies. Now, the African has a large development of the superior portion of the brain, showing great endurance of all these faculties: and whoever has attended negro-meetings—particularly those for conference, prayer, exhortation, and singing—must be struck with the agreement between the laborious continuance in each department of their religious services, and the signs of the endurance of these faculties in the top of the head. But the Negro has still more endurance of the domestic and social affections, as is very well known; and these are indicated in the cerebellum and posterior lobe, which are very large in him.

Gall has shown us the agreement between the relatively larger domestic and social affections in woman, and her relatively larger back-head; and also between the relatively superior intellectual faculties in man, and his relatively larger forehead. The difference is principally in the *endurance* of these two classes of faculties. Woman has more endurance of the affections, and hence she does not weary as man does in the love and care of children—in affection and assiduity for the conjugal partner—in the exercise of the social faculties—nor in the discharge of duties that are forever repeated.—Man, on the other hand, has more



endurance of the intellectual faculties, and hence he does not weary as woman does in the study of abstruse and philosophical subjects—in the acquisition of profound and extensive learning—in the calculation of difficult and lengthy mathematical problems—in the transaction of commercial and public business—nor in the exercise of the mechanical faculties and talents for invention and the arts of

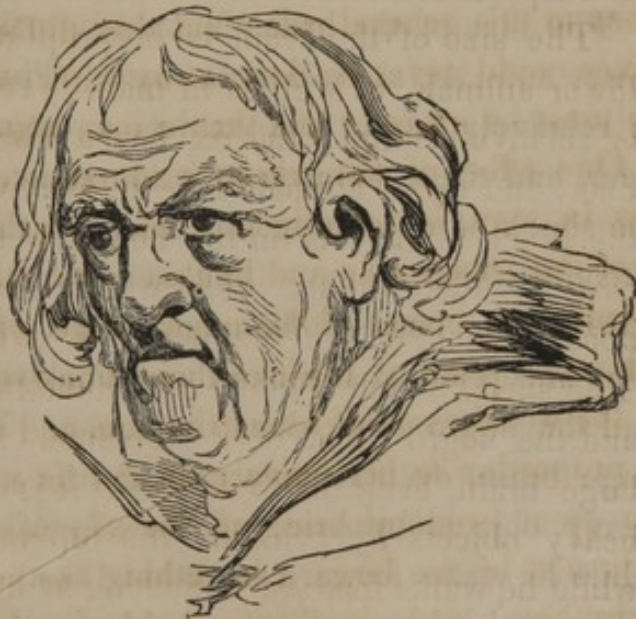


design. Of course, no one denies that there are some exceptions to this general rule; but this difference between the two sexes could never be done away with, much less reversed; and he must be more or less than a man who would wish it to be so.

One effect of the greater endurance of the intellectual faculties in man, is sometimes a too great predominance of these over the affections; and in this case the man becomes a cold, calculating, severe philosopher—one who lacks sympathy with the social spirit of his kind, and who looks upon the affections as the weaknesses of human nature, and upon woman as inferior in proportion to her tenderness and love. On the other hand, a too great predominance of the affections in woman (which is indicated by too large a back-head, or by too small a forehead, or by both) leads to ungovernable passions, to tempests, and to the exercise of the affections without the restraints of reason or prudence. This is the case with those who fall into hysterics, either from love or anger, from joy or grief; and such exhibitions generally occur at night, because then the reasoning faculties having less endurance are exhausted, while the affections having more endurance are still strong and active. Not having the reasoning faculties to govern them, an unusual disturbing cause is sufficient to throw them into a tumult; and this produces a corresponding effect upon the body. The passions

alone will rack and destroy the habitation of the spirit; and the intellectual faculties alone will cause the spirit to desert its tenement, and leave it standing like a dim and solitary pile, nodding by moonlight. Let him who would not see the fairest of temples destroyed, lend his reason and his calmness to soothe the wounded affection, and quiet the whirlwind of passion; and let her who would not see the stately mansion deserted, its hearth desolate and cold, and its halls forsaken, lend her love and purity to warm the feelings into life, to restore the neglected and discarded affections to their home in the breast, and to melt the icy reason into a refreshing stream.

At no period of life is Endurance so great, relatively, as in infancy. From the time of the meridian of life to its close, this quality gradually decreases, till at last "the grasshopper is a burden," and then the brain has become very much shrunk and diminished in size. But there are many fine instances of Endurance and large brains in persons of mature age.— Statesmen, as a class, have very large heads, and they are famous



for long-continued exertions in the discharge of their duties. These are the men who make speeches of several hours without fatigue; and the longest speakers have the longest heads, by which we do not always mean the most logical ones. Clergymen, too, who have very large brains, incline to preach very long sermons, while those with small brains are glad to stop when they have preached short ones. Those of the audience who have large brains are not wearied with the long discourses of the first class, and would willingly listen to more from the

latter, while those with small brains complain of the long sermons, and think the short ones quite long enough.

Endurance is necessary to a man who would be a great traveller; and indeed this quality disposes him for travelling, inasmuch as it gives him the capacity for it, and because he takes a special pleasure in receiving impressions of external objects, sights, sounds, &c. All great travellers, so far as we know, have large brains. John Ledyard, for example, is said to have had a very large head. Phrenologists pay special attention to the cultivation of the brain, besides which they usually have large heads and well formed, affording a good illustration of their principles; and it is well known that they have great locomotive powers, and are great itinerants. The example of Gall and Spurzheim has been well followed.

The size of the brain is in proportion to *endurance* in the lower animals, as well as in man. The cerebrum of the sheep is relatively large; the ox has a large brain, and so has the deer, and these animals love to receive the pressure and even the shock of objects on the head, for the purpose of moving or carrying them along. The weight in these cases falls where it does in the head of the negro: *i. e.* on a line with the neck. The sheep and goat make their attack with this part of the head, and the negro often does the same. The elephant has a very large brain, even relatively; and it is natural for him to move heavy objects by bringing the top of his head against them, while he walks forward something as a negro does under a load. These animals are all remarkable for the power of long-continuance in action: but the most wonderful instance of this power is seen in the humming-bird; and his brain is larger, in proportion to the size of his body, than man's. He knows no fatigue, but continues on the wing almost incessantly, not alighting even to take his food. His brain can sustain a shock greater than the strength of his powerful little wings, without injury. He is a traveller too, and has great endurance of the affections.

## LETTER III.

It might not appear at the first thought why a small brain should not *receive* impressions equally with a large one. The brain is a sensorium; and the larger it is, the more of a *sensorium* it is. Its relation to the objects of intelligence and feeling is of the same nature as the relation of the nerves of seeing, hearing, smelling, tasting, and feeling, to the objects of these inferior senses. The more the optic nerve is spread out, or the greater its extent of surface (and this can not be much unless the substance of the nerve is considerable), the more sensible is it to the impressions of external objects. Hence the eyes of all animals that are intended to see with very little light are large, with the optic nerve very much expanded, presenting a broad surface for the reception of images, as we see in the cat, owl, dog, &c. The larger the olfactory nerve, and the greater the extent of surface over which it is spread within the cavity of the nose, the better is the sense of smell; as we see in the ox, the elephant, the spaniel, the bloodhound, and all animals which choose their food or follow their prey by the scent. The like remarks may be made respecting the other external senses; and in just the proportion that the nerves of these senses indicate the power of receiving impressions, do they indicate the power of *endurance*. The cat can watch intently for a very long time, without relaxation or fatigue: the dog can pursue the track of his master, even on the ice, for miles, and exhibit no loss of the acuteness and discrimination of his smell: and so of the other senses when they exist in an uncommon degree. It should be observed that it is the *surface* of the nerve, and not its absolute *quantity*, which indicates the power of receiving and continuing impressions—or, in other words,

the power of endurance. The same is true of the brain—or at least we infer this from its connection with the ophthalmic, auditory, olfactory, and gustatory nerves, and from all the proofs of its being a sensorium. The larger the brain, the greater its extent of surface, as a general rule. But this is not always the case: indeed the exceptions are very frequent, for the extent of surface of the brain depends very much upon the number and depth of the convolutions, and the size of the ventricles. We see what means Nature has taken to furnish the greatest extent of surface within the smallest compass; viz., by folding the brain together and giving it a great number of convolutions lying side by side, so that it may be contained within a moderately-sized skull; whereas, were it spread out as it requires to be, in the true method of demonstrating it, as was shown by Gall and Spurzheim, it would require for its accommodation a skull shaped somewhat after the manner of deers' horns. This fact with regard to the brain shows how much like the nerves of the external senses it is, especially those of seeing and hearing, which are more intimately associated with it. All the faculties of the mind as respects the quality of Endurance may be called *senses*, with as much propriety as seeing, hearing, smelling, tasting, and feeling; and when a person says of another that "a blow on the head has deprived him of his senses," he speaks correctly.

This parallel between the brain and the nerves of the external senses may seem to make the mind dependent on material organs—which the former letter asserted was not the case. The objects of the higher faculties are not gross and material, like the objects of the external senses, and consequently they may be perceived without the intervention of material organs, which are rather the *signs* of these faculties than their instruments.\* True it is that the portions of the brain which are

\* Great discoveries of principles and their application, in either science or art, were never made without a withdrawal of the higher faculties from their connection with the body. This fact is familiar to the greatest inventors in the mechanic arts, and much more so to those who make important discoveries in the higher

connected with the higher faculties have their use ; but when they are removed, by accident or disease, the faculties are manifested without them. It is a law of the economy of Nature, or of Physiognomy, that the *index* of a faculty should be the *instrument* of that faculty ; but, as the faculty produces its own sign, it is absurd to suppose that it can not dispense with it as an article of necessity, though it would retain it as an article of convenience. The whole body is an index of the whole mind, and is undoubtedly, also, the instrument of the mind ; but when the cause comes that shall separate the mind and body, the former can act without the latter, though the latter is left lifeless and inert, as it was in the first place. Should the mind degrade itself to become the instrument of the body — and this, alas ! is too commonly the case — its faculties will seem less capable of acting for themselves, or independently ; and this it is that makes *materialists* of mankind. Many even whose higher faculties are emancipated from this thralldom, still think that there are faculties exercised by human beings that are not of the mind at all, but of the body ; and these they call “bodily senses” and “bodily desires.” These faculties we make the instruments, and too often the slaves of our bodies : they are seeing, hearing, smelling, tasting, and feeling, and the various appetites and desires connected with them. The indexes of these faculties are called their “organs,” and are invariably supposed to be necessary to the exercise of the faculties themselves. In most cases they are supposed to be necessary even to the *existence* of these faculties ; nay, some persons, of very gross minds, see no difference between the faculty and the instrument through which it commonly manifests itself.

branches of philosophy. This was the belief of Socrates and Plato, and others of the ancients ; and they could not well believe otherwise, for, in the contemplation of the higher principles of man's nature and of his relations to God and his fellow-man, they experienced this elevation of the mind above the body, and consequent absence from it. If the objects of our thoughts and desires are above material things, our minds will be more connected with them than with the brain ; for “where your treasure is, there will your heart be also.” To this effect are the words of our Lord respecting himself : “No man hath ascended into heaven but he who came down from heaven, even the Son of Man who is in heaven.”



Now, it is not only a false doctrine that the faculties of the mind are dependent upon their signs in the brain, but it is a mistake to suppose even that the faculties of tasting and feeling, and the desires for food and clothing, are dependent upon the nerves and arrangement of parts so perfectly adapted to them, and which serve their purposes so well. This assertion may be proved of the higher external senses more easily than of the others, for they are more nearly allied to the intellectual faculties and to the more elevated affections. There are those who see and hear without the use of eyes and ears,\*—just as there have been those (their cases are on record) who have exercised all the higher faculties of the mind, though the portions of the brain with which those faculties are connected were destroyed. If this is true of seeing and hearing while we are *in* the body, then it may be true of smelling, tasting, and feeling, and the desires for food, clothing, and other things connected with the external senses, when we have *left* the body—for is it not the *mind* which smells, tastes, feels, desires food, clothing, habitation, &c., as well as the mind which sees, thinks, reasons, admires, reverences, and does all things that man is capable of

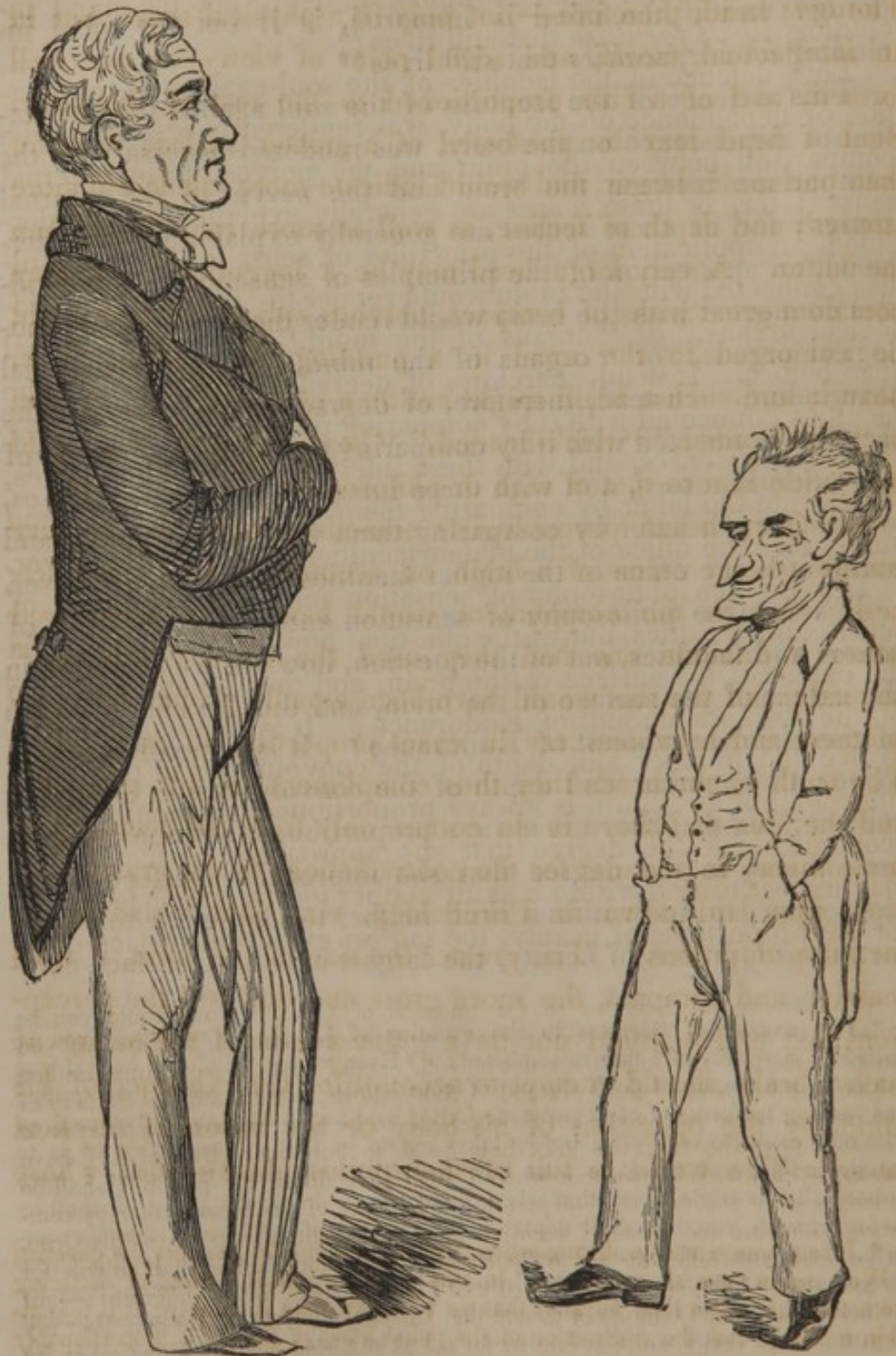
\* Cases of clairvoyance, which prove this assertion true in reference to sight, are too familiar, or at least too accessible, to need quotation here. In reference to hearing, however, the following may serve as illustrations: "A lady and gentleman in Berwickshire were awakened one night by a loud cry, which they both immediately recognised to proceed from the voice of their son, who was then absent and at a considerable distance. Tidings subsequently reached them, that exactly at that period their son had fallen overboard and was drowned. On another occasion, in Perthshire, a person aroused her husband one night, saying that her son was drowned, for she had been awakened by the splash. Her presentiment also proved too well-founded, the young man having fallen from the mast-head of the ship."—"Dr. Kerner relates of his somnambule, Frederica Hauffee, that one day, at *Weinsberg*, she exclaimed in her sleep, 'O God!' She immediately awoke, as if aroused by the exclamation, and said that she seemed to have heard two voices proceeding from herself. At this time her father was lying dead in his coffin, at *Oberstenfeld*; and Dr. Fohr, the physician who had attended him in his illness, was sitting with another person in an adjoining room, with the door open, when he heard the exclamation 'O God!' so distinctly, that, feeling certain there was nobody there, he hastened to the coffin, whence the sound had appeared to proceed, thinking that Mr. W——'s death had only been apparent, and that he was recovering. The other person, who was an uncle of Frederica, had heard nothing. No person was discovered from whom the exclamation could have proceeded, and the circumstance remained a mystery until an explanation ensued."—*Mrs. Crowe's Night-Side of Nature*.

doing? and if the mind is immortal, is it not the mind including *all its faculties* that still lives?\*

This defence of the faculties of the soul against the imputation of dependence on the body, was rendered necessary by the comparison between the brain and the nerves of the external senses; for, as these senses are generally explained and understood, an application of the principles of sensation to the faculties connected with the brain would render the idea of "phrenological organs," or "organs of the mind," still more material than before. Instead, therefore, of degrading the brain and the faculties connected with it by comparing them with the nerves of the external senses, and with these inferior faculties themselves, we elevate the latter by comparing them with the former—and surely it is the office of the higher faculties to elevate the lower.

Leaving the philosophy of sensation and endurance, and of senses and faculties, out of the question, how are we to ascertain the extent of the surface of the brain, and thus be able to judge of the absolute amount of Endurance? It is impossible for us to see the number and depth of the convolutions in the living subject; but as Nature is always proportioned, harmonious, and economical, in the degree that she approaches perfection, we may expect to find within a skull neither too large nor too small for the proportions of beauty, the largest extent of surface com-

\* The answer of Socrates to the question of Crito, "How would you be buried?" is worthy of being remembered: " 'Even as you will,' said he, 'if you can catch me too, and I don't slip out of your hands.' At the same time smiling and turning to them, 'I can't persuade Crito,' said he, 'that I am this SOCRATES who now converse with you; but he takes me to be that carcass which he is to see by-and-by, and therefore asks how he is to bury me. But what I have insisted all this while upon, that when I shall have drank the poison, I shall be no longer with you, but shall depart to the felicities of the blessed, thereby comforting both you and myself, I seem to have said to little purpose to this Crito. Be ye sureties therefore for me to Crito; but not in the manner that he was for me before the judges: for he engaged that I should stand to the judgment;—but do you engage that I will stand to nothing, but be gone; that Crito may bear my death the more easily, and not lament for me as suffering terrible things, when he shall see my body burned or buried; nor say at my funeral that SOCRATES is carried out or interred. Believe me, my dear Crito, 'tis an error in speech, and affects our souls. For we ought to be confident, and to express it thus, that my body is to be buried; and buried let it be, as shall please you, and you shall judge most fitting.' "



patible with the safety of so delicate a substance as the brain ; and this must be the extent of surface indicative of the greatest amount of endurance, or at least just that amount of endurance that is necessary to the best and most perfectly-balanced mind.

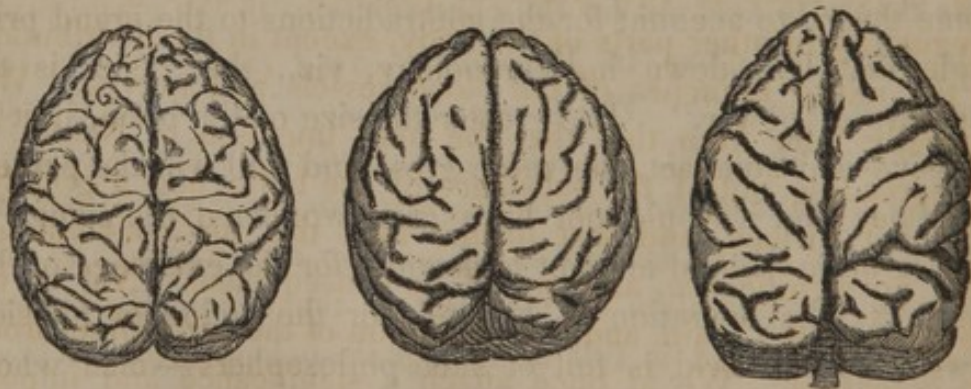
The best head, therefore—not only in a physical sense, but in an intellectual, moral, and social point of view—is one well formed, and of a size proportioned to the rest of the body. Such a head may be possessed of a greater surface of brain than one much larger, and would indicate more talent and more strength and depth of feeling, as well as more refinement, than the latter. A very large head may be a loggerhead—it may contain a great mass of compact, nervous substance, that might be compared to the meal in a pudding-bag—close, thick, heavy; and such a brain might entitle a man to the appellation of “dull-headed,” “thick-headed,” “heavy-headed,” but could not entitle him to that of sage or philosopher.

We have heard phrenologists sometimes speaking in very complimentary terms of a brain on account of its “compactness,” though the compliment would have been considered rather a dubious one had they used the word “heaviness” instead; and yet this would have been equally proper, for compactness and heaviness are in exact proportion to each other. The truth is, the heads they thus compliment are not compact; and the idea that they are so comes only from the necessity of some theory to account for the contradictions to the grand principle first laid down in Phrenology, viz., that “size is the measure of power.” The greater the size of the brain, if it be massive and compact, the more gross and dull will the perceptions be; and it would not be a great wonder if the owner of such a brain should attempt to account for the existence of his mind, by the operation of his body or the action of physical laws.\* The world is full of such philosophers—men whose

\* It is a person with a disproportionably large brain who answers the question “WHY DARKNESS IS TERRIBLE,” in this manner: “Now, instead of declining from the light but a little, suppose that we withdraw from it entirely; it is reasonable to think that the contraction of the radial fibres of the iris is proportionably greater; and that this part may, by great darkness, come to be so contracted as to strain the nerves that compose it beyond their natural tone, and by this means produce a painful sensation.” He adds: “It may perhaps be objected to this theory of the mechanical effect of darkness, that the ill effects of darkness or blackness seem rather mental than corporeal: and I own it is true, that they do [seem] so; and so do all those [effects] that depend on the affections of the finer

ideas prove the corporeal origin of the mind more nearly than anything else could do. Why should they stoop so low, as if they were grubbing after the coarsest food for the body, when they look for the source of the Sublime and Beautiful in the human mind? Why do they become profound when they would touch on higher themes? and why do they go to the darkest place when they would seek the light? Let them know that the brain indicates the first and lowest quality of the mind; that it is the foundation; and that if the basement is too large for the building, the servants will be better accommodated and will invite more guests than their masters; and that when the masters have become slaves, they will go to the brain, or even to the external senses, for the origin of their ideas.

To illustrate the degree of mental capacity as indicated by the expansion of the brain by means of the convolutions, the figures of three different brains are here introduced—the first being that of a person of ordinary intelligence, the second that of an idiot, and the third that of the orang-outang. According to the convolutions, the last is superior to the second, but is far inferior to the first.



parts of our system." On "THE EFFECTS OF BLACKNESS," the same writer observes: "Black will always have something *melancholy* in it, because the sensory will always find the *change* to it from other colors *too violent*." The mind that could conceive such ideas must be "of a nature all compact," and compactness of brain would best indicate it. It is strange that "a philosophical inquiry into the origin of our ideas" concerning anything should be directed to the body; and it is also strange that the writer, who is a great man, should not see that, according to his theory, a strong light should be as "terrible" as pitch darkness, and that white should "have something melancholy in it" as much as black.

## LETTER IV.

THE objection has been made to Dr. Gall's method of judging of character by the skull, that there are no such subdivisions of the brain as would authorize the doctrine of distinct organs for the manifestation of the different faculties. This is a *natural* objection to such a theory, and demonstrates its absurdity; but regarding the different portions of the skull as *signs* of different faculties, is regarding facts alone,—and we are no more required to show corresponding subdivisions in the brain than we are required to show lines of separation between the various signs of character in the face.

In observing the brain, however, our attention is first directed to four grand divisions—the cerebellum, and the posterior, middle, and anterior lobes of the cerebrum. These divisions we see to be uniform; whereas the convolutions are irregular, and never alike in two different persons. There is no such irregularity in other parts of the body, except in the distribution of the minor branches of the blood-vessels and nerves. We naturally infer from this, that the only intention of Nature is the spreading out of the substance of the brain into a greatly-extended surface, and that further than this the convolutions have no significance, and are of no consequence. Not so of the lobes of the brain, and the separation of the cerebellum from the cerebrum. We at once attach a significance and importance to these, and naturally suppose that they stand related to certain grand divisions of the faculties of the mind. In the lowest animals that have sufficient brain to be honored with the protection of a skull, as fishes and reptiles, we find a cerebellum and a very small portion of a posterior lobe. In animals a little higher, as birds, vampires, &c., we find a posterior lobe of good dimensions, with something of a middle lobe, and very little

else. In the domestic animals, and all others that rank next to man in the scale of the animal creation, we find the addition of a well-developed middle lobe (in which Firmness, Independence, Subserviency, and Submission, are prominently indicated); and besides this there is a respectable anterior lobe, more or less according to the degree of intelligence. In man the anterior lobe is developed to the point of perfection, and causes the forehead to vie with the eyes for the palm of beauty—nay, it reaches the face and aspires to become a part of it, and to be ranked among the signs of the voluntary action of the faculties.\*

\* The brain of *fishes in general* is far from occupying the whole of the cavity of the cranium. Between the brain and the internal surface of the skull, or between the membranes which cover the one and line the other, is an interspace filled by cellular tissue containing a quantity of oil. The *cerebellum* is a large spherical mass of nervous substance, folded upon itself posteriorly, showing a greater extent of surface than is indicated externally. In *front* of the cerebellum are two large oval hemispheres, apparently forming the largest portion of the brain; but, on examination, they are found to be hollow, and to correspond to the quadrigeminal bodies and the optic thalami, and to be connected with the cerebellum by fibres of the *crura cerebelli*. They are called by some—and we think properly—the “optic lobes.” In *front of these* are the “olfactory lobes,” smaller than the others, and united to them by a small medullary band. From these the nerves of smell arise, as the nerves of sight do from the others. The optic and olfactory lobes are connected with the cerebellum; so that fishes and reptiles (which do not materially differ in respect to the brain) are seen to possess whatever belongs to the cerebellum in a superior degree, and to have very little brain besides.

In *birds* the cerebellum is very deficient, and the faculties indicated by it are very deficient also. Not so of the serpent (as one of the class of reptiles), if we may believe what those say who have witnessed his sensuality. But there is a *posterior lobe* in birds, and a tentorium to separate it from the cerebellum. The cerebral hemispheres in most birds include very little besides the posterior lobe. They are broad, or extended laterally, in birds of prey, showing large signs of Combativeness, Destructiveness, &c., which belong to the posterior lobe. In other birds the hemispheres are extended longitudinally, showing a predominance of the signs of the gregarious disposition and parental love. In the parrot, the longitudinal diameter is relatively much greater than in any other of the feathered tribe; and as this is in the anterior direction, it probably includes a very well-developed anterior lobe: so that the parrot is, literally speaking, *long-headed*. Whether his anterior lobe be well developed or not, his brain presents the appearance of convolutions; while in most birds the surface of the brain is quite smooth. This goes to prove that the strength of the faculties is indicated by the extent, and not by the quantity of the cerebral substance, for the intellectual superiority of the parrot is undoubted. The *middle and anterior lobes*, or at least the commissures which seem to be the origin of these in the human subject, are in birds *very deficient*. The great commissure, or *corpus callosum*, is extremely

Thus we see a regular gradation of cerebral development corresponding to the scale of gradation in the animal kingdom. The question now arises, How shall we ascertain the relative proportion of the different lobes of the brain, or the situation of the lines of division between them? It is impossible to determine this by direct means in the living subject, and the distance from the ear to any other point on the surface of the skull is not a criterion of the boundaries of the different lobes. It is impossible, *e. g.*, by any of the rules of phrenology, to ascertain how far the middle lobe may encroach upon the anterior lobe and press it forward, thus causing it to present the appearance

short and small, and the part corresponding with the *fornix* is but the rudiment of what it is in man.

In the bat, the raccoon, the opossum, the rat, the squirrel, the cat kind, the rabbit, &c., the brain resembles that of birds so far as these quadrupeds resemble birds in their habits and dispositions. The cerebellum is small, the tentorium is strong, and in the cat kind consists partly of a bony partition; and in proportion to the tentorium is the size of the posterior lobe;—the corpus callosum and the middle lobe are deficient, and the hemispheres are very flat, which shows that they are not of the higher portions of the brain, and they are either without convolutions or present only a few shallow depressions.

Not so, however, of those animals which are most adapted to domestic use by the possession of Submission and Subserviency, and the other faculties connected with the middle lobe. In these the posterior lobe is very deficient, and they have but little endurance of the faculties connected with it, not even of parental love. They will not fight long, like birds and the animals enumerated above, and they very soon forget their young when out of sight and hearing, though the *voluntary* action of these faculties is very strong. It is the instinct of the cow to visit her young calf but twice in twenty-four hours; but when he gets old enough he follows after her. The sheep is heedless of the absence of the lamb until it cries after her, and only *for a little while at a time* is she very fond of it. It is very different from this with the cat kind, the rodentia, the marsupiate, the edentata, and with all kinds of birds. The young of the opossum are attached to her person constantly, and we venture to predict that in this animal the sign of parental love in the brain will be found very large. But though the horse, cow, sheep, &c., have a small posterior lobe, the middle lobe is large in them, and the brain exhibits very numerous convolutions, indicating a nearer approximation to human feeling and intelligence, and a greater readiness to receive impressions, and to be trained to the comprehension of things required of them. The dog has a large middle lobe and numerous convolutions, but the cat is very deficient in these respects; and in the corresponding traits of character lies the great difference between these two animals. The elephant is remarkable for a well-developed cerebrum, deeply convoluted, or furrowed; and the orang-outang and chimpanzee approximate man in the development of all the cerebral lobes and the cerebellum, and in the number and depth of the convolutions. In the ordinary apes, however, the middle lobe is smaller and the furrows are less numerous than in the dog and horse, which animals are more tractable than they.



of very large signs of the endurance of the reasoning faculties. In such a case as this, it is evident that phrenology is at fault; and that there are multitudes of such cases, where the mental manifestations belie the indications in the forehead, has been proved by the experience of very many persons, who have given attention to this subject. In this portrait of the emperor Paul, father of Nicholas the present emperor of Russia, we have an example of what phrenologists would call "an intellectual forehead;" that is, on condition they were not allowed to see the face, especially the nose. You will agree with another in thinking that



"—————'twould puzzle even O. S. Fowler  
To set a head upon this pug-nosed growler,  
That with its majesty would quite efface all  
The stupidity of such an organ nasal."

Were the brain, in itself, perfectly faultless, both as to the relative proportion of the lobes to each other, and as to the number and depth of the convolutions, still the mind might be very deficient; for Endurance is only one of the twelve qualities, the most important of which is that indicated in the face.

Let us see if the question, "How shall we ascertain the relative proportion of the different lobes of the brain to each other?" can not be answered. The external senses indicated in the nerves of feeling and tasting constitute the lowest plane of intelligence; and the desires for propagation and food, indicated in the base of the brain, belong to the lowest plane of the desires. This lowest plane of sensation and desire is well represented in worms, fishes, and reptiles: and in these animals we



see that the brain is not curved forward upon the spine, as it is in the higher orders, but that it is on the same line with the spinal cord, or continuous with it, so that there is nearly a straight line from the mouth to the opposite extremity. The same relation between the brain and spinal cord may be observed in an infant born without a posterior, middle, or anterior lobe, and with only a cerebellum, as in this example. Here the base of the skull is very nearly on a line with the neck, and the face is where the top of the head should be. We have thus a monster more nearly resembling a frog than a human being.



The next inferior plane of the mind is indicated by the posterior lobe of the brain. Its ruling affections are parental love and the inferior social feelings, with a great many selfish ones. Most birds have a predominance of the posterior lobe, with very little brain besides. The cerebellum is very small in them. But the degree of elevation above animals of the lowest plane, is accurately indicated by the increase of cerebral development, and also by the departure from a right line in the relation of the brain to the spinal column. In this skull of a partridge, *e. g.*, the line of the jaw or bill forms an angle with a line passing into the large hole at the bottom of the skull in the direction of the spine. Of course the living bird has the power of bending the cervix near the skull, and of producing a seeming angle between the head and neck, besides a real flexure of the joint betwixt the two: but in such a case the head is seen to be in a forced position. The natural angle is a very obtuse one, but it is nevertheless an angle; and the less obtuse it is, the greater superiority does it indicate over that which is indicated by the straight line.



A human being not having the usual share of intellectual and moral sense, but possessing strong combative faculties, with a great deal of self-love and selfish family affections, is deficient in the anterior and middle lobes, while the posterior lobe occupies the largest portion of the cavity of the skull. The projection of the skull backward is not, in such a case, an indication of the size of the posterior lobe; for the middle and anterior lobes being small, the posterior lobe presses forward, and causes the appearance of more intelligence and moral sense than the person should receive credit for; while there appears to be less of the posterior lobe than there really is. In the heads of most idiots, you see this deficiency of the occiput, or back-part of the head, as in the figure below; while in intellectual persons you see a projection of the skull backward, quite posterior to the neck. In animals, too, many of which certainly have a large posterior lobe, the skull does not project backward, but is nearly on a line with the neck, as it is in those human beings that have little more intelligence than they.\*

How then are we to determine the size of the posterior lobe, and its comparative value with the middle and anterior ones? It is by the application of the same rule to the human being which we applied to one of the lower animals, in the last example. The angle of the head with the spinal column, in this idiot, is much less (*i. e.*, it approaches nearer to a straight line) than in persons in general. It indicates a great predominance of the posterior over the middle and anterior lobes, and a correspondingly low plane of all the faculties of the mind. The relation of the brain



\* In birds the posterior lobe is large, but is situated so anteriorly that the small cerebellum is left completely uncovered; whereas in human beings the posterior lobe is situated so posteriorly that it not only covers the cerebellum, but forms a promontory, so to speak, behind it. When the middle and anterior lobes are absent or deficient, it occupies their place: thus it is in birds, and thus it is to a degree in those imperfectly-formed human beings called idiots.

and spinal cord to each other is such that the features of the face look obliquely upward, just as one of the lower animals would look were his body placed upright. The surface of the skull itself does not inform us of the extent of the posterior lobe, in cases such as this, where from the external appearance it might be supposed deficient; but this new *facial angle*,\* as we will call it, gives us correct information on this point, agreeing with the proofs on dissection, and with the signs in the face.

In the middle lobe of the brain we have the indication of a plane of intelligence and desire—the next in degree above that which is indicated in the posterior lobe. The domestic quadrupeds in general have a large middle lobe, and they may be considered as belonging to this third plane in the scale of being; and fools who have a predominance of the middle lobe have sufficient intelligence to be useful in the various domestic employments. Like the domestic animals, they need, of course, to be directed, and are something like machines endowed with a degree of sense. When the chief part of the cerebral substance is in the middle lobe, the angle of the spinal cord with the base of the brain is greater than when the cerebral substance is mostly in the posterior lobe. In this skull of a dog, the angle described is seen to be less obtuse than that represented in the figure of a fowl.



The position of the head relatively to the spinal column as shown in the following portrait of a human

\* The *Facial Angle of Camper* ought not to be discarded without a good and sufficient reason. That it is incorrect, can be shown in very few words. Shortness of the upper jaw will increase this angle as much as prominence of the anterior lobe of the brain. Now the dog has longer jaws than the cat, and the horse has longer jaws than the cow; but no one pretends to think that they have less intelligence on that account.

By an increase of the true facial angle, is meant the very opposite of what is meant by an increase of the facial angle of Camper.

being shows folly, but a less degree of it than is seen in the former example.

The anterior lobe of the brain belongs to the highest degree to which the faculties can attain, in their connection with material organs. In even the most superior of the lower animals, it is comparatively very deficient. In all truly noble and great men, the anterior lobe is large in proportion to their nobility and greatness. Not only does the front lobe of the brain indicate intellectual elevation, but it indicates the supremacy of the best of the moral and social feelings; as Benevolence, Kindness, Gratitude, Respect, Faith, Hope, Charity. But it is impossible that we should see through the skull, and be able to define the line of separation between the anterior and middle lobes, unless the gift of clairvoyance be conferred on us: how then shall we ascertain the relative size of the anterior lobe? The distance from the opening of the ear forward will not determine it, for in many cases the anterior lobe grows backward more than common, and encroaches on the middle lobe; besides, the distance forward has to be judged of relatively to the prominence of the face, which, without a more exact rule for its basis, is a very uncertain method.

The *angle of the spinal cord with the base of the brain* is the rule in this case as it is in the others. In this skull of a monkey, the line passing into the large opening at the bottom in the direction of the spinal cord, forms a greater angle with the line drawn from the



same opening to the root of the nose, than in the preceding example. By a "greater angle," we mean a sharper one, or one less obtuse. The monkey has a larger anterior lobe, and, in spite of what his detractors say, he has more of such intelligence and social feeling as human beings manifest, than belongs to other animals, not excepting the favorite dog. Let any person acquaint himself with the habits of those monkeys that are carried about the streets by organ-players; or, if this be not sufficient, let him visit a pair of orang-outangs and be social with them, and he will be convinced of the superiority of these animals, so far as intelligence and sociability are concerned. The dog and other domestic animals are useful, and the faculties which make them so are particularly indicated in the middle lobe.

But, allowing the monkey all that his facial angle ascribes to him, this angle is very much greater in man, as may be seen by comparing this with that.

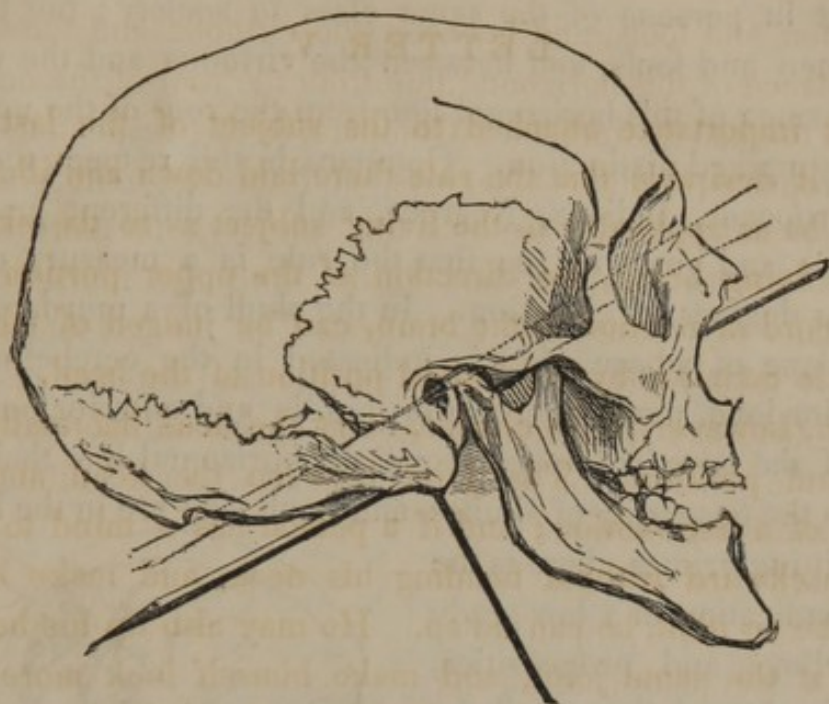


## LETTER V.

THE importance attached to the subject of the last letter, makes it desirable that the rule there laid down and illustrated should be as applicable to the living subject as to the skeleton. In the living being, the direction of the upper portion of the spinal cord in relation to the brain, can be judged of with considerable certainty by the natural position of the head. A person can, however, if he choose, carry the head habitually in an unnatural position. The joint between the head and neck admits of a free motion; and if a person has a mind to tip his head backward without bending his neck, and make himself look like an idiot, he can do so. He may also tip his head forward, at the same joint, and make himself look more like a wise man than he really is. The bending of the *neck itself*, so as to throw the head backward or forward, is something very different, and is not likely to be mistaken for the flexure of the joint between the head and neck, nor for the natural angle between the two.

Still, it is difficult to be perfectly satisfied with this sign when we apply it as a test of the comparative elevation and intelligence of human beings, without being able to demonstrate it by rule and compass. For this purpose, we need first to discover a line that shall be a right angle to the spinal cord, at the large opening through which the spinal canal communicates with the cavity of the skull. Such a line is one drawn across this opening, touching its anterior and posterior edge, except in the dog and a few other animals, in which the posterior edge is notched for the convenience of throwing the head backward, as in barking up a tree. But as this line can not be applied as the measure of mind, except in the skeleton, it is necessary to find a parallel to it that shall be of practical utility in the living sub-

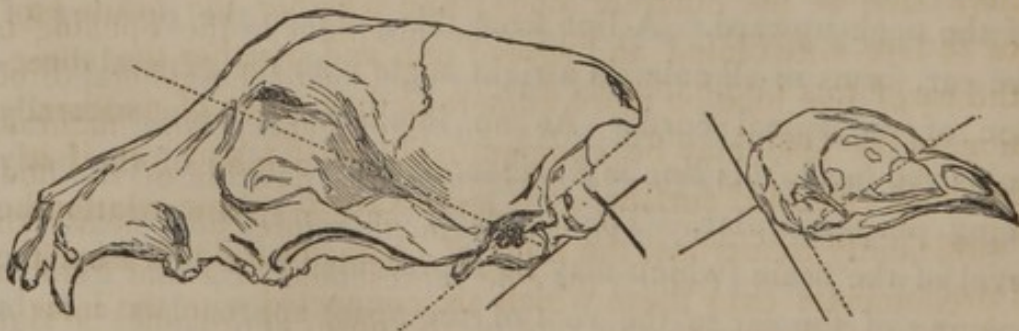
ject. Such a parallel line is one drawn from the lower surface of the occipital protuberance, just above the hollow of the back of the neck, to the opening of the ear, as represented in the following figure. This protuberance is sometimes very large, and



in most persons can be easily felt; but, whether it can be distinctly felt or not, it is situated midway between the lobes of the cerebellum, and is the first part of the skull with which the finger comes in contact in passing from the hollow of the back of the neck upward. A line from this point to the opening of the ear, forms in all animals a right angle with the general direction of the spinal cord. As an intelligent person naturally holds the head, this line is *horizontal*, the position of the body being perpendicular. To ascertain, therefore, how nearly the level of the brain (which may be represented by a line from the opening of the ear to the root of the nose) approaches a right angle to the spinal column, it is only necessary to see how near it approaches the horizontal line from the occipital protuberance to the opening of the ear, continued anteriorly to the ridge of the nose, as illustrated by the dotted lines in the preceding example. The more the base of the anterior lobe of the brain descends, the nearer it approaches this right angle to the spinal



column, and so much the greater is the mental superiority which it indicates. In most persons this horizontal line is within an inch of the root of the nose, which is near the base of the anterior lobe. There is no great difference to be observed in this respect in persons of the same class in society; but between wise men and fools, and between the virtuous and the vicious, the distance of this horizontal line from the root of the nose presents a marked distinction. Compare, in this respect, the skulls of Europeans, Indians, Negroes, and the different grades of society; and you will see that the rule is a measure of their various degrees of elevation. In the skull of a murderer, *e. g.* (the plane of whose mind is indicated in the cerebellum and posterior lobe, more than in the middle and anterior ones), the root of the nose is further above the horizontal line than is the case in the generality of skulls: and in all who are in the habit of committing crimes, there is the same indication of a low grade of feelings and propensities, and of a degradation of all the faculties of the mind. In this skull of a monkey, the root of the nose is still farther above the horizontal line; and in this of a dog, the distance is still



greater. In birds in general, the angle is still less acute; and in fishes and reptiles, it is a right angle.

To apply this rule to the judgment of character in the living subject, take a narrow strip of stiff paper, apply one end to the protuberance on the back of the skull just above the neck, and

carry the length of the paper across the opening of the ear to the ridge of the nose. In persons of exalted character and intellect, the root of the nose will be found to be nearer to this horizontal line than in those whose minds are low and degraded. A truly noble character—one whose passions and desires are elevated by the strength of the higher faculties—will be approved by this rule, more than one who has great talents without nobility,—whose baser faculties make slaves of the higher ones, and drag them down to their own level.

This rule of measurement is more professional, and of less every-day practical utility, in the judgment of character, than the observation of the natural position of the head relatively to the neck, as explained in the last letter. Both methods are the same, so far as the principle is concerned, the one being deduced from the other; and it should be understood that they are indications of the *degree of elevation* OF THE MIND AS A WHOLE; and that the signs of the particular mental faculties must be observed, if we would judge correctly of the peculiar traits of character. It is evident that, if the *facial angle* which we have described be correct, it is the proper basis of more minute observations, and that it goes very far toward removing the difficulties in the way of judging correctly of the signs of character in the brain, viz., the impossibility of observing the relative size of the different lobes; and whether the brain be more or less convoluted and spread out, and whether the convolutions of one lobe be more numerous than those of another. The anterior lobe may be comparatively small; and yet, if it has a more extended surface, as it must have if its convolutions are sufficiently numerous, the traits of character indicated by it will predominate over those which are connected with the inferior lobes; and the facial angle will decide in favor of the anterior lobe as much as if it were larger and less expanded. Nay, the increase of surface by thinness is better than the increase of surface by size; for the former indicates clearness of mind, and the latter “thick-headedness”—the one belongs

to the power of seeing truth in its own light, the other to the necessity of seeing things in shadow, and of starting conjectures concerning them. If the intellect is expanded, the parts of the brain connected with it are expanded also; and if the intellect and the highest social and religious feelings are elevated into the pure light of truth, they elevate and purify all the lower faculties; so that love, which is sensual in the brute, is pure and holy in man, and so that the external senses, which are the servants of the lowest desires in the degraded, are ministers of the purest enjoyments to the intellectual and refined.

In proportion as the mind is thus elevated, the brain descends and approaches a right angle to the spinal column. Why is this? It seems significant of the quality of the mind which the brain indicates—*i. e.*, Endurance, which is the basis of the twelve qualities. Regarded as the *first of the twelve qualities*, Endurance is indicated in the brain, the head being first; but, as the *foundation*, it is indicated by the tendency of the brain downward; and this in the degree that the other qualities are built upon it. It may be said that the foundation is the most important part of a building, because it is essential to all the rest; and in like manner we may say that the brain indicates the most important quality of the mind, because we see that the absence of it indicates no mind at all—as in the figure of a brainless infant in the last letter. In another sense, however, it may be said that the superstructure is the most important, because it is for this that the foundation is intended; and in like manner we may say that the other qualities of the mind are most important, because they are the objects for which Endurance exists. If a man expends the most of his materials in making a very large foundation, he has done a low work, and will have no beautiful edifice looking toward heaven: and if Nature exhausts herself in the one quality of Endurance, causing a very large brain, she will have produced a gross, material mind, with no heavenward aspirations, no conception of spiritual things—a mind that will *dwell* in the brain, and expect that the ruin of its dwelling will put an end to its own exist-

ence.\* What man who believed that his mind dwelt in his face, and in his whole body, as much as in his brain, ever feared annihilation, or talked of the dependence of the mind on material organs? It has been already remarked, that portions of the brain may be removed by accident or disease, with the same impunity that portions of the face or internal organs may be removed, so far as any loss or injury to the mind is concerned. In *Paine's Medical and Physiological Commentaries*, vol. ii., a very large number of references are made to cases of this kind, and among them the following, which is given in detail in the *American Medical Intelligencer*:—

“A lad, eleven years old, received a kick from a horse, which fractured the *os frontis*. ‘In two hours after, he recovered every faculty of his mind, and they continued vigorous for six weeks, and to within an hour of his death, which took place on the

\* PHRENOLOGY, which has been afflicted with a serious malady from its birth, presents a favorable symptom in the following sentiments, which we extract from the “*Phrenological Journal*,” vol. xi., art. 81. They are conceived in that forcible language so characteristic of the editor, O. S. FOWLER. He says: “An article in a former volume showed that many persons, as they approach death, become clairvoyant; and that clairvoyance, after all, is only a disembodied state of the soul, and perfectly analogous to that state in which believers in its immortality admit that it will exist hereafter. It argued thus: ‘In the immateriality and immortality of the soul, most men religiously believe. They admit that, at death, the mind becomes a disembodied spirit, capable of ranging the fields of space as on angels’ wings, and acquiring more knowledge in an instant (!) than now in a lifetime.’ \* \* \* Shall, then, the DISEMBODIED soul possess this clairvoyance in a measure so exalted, and the embodied NONE? Is it so strange, so contrary to the laws of mind, that it should possess a moiety of that gift here, which all believers in its immortality ascribe to it hereafter? Does death change any of its inherent POWERS or elements? To deny it, in the body, even a single iota (!) of that spiritual perception of universal truth which we ascribe to it in so exalted a measure hereafter, is manifestly unreasonable: whereas, to admit that it is endowed with a slight degree of clairvoyant capacity in this life, is perfectly philosophical, if not a clearly analogical inference; so that those who believe in the soul’s immortality, yet deny clairvoyance, are much more inconsistent than those who deny the former, but admit the latter.” Why “much more inconsistent”? we would inquire. Simply because those who deny the immortality of the soul, and admit the truth of clairvoyance, can account for the latter by supposing a faculty of “spirituality,” or “SPIRITUAL INTUITION,” as it is called in the article from which we quote the above—the same which was aforesaid called *Marvelousness*. This faculty, like all the others, they ascribe to the action of a particular portion of the brain; and the brain, in their opinion, is indispensable to the existence of the mind. Since the writer of the above reasons so well, we would ask him to consider whether a *single faculty* and a phrenological organ explain clairvoyance, which he says is a “disembodied state of the soul.”

forty-third day.' 'He sat up every day, often walked to the window, frequently laughed at the gambols of the boys in the streets,' &c. On dissection, in presence of other physicians, 'the space of the skull previously occupied by the *right anterior and middle lobes of the cerebrum*, presented a perfect cavity, filled with sero-purulent-matter, the lobes having been destroyed by suppuration. The *third lobe* was much disorganized. The *left hemisphere* was in a state of *ramollissement* down to the corpus callosum.' "

A person who acknowledges the fact of clairvoyance, somnambulism, sleep-walking, &c., need have no difficulty in accounting for such a case as this. The mind is partially disembodied, and, through the remaining material organs, shows its independence of them all.

## LETTER VI.

THE next quality of the mind is *Repulsiveness*, and is closely allied to Endurance. The primary relation of all the faculties of the mind to their objects is simply the power of enduring or of receiving impressions from them; and this is followed by a more active quality—the power of repelling whatever objects are unsuitable, or not adapted to the harmonious relation of the faculties with each other, and which are not therefore any longer to be tolerated or endured. Repulsiveness implies the possibility of deterioration in the objects of the several senses or faculties of the mind, and of increase in the faculties themselves, so that the former become unsuitable to the latter. This quality is therefore the guardian of Endurance, or rather the power necessary to its relief when the things which were received as the proper objects of the mind cease to be such, or become intolerable.

Repulsiveness is indicated by the length and thickness of the spinal marrow. As this quality is the servant of Endurance, and intimately associated with it, so the spinal marrow is very intimately associated with the brain and acts as its instrument. It presents the appearance of a dependence of the brain, passing from the large opening at the bottom of the skull down through the spinal canal to near the extremity of the body. The quality of Endurance implies the quality of Repulsiveness, for the objects of the senses change, and impressions are ever being removed, to relieve the mind, and make way for new ones; and how aptly is this dependence of Repulsiveness on Endurance indicated by the dependence of the spinal marrow from the brain! In another sense, however, Endurance is dependent on Repulsiveness, just as the master is dependent on the ser-

vant; for if the impressions of unsuitable objects were not removed, the mind would have neither capacity nor strength to receive new ones: and this agrees very beautifully with the fact that, in the embryo of the human being and of other animals, the spinal marrow is formed first, and is larger in proportion to the brain than subsequently.

Repulsiveness, then, is very necessary to the action of the quality of Endurance; and, in observing the brain in order to judge of the strength of the latter quality, the spinal marrow should be taken into consideration. If the mind repels vigorously those objects which are naturally unsuitable, or which have become so by change and perversion, it is strong to receive numerous impressions, and to endure them as long as they remain suitable, and to enjoy them as long as they are proper to be endured.

In the first and lowest action of Endurance, that of carrying weights on the head, we see how necessary a strong spine is, in order to bear the burden and the shock; and the strength of the spine is in proportion to the length and fullness of the spinal marrow (making due allowance for accidents and disease). The Negro, and all others who carry weights on the head, have long and strong spines, and so have all those animals that are inclined to butt and push with the top of the skull.

It is improper to say that the action of any quality or faculty of the mind is *physical*. Every action of the mind is a mental action; and what the mind *produces*, when it acts upon the body, is a *physical result*. The quality of Repulsiveness in its lowest action, which is manifested most in the lowest animals, shows itself in the casting off from the body whatever has become unfit or unsuitable to it, and in the rejection of whatever food or situation is not adapted to the nature of the animal. The first covering of the worm, the snake, the lobster, and of a great variety of reptiles and insects, becomes gradually too small for the accommodation of the creature's body in the changes which take place during the progress of its development; and when this is the case, the old covering is thrown off, the disa-

greeable impression of it is removed, and the animal is prepared for a new one.

It is the energy of Repulsiveness, too, which causes quadrupeds to shed their coats in spring, and birds to moult their feathers. Birds that are deficient in this quality, as many of the song-birds, may even die in the effort of moulting; but those with a great deal of repulsiveness, as the goose, the duck, &c., produce a superabundance of down and feathers, which it is the intention of nature they should get rid of, and which, if not plucked, are shed of themselves. The eider-duck makes this arrangement of nature useful to herself by plucking the down from her breast to make a soft bed for her young; and man takes advantage of the same law, in laying a periodical tax on the feathers of geese. These animals have very long and strong spines, and in their repulsiveness remind us always of snakes.

The influence exerted by Repulsiveness, when this quality is very great, extends itself to our consciousness, as for example when we see a worm, a serpent, an eel, a lizard, &c. These animals are repulsive to us, and to all living beings endowed with the like susceptibility; and the longer and stronger the spine, the greater is the degree of repulsion. The eel is more repulsive to the sight than an ordinary fish, for apparently no other reason than because he has a longer spine; and the electrical eel exerts this power on the body directly as well as through the mind, for the shock which he communicates by contact is like that which the mind is conscious of when he is present to the sight alone. If it be said that the eel is repulsive because he resembles a snake, then why is a snake repulsive? Very many snakes and worms are perfectly harmless, and yet the feeling of repulsion at the sight of them is spontaneous and irresistible. Many kinds of lizards are innocent of all malice and evil influences, and yet they are exceedingly repulsive. We feel driven from the presence of alligators, crocodiles, and serpents, and can not bear to lay our hand upon them when they are confined and incapable of hurting us: and why?—



Chiefly because they exert upon us a degree of repulsiveness which it is impossible for us to overcome.

This influence we feel when the serpent is quiescent; but when he makes us the object of this power for the purpose of disarming or expelling us, as he does when we are the aggressors and stronger than he, he shows the activity and strength of his repulsiveness by elevating the back. This has the effect which nature intends, for he is more repulsive to us in such a position than when perfectly prone. When he prepares himself for the enjoyment of a quiet sleep, he instinctively makes himself as repulsive as possible, by curving his spine outward the whole length of his body, so that his repulsiveness may act as a guard to his safety during the hours of his helplessness, at the same time that the small compass into which he coils himself helps to keep him out of harm's way. All animals that have much repulsiveness, and have flexible spines, lay themselves down to sleep in the same manner. The dog, cat, lion, tiger, &c., incline to this position; and worms universally curl themselves up when their repulsiveness is most called into requisition—that is, when they are in danger. It is instinctive, even in a child, to do this when his parent or teacher threatens him with a blow, and also when he lies down to sleep. The reason is, that Repulsiveness is proportionably greater in a child than in an adult. It succeeds Endurance, the strongest degree of which belongs to infancy; so that the strongest degree of Repulsiveness, relatively to the other qualities, belongs to childhood.

To the assertion that snakes are naturally repulsive, it has been sometimes objected that children have been known to play familiarly with them, and to share with them their bowl of bread-and-milk, of which these reptiles are very fond. It is not to be denied that children act naturally, and it is equally certain that grown persons, when they act spontaneously and without affectation, act naturally too. The truth is, it is natural for a child, say of two or three years old, to feel no repulsion from a snake, and equally natural for an older person to feel repelled by such an animal—the reason of which is, that the child has himself a

great deal of the quality of Repulsiveness, while the older person has less. Repulsiveness in one animal counteracts it in another, and hence snakes feel no repulsion toward each other. The same nature produces agreement, and a child is not repelled by that which he himself possesses: it is not strange to him, and why should he be repelled by it in an animal which is not otherwise disagreeable? Nay, it is certain even that every quality seeks its own, and that repulsiveness joins with repulsiveness, as we see exemplified in those piles of serpents of which travellers tell us, in which there are thousands of these animals all lying together, and forming a sight the most repulsive that can be imagined. This same principle we see exemplified in the Indian jugglers and their tame serpents, both



appearing to be equally fond of each other's society ; and it accounts also for the fact that children seem not only to tolerate the presence of snakes, but to take a real pleasure in receiving visits from them, and in showing them hospitality. A child may be called a serpent-charmer with as much propriety as a professor of the art.

Have children and the class of persons here referred to a large sign of Repulsiveness ? Yes : the body of a child is very long in proportion to the length of his limbs, as compared with an adult ; and those persons who do not feel the usual repulsion at the sight of worms, serpents, and other repulsive animals, have longer spines than people in general. The Negro has a long and strong spine, and it is among the swarthy-skinned race that the talent for taming and charming serpents is most exhibited.

But if children have so much Repulsiveness, why do we not feel repelled by them ? It is because they are the objects of one of the strongest affections—the love of children—and because they have a great deal of the opposite quality, Attractiveness, which is the next subject to be treated of. If, however, we become the object of a child's repulsiveness—if we seem to him to be improper objects of affection, or to have become so after he has loved us, we shall be made aware of the wonderful strength of this quality in him. It is exerted as spontaneously and unconsciously as if it were “a child's weakness ;” but if any one has experienced it, he has felt weakened by it, and discouraged from the effort of making an approach or of breaking through the child's repulsion so as to make a favorable impression on him. When twice repulsed by a little one, he feels as if he could “do no more.”

It is very desirable that we should be made acquainted with this quality of our minds—the power of repelling unsuitable, improper, and unlawful objects. Repulsiveness is the guardian of virtue, of reason, and of health, if we choose to have it so ; and we can make it the instrument of our reformation if we will. A person possessed of strong moral principles will be better able to act in accordance with them if he knows that he has

such a power within him, and that, by calling it into exercise, he will strengthen it. He will find that, in so doing, he gives strength to his spine, and makes himself more erect; he will become more upright in both body and mind. When a thought or a feeling contrary to virtue is presented to his mind, let him repel it; when an improper object of love or desire makes its impression on him, let him throw it off ere the impression be deepened—or, if it is possible, let him anticipate his dangers, and “shun the very appearance of evil.” Let him avoid the path that may lead to it, and not allow temptation to come into his sight, much less to come in contact with him. The man who can do this, has powerful repulsiveness and a strong spine; and the man who will strive to this end will gain strength in both these respects—his spine will be more vigorous and erect whenever he makes such a mental effort, and he will feel that the influence is a life-giving and a joyous one.

Not so, however, of the person who is wanting in moral principles, and is governed by low and sensual desires. Repulsiveness in such a case gives greater energy to depravity and wickedness, by enabling the person to repel the first emotions of self-condemnation, and to turn away the loudest voice of suffering or remonstrance. What is regarded as unsuitable by such a character is, whatever enjoins virtue, purity, innocence, honesty, charity, gratitude, magnanimity, or self-denial for the good of others; while what is regarded as suitable is the gratification of every selfish passion and infernal delight: and the former are therefore the objects which are repelled, while the latter are indulged in to the greatest degree possible. A person can neither be a monster of depravity, nor a pattern of morality and virtue, without a great deal of repulsiveness; and, accordingly, the worst men and the best men have very strong spines and are very erect—with this difference, however, that the one class have a proud and reckless bearing, while the other have the appearance of rectitude and uprightness. The reckless man and the upright man may be distinguished from each other on page 18. The man *deficient* in uprightness bears a considerable

resemblance to the accompanying figure. To know whether good or bad faculties govern Repulsiveness, we must observe the signs of character in the face, and these will be found to agree with the general bearing of the body in respect to the sign of Repulsiveness.



In repelling the presence of unlawful objects, and the temptations to improper gratifications, the upright man not only benefits himself, but others. Those with deficient Repulsiveness will experience the benefit of this quality when it is exercised by others toward themselves. If, for example, the person with weak Repulsiveness can not resist the temptations of his own heart, and strives to lead the person with large Repulsiveness into the same temptation, so that his unlawful desires may be gratified, the latter has the power of repelling the temptation to such a degree that the tempter will feel himself delivered from it, and will be mortified and humbled at having been repulsed and identified with his own sin. This shows how far

the stronger is responsible for the sins of the weaker. But if the tempter have himself very great Repulsiveness, no degree of the exercise of this quality in the tempted will be sufficient to make him desist from his evil purposes: only the force of necessity will compel him to do it. There is no shame or relenting in his heart; and his great Repulsiveness makes him more like the serpent who tempted Eve, than like the children of whom Christ said, "Of such is the kingdom of heaven."

Who has not heard of the power there is in the rebuke of a child? It is said, by those who have experienced it, to be very great; and if we become "like little children," as we are commanded to, we shall not only be innocent as they are, but the power by which we cast off evil habits and repel all improper objects of desire—and thus become innocent—will do much toward removing evil habits and desires from others.

## LETTER VII.

THE *Endurance* of the faculties indicated in different portions of the brain is connected with the *Repulsiveness* of the faculties indicated in different portions of the spinal marrow. A person has all the more endurance of the faculties connected with the cerebellum if he has also a large development of the spinal marrow within the sacrum, or lowest part of the spine; and, as a general rule, this lowest portion of the spinal marrow is in proportion to the lowest part of the brain, as in the Negro. We



may judge of it by the length and posterior projection of the sacrum: if this be great, the person has more of those faculties which are indicated by the cerebellum than he would be supposed to have, judging from the size of the cerebellum alone. This is very well illustrated in the form of the Venus de Medicis; and, in giving this form to the goddess of love, the ancients showed how well they studied nature.

A physiognomical sign, to be proved true, must be of universal application: it must be deduced from examples in the animal kingdom as well as from human beings, and must admit of no exceptions. The lowest plane of the faculties being indicated in the cerebellum and in the lowest part of the spinal marrow, these parts of the nervous system are very greatly developed in the lowest plane of the animal creation.

Fishes have the lower extremity of the spine prolonged beyond the place of the posterior extremities, which in them are called the

ventral fins. The lobster is a remarkable instance of this spinal prolongation, and the serpent and the alligator furnish the strongest examples. It is seen that a great part of what is called the tail in these animals, is a continuation of the body beyond the posterior extremities; and it is known that the tails of such animals as the dog, cat, cow, monkey, &c., are mere appendages, and are not perforated by the spinal cord. Yet the connection of the tail with the lowest part of the spine causes it to be influenced by the lowest plane of the faculties; and when it rises naturally over the back, or in consequence of excitement, as it does in the dog, the goat, and some other animals, it is an index of the faculties connected with the lower part of the spinal marrow.

The posterior projection of the sacrum, as well as its length, shows the predominance of these lower passions in animals no less than in man, as we see in the goat. When we compare animals with men, however, in respect to the signs of these lower faculties, we must bear in mind that human beings are endowed with higher faculties, the office of which is to elevate, purify, and refine, the lower ones; and that these latter are thus regenerated and scarcely to be recognised as the same faculties which are manifested by the low and degraded portion of mankind, and by the brute creation.

The Endurance of the faculties connected with the *posterior lobe* of the brain is increased by the *Repulsiveness* of these faculties; and this is indicated by the lumbar portion of the spinal marrow, or that portion which belongs to the loins, being between the sacrum and the ribs. The size and length of this portion of the spine is generally in proportion to the size of the posterior lobe of the brain. A person with a small posterior lobe has a short and weak loin, while a person with a large posterior lobe has a long and stout loin. The exceptions to this rule are exceptions to the rule of good physical proportions. In woman, the posterior lobe is relatively better developed than in man; and so of the loins, which, in the course of nature, are destined to repel the object of her strongest love, when it is no



longer adapted to its first situation, and becomes suited to another. The endurance of parental love, which, with other faculties, is indicated in the posterior lobe, is increased by this capacity of giving birth to offspring; and Nature has intrusted the care of children to the parent that has the most endurance of this faculty.

In birds, which have such great care of their young, the posterior lobe is the largest portion of the brain, and the lumbar portion of the spinal column is long and large, while the sacrum is comparatively small. It is upon the loins of its mother that the chicken is sometimes seen to perch itself, and this gratifies the instinct of the hen as well as of the chicken; but if he places himself too far forward, she shows uneasiness, and "the young saucebox" has to come down. Nature will not submit to the least violation of her laws.

The bear and all the cat-kind are remarkable for affection



for their young, and this is indicated by the length and posterior curvature of the loins. Their predominating characteristics place them in the second scale of the animal creation, and this is indicated by the length of the second portion of the spinal column, or loins, as well as by the second division of the brain, or posterior lobe. The lowest portion of the spinal column, or

sacrum, together with the cerebellum, belongs to the lowest plane of the faculties and to the lowest plane of animals, as in the serpent and the lizard. It should be further observed, in reference to the backward curvature of the loins, as seen in the bear and animals of the cat-kind, that the destructive and combative faculties, as well as parental love, are indicated in the posterior lobe; and that this convexity of the back indicates the repulsiveness of these faculties, as well as of parental love, as appears in the fact that the cat elevates her back when she would repel the attack or the presence of a dog, and from the fact that the bear and other such animals manifest repulsiveness of these faculties.

In human beings, the loins (familiarily called the "small of the back") curve forward instead of backward, and this is more beautiful. It belongs to the upright position, which could not be assumed if the whole length of the spine were convex posteriorly, as the sacrum is. The cause of this difference between man and the lower animals is, that the faculties indicated in this portion of the spine have less repulsiveness in him than in them. Parentiveness in animals is, for the most part, repulsive to the young of all animals except their own, especially to children; but, in woman, it is not designed to be so: she feels affection for young animals, and for children in general—sometimes almost as much as if they were her own. This difference between men and animals agrees also with the fact that women have severe labor in giving birth to offspring, while it is an easy matter with most of the inferior animals, especially the hump-backed. In savage life, women have more exclusiveness of parental love, and they have also more ease and safety in parturition.

But, though it is not intended that human beings should have much repulsiveness of parental love, it is intended that they should have strong repulsiveness of the conjugal affections, or rather that these affections should be exclusive, while the love of children is not. Husbands and wives are to love each other exclusively, in the degree that love may be called conjugal; but

they may love children in general with all the strength of parental love, without violating any social or moral law; and they may adopt the children of other people, and make them their own. This difference between the love of the other sex and parentiveness is indicated by the curvature of the sacrum backward, and of the lumbar vertebræ forward. In very many animals, particularly in birds, sexual love is not near so strong a passion as parentiveness; but in human beings, it is very frequently the stronger of the two—and this is indicated in the opposite curvatures of the two lower portions of the spinal marrow, making a line of beauty corresponding to the beautiful relations of parentiveness and conjugal love in the human being.

The faculties which are indicated in the *middle lobe* of the brain are indicated also in the *dorsal portion of the spinal marrow*, between the loins and neck. The longer and more convex posteriorly this portion of the spinal marrow is, the greater is the repulsiveness of the faculties which it indicates. The repulsiveness of these faculties is generally in proportion to their endurance; and those who have a large middle lobe have generally a long and strong spine from the neck to the loins, while those who have any defect in the development of the middle lobe have also some defect in the corresponding portion of the spinal cord. The cow, sheep, elephant, horse, camel, and other vegetable-eating domestic animals, have the dorsal portion of the spine very long and powerful, enabling them to support very heavy burdens. Some of the faculties connected with it and with the middle lobe are Submission, Subserviency, Love of Liberty, Firmness, Caution, Acquisitiveness; and the animals mentioned have one or more of these faculties in an extraordinary degree. The camel is remarkable for them all, and he is equally remarkable for the length and elevation of the back between the shoulder-blades and as far as the spine has a connection with the ribs. The camel's hump depends partly on the accumulation of a fleshy substance adapted to the accommodation of burdens, but the spine itself is very much elevated; and we may suppose it to be the energy of repulsiveness in this

portion of the spine which causes the fleshy growth referred to. In this figure of an ostrich, the middle lobe seems to be relatively



large, indicating the Endurance of the faculties of Submission, Subserviency, Love of Liberty, &c., ; and the indication of the Repulsiveness of these faculties is very large indeed. In the stork, crane, pelican, &c., the sign of the Repulsiveness of these faculties is large, while that of their Endurance is small. The ostrich is in fact very like the camel, and is represented in the engraving in the capacity of a beast of burden, which is a character very diverse from that of birds in general. She has but two toes, and, in running, moves "all fours"—the "wings, like two arms, keeping alternate motion with the feet." If, as is stated in the following extract, a man has been seen journey-

ing on the back of an ostrich, the bird may be used for the purpose of travelling and carrying burdens: "M. Adanson saw two tame ostriches which had been kept two years at the factory of Podor, on the south bank of the Niger. 'They were so tame,' he says, 'that two little blacks mounted together on the back of the largest: no sooner did he feel their weight, than he began to run as fast as ever he could, till he carried them several times round the village; and it was impossible to stop him, otherwise than by obstructing the passage. This sight pleased me so well, that I would have it repeated: and, to try their strength, I made a full-grown Negro mount the smallest, and two others the largest. This burden did not seem to me at all disproportioned to their strength. At first they went at a moderate gallop: when they were heated a little, they expanded their wings as if it were to catch the wind; and they moved with such fleetness, that they seemed to be off the ground. Everybody must some time or other have seen a partridge run—consequently must know there is no man whatever able to keep up with it; and it is easy to imagine that if this bird had a longer step, its speed would be considerably augmented. The ostrich moves like the partridge, with both these advantages; and I am satisfied that those I am speaking of would have distanced the fleetest race-horses that were ever bred in England. It is true, they would not hold out so long as a horse; but, without any doubt, they would be able to perform the race in less time. I have frequently beheld this sight, which is capable of giving one an idea of the prodigious strength of an ostrich, and of showing what use it might be of, had we but the method of breaking it and managing it as we do a horse.' The traveller Moore mentions that he saw a man journeying mounted upon an ostrich; though both this and the instance given by M. Adanson show the circumstance to be of unusual occurrence."\*

The ostrich is unlike other birds, in having also very little endurance of parental love and the other faculties connected with the posterior lobe of the brain; and in animals, the size of

\* From the "Faculties of Birds."

the middle lobe is generally in proportion to the deficiency of the posterior lobe, as before stated. This strange bird lays her eggs in the sand, to be hatched by the heat of the desert; and “forgetteth that the foot may crush them, or that the wild beast may break them. She is hardened against her young ones, as though they were not hers.”

The reindeer is one of the best of servants, and the indications in the brain and spinal marrow of the faculties which make him so are very large. According to these signs, the moose might be domesticated and made as serviceable as the reindeer, if not more so—though the very great repulsiveness of these faculties would render the breaking of him very difficult.

Negroes and servants generally have this length and posterior roundness of that part of the spine connected with the ribs in a marked degree, and they have a corresponding development of the middle lobe.

The repulsiveness of the faculties assists their endurance, by throwing off the objects which are unsuitable to them, or which are more than they can well endure, and enabling them to receive new impressions and bear new burdens.—

This is exhibited in the camel, which bears such immense burdens, but refuses to rise under a burden that is too great for his endurance. Though he is an excellent servant, he makes his master aware of the great repulsiveness of those very faculties with which he serves him; though he performs the duties imposed on him, it is never with



hearty good-will, but with much vexation, ill-nature, and torment. In short, it is the feeling of everybody who has anything to do with him, that he is exceedingly repulsive in both looks and disposition.

As long as Repulsiveness is inferior to Endurance, it is its servant; but as soon as it becomes the superior, it is the master, and casts off the objects of Endurance altogether. The camel seems to be on the verge of this latter alternative. In the American bison, or buffalo, the preponderance may possibly be on the side of Repulsiveness; for though this animal is of the *bos* kind, and ought to have remarkable Submission and Subserviency (judging from what we see in the cow and the ox), yet he shows not a little repulsion to the objects of these faculties. If, however, his Repulsiveness be the servant of his Endurance, he is capable of excelling all other animals in travelling and bearing burdens for man—unless we except the wonderful camel, which, in Endurance and Repulsiveness, may possibly be his superior.\* The elevation of the dorsal portion of the spine, indicating Repulsiveness, is very great in the bison—though the fleshy hump which partly covers it makes it appear higher than it really is.

When the Repulsiveness of the faculties connected with the middle lobe very greatly exceeds their Endurance, the disposition of the animal will be exceedingly intractable; it will be impossible to make an impression on the faculties of Submission and Subserviency which will not be removed as soon as made.

\* On this subject, Robert Walsh, the American consul at Paris, writes as follows: "M. Lamare Piquot, who has travelled extensively in our western regions, has addressed a memoir to the Paris Academy of Sciences, on the naturalization and domestication in France of the American bison. He urges that the animal is remarkably strong and swift; that it would be fit for draught in the operations of husbandry and domestic business; and that it would contribute a new meat of agreeable flavor. He considers the animal as the finest and most useful of the native productions of the 'Great West.' He relates that he saw it hunted on the banks of the Mississippi and the Missouri, and that, from the facility of destroying it, he fears the species will soon disappear. The bison, he adds, has been domesticated on the Red river, and the flesh found excellent after it has been five years in that state. He cites an instance, in 1842, in which the animal at four years of age performed a journey of seventy-five miles in a day; and on the morrow, dragged back, by eleven at night, a load of eight hundred pounds."

The animal which answers to this character the most perfectly seems to be the hyena ; and in him the height of the spine between the neck and loins exceeds that of any other animal. In the general form of his body, in his appetites, and in many other respects, he resembles the dog, which has a great deal of the Endurance of Submission and Subserviency, with much less Repulsiveness of these faculties than the hyena.

Next, there is the same relation between the anterior lobe of the brain and the cervical portion of the spinal marrow as between the three other divisions of the brain and the three other divisions of the spinal marrow. Repulsiveness, in its relation to the other qualities, is dependent on Endurance, and by itself is a negation of the mind rather than an element of strength. As the servant of Endurance, it repels the objects of the faculties after they have served their use ; but, by itself, it repels the objects of the faculties altogether. The Repulsiveness of the faculty of Submission, for example, repels all the conditions of slavery, and the very feeling itself. None of the lower animals have a large anterior lobe, and some of them have none at all ; but most of them have necks, and some of them very long ones. This indicates that they are not only wanting in the Endurance of the faculties connected with the anterior lobe in human beings, but that they have the Repulsiveness of these faculties ; so that it is impossible that the objects of reason and of the moral and religious feelings should make any impression on them. They are wanting in the foundation of the faculties which characterize man, and there is therefore nothing in their minds on which a superstructure of intellect and virtue can be reared. In man, however, the cervical portion of the spinal cord is an index of greater strength of the perceptive and reasoning faculties, and of Benevolence, Kindness, &c., than would be indicated by the anterior lobe merely. The Repulsiveness of these faculties is an assistance to the power of Endurance. It enables the individual to vary the employments of his mind almost infinitely ; to seek new objects of study and contemplation ; to refresh and invigorate his social feelings with variety ; and to renew the



heart by the ever-changing duties, trials, and experiences, of life. It enables him to throw off the impressions of objects that are not favorable to the cultivation of his mind, or that would interfere with the free exercise of his reason; but for this end he must not be deficient in the Endurance of the ennobling faculties.

As a general rule, when the anterior lobe of the brain is large, the cervical portion of the spinal cord is large also; and this last will be indicated by the strength of the neck, rather than by its length: for, if the spinal cord within the vertebræ be small, the neck will be weak. The faculty of Firmness causes the posterior part of the neck to be long; and were not Firmness connected with the Repulsiveness of the higher faculties, the mind would be fickle and for ever changing—it would be too versatile to stop at truth, or to hold to permanent principles.

## LETTER VIII.

FROM what has been said, it is evident that there can be no very great Endurance, either physical or mental, without large Repulsiveness. The weaker are exposed to the imposition of heavy burdens by the hands of the stronger; and if they have not the power to resist and cast off the burden from their spirits, they are weakened and crushed, and their life and spirit soon depart from them. The African has generally too much Repulsiveness to allow either slavery or misfortune to crush his spirit; and hence his spine does not become weakened, but retains the vigor necessary to the bearing of burdens, and to the strength of the limbs. The tyranny of the white man, when it would make slaves of those of his own complexion, more frequently oversteps itself and defeats its own end; for the burdens and hardships which Repulsiveness enables Endurance to bear up against when both these qualities are as large as they are in the Negro, crushes the white man to the earth. The white slave's spirit is broken, and so is his back; and when this is the case, the last remnant of life soon departs from him. The avarice and cruelty which could produce this effect on one of the black race must be very great, but such avarice and cruelty are not unknown.

What is true of a human being in this respect is true of the lower animals. The man who carries his idea of "breaking a horse" to such a degree as to break his spirit, renders him unfit for service, weakens his repulsiveness, and thereby his back and limbs, and the viscera of the body; and, from making him a "broken-down" animal, very soon puts an end to his existence. A young horse attempts to throw off his rider, as something unsuitable to be borne; and the rider, to break this power of *repulsiveness* in him, instinctively attempts to break his *back*—

and sometimes, in his blind rage, he has been known to succeed in his undertaking at a single blow. How much better would it be to teach the young, high-spirited animal, by imperceptible degrees, that a *saddle* is a *proper* object; and, secondly, that a *weight* on the saddle is proper; and, thirdly, that a man, capable of guiding and governing him, is the most proper object of his faculties of Submission and Subserviency, and in no way inconsistent with his love of liberty! What a noble, strong, vigorous, watchful, careering animal, he would then be! how well he would answer to the description found in that most ancient poem, the Book of Job! —

“Hast thou given the horse strength?  
 Hast thou clothed his neck with thunder?  
 Canst thou make him afraid as a grasshopper?  
 The glory of his nostrils is terrible.  
 He paweth in the valley, and rejoiceth in his strength:  
 He goeth on to meet the armed men.  
 He mocketh at fear, and is not affrighted;  
 Neither turneth he back from the sword.  
 The quiver rattleth against him,  
 The glittering spear and the shield.  
 He swalloweth the ground with fierceness and rage:  
 Neither believeth he that it is the sound of the trumpet.  
 He saith among the trumpets, ‘Ha, ha!’  
 And he smelleth the battle afar off,  
 The thunder of the captains and the shouting.”

Let this be taken as a fitting emblem of the most noble, powerful, high-spirited, and magnanimous, of the human race, and how shall we deprecate any system of oppression, of discipline, of government, or of education, that tends to break the spirit of man, and render him less free and noble than Nature intended him to be!

The dependence of the child on the parent makes him subservient, and under obligations to obey and look to his parents for advice and direction; and just as the servile condition of the Negro requires large Repulsiveness to sustain it, so does the relation of dependence and Subserviency in the child require an unusual degree of this quality. By means of it the young heir takes his place in an inferior condition, and is, as the apostle Paul says, like a servant in the house, under tutors and subject

to discipline, though he be in reality lord of all. The rebukes, the corrections, the misfortunes, and the griefs, that fall to his lot, lay heavily at first, but are soon thrown off—so that the spirit is not overborne, and is ever ready for new impressions and the imposition of new tasks. The effects which this quality produces in childhood are admirably given in these lines of the poet Gray:—

“Gay hope is theirs, by fancy fed,  
 Less pleasing when possessed;  
 The tear forgot as soon as shed,  
 The sunshine of the breast;  
 Their buxom health of rosy hue,  
 Wild wit, invention ever new,  
 And lively cheer of vigor born;  
 The thoughtless day, the easy night,  
 The spirits pure, the slumbers light,  
 ‘That fly th’ approach of morn.”

But if the parent or teacher conceives that the child is too frolicsome, too little submissive to hard tasks, too soon weary of one thing and inclined to another, too fond of change and novelty, too cheerful and disinclined to sobriety, too fond of the light and trifling, after having felt the weight of more serious impressions—he is in danger of abusing the power which Nature has put into his hands, and which she has taught the child to recognise no less than himself. If he becomes a prison-keeper, a taskmaster, and a cruel tyrant, he will weaken the power on which the child’s buoyancy of spirits depends—the power by which he is best able to receive impressions, and to endure the tasks both mental and physical that his improvement and education demand—the power also by which he is able to repel all improper objects of the affections, and all thoughts and suggestions that are opposed to the precepts of morality and virtue implanted in his breast and awakened by the example and instruction of others. Many an honest but sadly-mistaken parent has thus ruined his children, disappointed all his own expectations of the future greatness and goodness of his offspring, and brought to an untimely grave the fruit of his own body and of his own misguided discipline. He who presses the mind of his child to hard study; who restrains him from

diversion to other objects ; who imposes the hard task of perfect stillness and silence, and inflicts a box on the ear for inattention ; who administers severer blows if the child rebels against the imposition of an unjust punishment, and pours on the head of his little one a continual weight of censure, sarcasm, and abuse ; who bears down upon the young spirit with the constant presence of his criticism and severity—the man who persistently does all this, will assuredly break the spirit of his child, make him fearful, servile, and submissive, in the lowest degree, weaken him in mind and body, and render him incompetent to the tasks which reason and duty would have assigned him ; will deprive him of spirit and animation, and the enjoyment of health, and deform him both mentally and physically by relaxing or curving the spine, and lessening his moral rectitude and uprightness ; will deprive him of the power of resisting temptation and of maintaining a consistency and independence of thought and reason, and thereby make a shipwreck of his faith, and render the ruin of his innocence and virtue inevitable.

Some few children may have repulsiveness enough to escape such a fate as this, when the causes are such as have been described, but the majority will prove these remarks too true. Observe and inquire among those who have fallen victims to temptation and to their own weakness, and you will find that the strongest causes which have contributed to this end have been those which weaken and destroy the power of Repulsiveness, or at least that circumstances like those described above have been connected with their history and downfall ; and you will find that the exceptions to this rule are the more *positively* bad—those who have very great repulsiveness, and who have not been governed at all, and who have repelled from their minds only those things which were opposed to their own selfish desires and gratifications. It is to be expected, too, that those who survive the efforts of parents and guardians to destroy their repulsiveness, will have no favorable leaning toward the restraints and rigid injunctions in connection with which they have suffered so much, but that they will lean toward rebellion and

licentiousness, and exercise what little repulsiveness they have left to them in repelling the prohibitions of conscience to the free indulgence of lawless passions and desires. Their past sufferings may also beget in them a morbid sympathy and pity for those who have passions which it is unlawful to indulge; so that when they are tempted by others, they yield to the temptation for their sakes, and thus are partakers in their evil deeds, instead of teaching them how much more excellence and true happiness there is in virtuous self-denial than in vicious self-indulgence. And from this morbid sympathy with the bad, there is but one step to the cherishing of their vices: so that when vice is *endured* on account of what has been suffered from misnamed duty and obligation, it comes next to be *pitied* on account of the denials to which it is subjected; and when pitied, it comes soon to be *embraced* on account of the unrestrained gratifications which it allows, and the fictitious enjoyments it bestows.

The over-exercise of authority and power is aimed directly against Repulsiveness: the due exercise of these functions is, on the contrary, directed to the cultivation of this quality. As the repulsiveness of the child, of the servant, or of the subject, is offensive to the parent, to the master, or to the ruler, the latter, in their desire to annihilate it, instinctively direct their efforts to the part of the body with which Repulsiveness is connected—that is, to the back. The parent says, while he applies the rod to his son's back (after having made him take off his coat, for the convenience of so doing): “I'll make a submissive and dutiful boy of you; I'll drive the rebellious spirit out of you; there shall be nothing left that will assert a wish or a thought contrary to the will of your father. Your lessons you must learn, and your tasks you must do, come what will: playing when you are told to work, and running away when you are told to stay at home, can admit of no explanation or excuse; and the nature which prompts to such things must be beaten out of you, as something altogether depraved.” The master says, when he beats his slave, cutting the flesh at every stroke, and

causing the blood to dye the ground, till his victim faints or gives up the ghost: "This slave shall be a slave in both mind and body, though it should be at the expense of half his soul and half the blood in his veins; I'll break his spirit—and, if it would not spoil him for my use, I'd break his back!" The master does not know; or does not reflect, that the mind acts upon the body, and that the back must break when the spirit does. The autocrat says, when the knout is doing its fiendish work: "There shall not live a man in my dominions who will rebel in the slightest degree against my sovereignty, or who will not slavishly bear the heaviest burdens I may choose to lay upon him. It is not for my subjects to feel what is unsuitable to be borne, or to desire any change whatever in their condition. They may cast the weight of sorrow and care from their spirits if they will; but the back that throws off the burden I lay upon it, shall feel the weight of such heavy blows, that it will never be able to do so again. Let it crush him, rather than that he should not acknowledge my absolute authority." When the sovereign power or the government has no further use for the offender, it scruples not to break the back entirely, and sunder the cord of life; but, as the neck is the part of the spine most easily broken, hanging is the favorite method.

It is known to most persons how easily a wounding of the spinal marrow destroys life, and that the breaking of the neck is instantly fatal. The reason appears to be that Repulsiveness, and consequently the spinal marrow, is very closely connected with vitality. It imparts vigor, life, animation, and high spirits, as we have already seen. In its very nature it is opposed to what is dead, dull, inert, old, decayed, and worn out; and these things it repels when they are presented, and casts off as being no longer parts of the animal economy. If you observe those who have long and strong spines, and who are in consequence of it remarkably upright, you will see that they have great power of repulsing those they do not like, of scouting ideas that are opposed to their own, and of repelling insinuations that are unsuitable to their tastes and dispositions; and you may see also

that they have great vitality, and that it is difficult to kill them by either accident or disease. Long-bodied people are, other things being equal, long-lived people, and short-bodied people are short-lived. The Negro race afford the most remarkable instances of long bodies and long lives in connection with Repulsiveness. The American Indian has an uncommon power of repelling those who are not agreeable to him, and his body is long and very erect, and his tenacity of life is no less extraordinary. It is said that among the Cherokees it is a very common thing to meet with hale, vigorous old men, who have lived more than a hundred years—which shows that, under favorable circumstances, the Indian is not only hard to kill, but has great longevity.

Among animals, the cat-kind have great Repulsiveness, long spines, and great tenacity of life. The same remark may be made of the bear, the marten, the weasel, and, in short, of all quadrupeds that have very long spines in proportion to the length of the limbs. The goose and the swan are repulsive, long-lived, and have very long and powerful spines. The reason that the swan does not look repulsive on the water, and that the goose does not, is, that the length of the spine is not made to appear by the contrast of the legs. The swan is repulsive on land to the eyes of everybody. But the most extraordinary instances of vitality are the most remarkable examples of Repulsiveness—viz., the great variety of eels, lizards, serpents, and venomous reptiles. There are, however, other powerful elements of vitality besides Repulsiveness, which may be spoken of at another time.



## LETTER IX.

WE come now to the third quality of the mind—*Attractiveness*. This is the opposite of Repulsiveness, and, like that, is subservient to Endurance. Endurance is a passive quality, and Repulsiveness is an active one: but the mind is not only active in throwing off the burdens of Endurance—it is active also in attracting to itself its proper objects in place of those which are repelled. This is absolutely necessary; for Repulsiveness alone deprives the mind of the objects with which it is passively impressed, and this includes the objects of all the faculties, unless there be an active quality of Attractiveness which recognises proper objects, and is the means by which the mind receives impressions from them. To render Endurance something more than passive, Repulsiveness and Attractiveness make one with it—the first recognising and removing objects with which the mind is impressed passively, or without its “own free will and accord;” the second recognising proper objects, and causing the mind to be impressed by them. Attractiveness relates to things which are suitable or well adapted to the several faculties to which they address themselves. Such adaptedness of a faculty to its object is the ground of the attractiveness between them.

The sign of this quality is the fineness of the tissues covering the nerves of the external senses, which, together with those nerves, constitute the *organs* of smelling, tasting, hearing, and seeing, and of the more general sense, feeling and touch. The degree of Attractiveness in general, or of the whole mind, is indicated by the fineness and consequent thinness, smoothness, softness, transparency, and delicacy, of the skin. It is impossible not to feel attracted by a person who has much of this sign (unless, indeed, it be counteracted by very large Repulsiveness);

and one who has a thick and coarse skin does not exert this influence upon us, though he may be the object of our highest regard. Woman has, as a general rule, more Attractiveness than man, and she has more of the sign; while man, as a general rule, has more Repulsiveness, and has a more powerful spine. The greatest degree of Attractiveness in childhood succeeds the period of the greatest degree of Repulsiveness, and is then proportionally stronger than at any subsequent period of life. Indeed, this quality, along with Endurance and Repulsiveness, diminishes with man's declining years, and is deficient in old age. Childhood is always pictured to our minds attractively, with a smooth and delicate skin, and a transparency of complexion that seems significant of the frankness and confidence of its nature.

And this quality is very necessary to childhood. It should be in proportion to Repulsiveness, and is so in a well-balanced individual. If the child were not constantly repelling and casting off the helpless and infantile conditions of his being, and attracting to himself the conditions of a higher and more perfect existence, he could make no improvement either physically or mentally. There is a period in which the little one appears to exercise too much Repulsiveness to please strangers; and there is a period, succeeding the former, in which he appears to exercise more Attractiveness toward strangers than the parents think proper. This is particularly the case when the stranger is a male and the child a female; for Attractiveness is felt to be more a quality of the affections than of the other faculties, and in childhood even is too apt to be associated only with love.

But every faculty of the mind has the power of attracting to itself the objects most suitable to its gratification; and the child is ever seeking and drawing instruction by means of this quality from parents, teachers, friends, strangers, and from innumerable surrounding objects, at the same time that it is constantly engaged in attracting the thousand objects of affection both animate and inanimate. What living being, either rational or

animal, is capable of resisting the attractive love of a child of from three to seven years old ?

Let us look now at the sign of Attractiveness in the lower animals, and see how it agrees with the manifestation of this quality in them. The rabbit has an exceedingly thin skin — so thin, that, in dressing the animal, it is scarcely possible to take it off without tearing it ; and certainly the universal feeling is that the rabbit is exceedingly attractive, notwithstanding his gnawing and mischievous disposition. The sheep is, in the estimation of mankind, another very attractive animal, and has a very thin skin ; and the goat approaches the sheep in both these respects, although attractiveness in him is partly counteracted by certain disagreeable traits of character. Lambs and kids are more attractive than their dams (aside from the love of young which we feel toward them), just as children have more of the quality and sign of Attractiveness than their parents. Birds have generally very thin skins, and the thinner the skin the more attractive they are to us, other things being equal. Fishes are attractive in proportion to the thinness of the skin and the shortness of the spine. The speckled trout, the mullet, and the gold-fish, are not repulsive to us like the eel, the shark, and other aquatic animals, that have long bodies and not fine skins.

If, now, we observe those animals that have very thick skins, we shall see that they are wanting in attractiveness, and that if they have long spines they are very repulsive, this quality not being counteracted by attractiveness. The elephant has a coarse, almost impenetrable hide, and it requires that we should have a knowledge of his amiable traits of character in order to feel anything like attraction toward him. The rhinoceros has a still thicker, tougher, and more callous skin ; and who is there that does not feel rather repelled than attracted by him ? The ox has a thick skin, and his attractiveness is much inferior to that of the horse or the deer, both of which have skins that are fine, thin, soft, and pliant. We may appreciate the good qualities of the elephant, the ox, and the cow, but they can never be great favorites like the horse, the deer, the sheep, and the rabbit ; we

can not feel toward them that disposition to fondle and caress which is called forth by attractiveness.

Some animals have large Repulsiveness and Attractiveness combined, and the same is true of human beings. There is frequently to be seen a very fine, delicate skin, in connection with a long and powerful spine; and in such cases we feel two opposite influences, sometimes the one predominating and sometimes the other. Minds which have too much passive Endurance and too little active Repulsiveness, retain infantile weaknesses, and are more liable than others to yield to temptations and to the influence of improper objects, not having Repulsiveness enough to reject them. And when the appetites and desires are perverted through this means, Attractiveness is no longer to be relied upon as the criterion of what is proper, for it acts in favor of the very objects which it is the province of Repulsiveness to reject, and which would have been rejected had this latter quality been strong enough and been allowed to act freely. We see, therefore, that Attractiveness may serve the power of evil instead of good; and when it does so, how seductive is its influence! how like an *ignis-fatuus* it is! how fatal to those who are overcome by it! When Repulsiveness and Attractiveness serve the lower faculties instead of the higher, they become speedily perverted; and this power of perversion which the lower faculties exert has a more easy work to accomplish when the mind is weak and passive through small Repulsiveness and large Endurance. The more Attractiveness there is in such a case, the greater is the capability of perversion, and the more danger there is in coming under its influence.

Not only does too much Endurance favor the continuance of the natural weaknesses of infancy, but it favors the continuance of bad habits when once formed—such as the use of tobacco, opium, fermented drinks, &c., which, from ceasing to be the objects of Repulsiveness, come to be the objects of Attractiveness perverted. And, as it is with the appetites, so it is with the affections and other faculties of the mind. In a state of perversion, Attractiveness makes choice of the objects of Repul-

siveness, and Repulsiveness rejects those of Attractiveness ; and thus these two qualities, instead of being helpmeets, make war upon each other, and agree only in doing injury to the quality of Endurance instead of service. The faculties of the mind become slaves to unsuitable objects, instead of being ministered unto by the proper objects of their gratification, as Nature intended they should be. They who thus pervert their faculties, "put bitter for sweet and sweet for bitter, darkness for light and light for darkness ; they call evil good and good evil." The lowest in the scale of the animal creation are their most fitting emblems, for it is by the lowest faculties that they are governed, and by these that they become perverted. There is a peculiar propriety in calling serpents and dragons *monsters*, when they are made to personify the most perverted human beings.

The unperverted faculties know of themselves what are proper objects and what are improper — what to attract and what to repel. But, even when perverted, the mind may be restored to its pristine purity and conformity to Nature. This can only be done by studying what that pristine state is, and of this we have one and one only Perfect Example. HE was one with Nature in all respects, violating no law either moral or physical. He, too, it was who took a little child and set him in the midst, signifying that those who would attain the pristine state must commence a new life — be little ones a second time — regenerated, born again ; that they should repel all unsuitable objects of the affections, and attract good ones, and thus become pure and innocent as children ought to be. Thus they would be ONE with Him who is greatest in the kingdom of heaven, because the lowliest and humblest child of them all. Then would be realized the truth of the prophecy recorded in the Book of Isaiah :—

"The *sucking child* shall play on the hole of the asp,  
And the *weaned child* shall put his hand on the cockatrice's den."

"The wolf also shall dwell with the lamb,  
And the leopard shall lie down with the kid,  
And the calf and the young lion and the fatling together ;  
And a *LITTLE CHILD* shall lead them."

The most malignant temptations and the most depraved habits must be rendered powerless against the action of Repulsiveness in subservience to purity and innocence; as also the most discordant things must be rendered harmonious by the action of Attractiveness in subservience to truth and goodness.

## LETTER X.

WHEN the Attractiveness of an individual is no more than equal to his Repulsiveness, it still appears to be greater, and exerts a stronger influence on the person who is subjected to it. The reason is this: the signs of the first-named quality are external and more perceptible, and are brought nearer, so to speak, to our sensibility to physiognomical impressions. The general index of the quality of Attractiveness is the fineness of the investing membrane of the whole body; whereas, the index of Repulsiveness occupies the spinal canal, and shows itself only in the length and vigor of the spine. It is to be expected, therefore, that we should be able to read more character in the signs of Attractiveness than in those of Repulsiveness. The former are indeed very closely associated with the signs of the voluntary action of the faculties in the features and lineaments of the face, and contribute very much to the expressions; for it is in the face that the fineness, smoothness, softness, and delicacy of the skin, are most observed, and exert the most attractive influence. It is in the face, too, that the partial transparency which accompanies this fineness of the skin betrays the *moods of the mind*, so far as they influence the circulation of the blood,\* —sometimes withdrawing it to the heart, and leaving the cheek pale; sometimes driving it from the heart, and causing the cheek to flush; sometimes causing one hue and sometimes another, and playing a thousand pranks with forehead, eyes, and

\* "Who that looks at a beautiful face, and marks the lines of grace which every view discloses — the enchanting contrast of the colors — of the eyes, the brow, the teeth, the cheeks and lips, shaded by the dark flow of the waving hair — who can look, and not be persuaded that this combination was no chance medley; but that the wisdom of the great SCULPTOR and PAINTER, guided by his perfect taste, has here wrought for beauty? — and those red globules are an essential part of that beauty, and this is cause enough why they exist." — "*Respiration*," by Mrs. WILLARD.

lips, which only he who is versed in the language of the passions can well interpret. But he who has studied this language the longest is not always the most versed in it; for the first lessons in Pathognomy are taught by Nature, and only he who follows in her footsteps can become a proficient.

A very great degree of Attractiveness gives to the skin a quality that may be compared to porcelain—fine and delicately transparent, with an appearance of exceeding softness and smoothness. And how very greatly the beauty of the countenance is enhanced by the chastening and softening of the florid and purple coloring of the blood by the delicate covering that but partially conceals it! But the most important physiognomical indications connected with this sign of Attractiveness are the changes of countenance which accompany the slightest changes in the bodily health, and which mark the different stages of disease. The physician must be well skilled in these if he would form a correct judgment of the condition of his patient, or what he would call a proper *diagnosis*. This is so well understood, that a physician who lays claim to extraordinary qualifications makes it a point to appear to understand this language of the countenance perfectly, and thereby to comprehend the entire state of the case without much verbal questioning. The truth is, all persons have more or less of an intuitive perception of the conditions of the health and the variations of disease by the faint shadows and alterations that come over the countenance; and if the friends and relations of the sick had as much confidence in this perception of theirs as the physician pretends to have in his, they might not always defer so implicitly to his judgment as he would wish. The former, when they see anything unusual in the countenance of another, as for example any unwonted paleness or redness—any strange hue or shadow of a passing change about the mouth or eyes—ask, “What ails you? what have you done? where do you feel pain? what shall I do for you?”—but the doctor professes to know all these things, the disease, the cause, the symptoms, and the remedy, by what the countenance says of the state of the nervous system and the cir-



culatation of the blood, and by his experience in medicines. No doubt much credit is due to his habit of observing these facial symptoms of disease, and to the motives which prompt him to draw correct conclusions from them ; and certainly this is strong ground of confidence, if he allows his intelligence and experience to testify in his behalf without bringing in the aid of self-flattery and adulation.

Other things being equal, the delicacy of the sense of feeling is in proportion to the fineness and delicacy of the skin, and is therefore another sign of Attractiveness. The nerves of feeling belong to the quality of Endurance, the chief index of which is the brain. They proceed mainly from what appears to be the posterior part of the spinal marrow, which, as it is distinct from the anterior portion, and does not extend the whole length of the spinal canal, may be regarded as the main trunk of the nerves of feeling, sent out from the brain, and being as much a part of the *sensorium* as the nerves of the other external senses are. It contributes nothing directly to the strength of the spine, and stops short of the termination of the spinal canal, so that the signs of Repulsiveness (the length and vigor of the spine) are not to be referred to it. The nerves of feeling, therefore, together with the brain and the nerves of the other external senses, belong to the quality of Endurance, or to the power of receiving and sustaining impressions. Between the nerves and the objects of feeling is the skin, which is the medium by which these objects impress themselves so that their qualities shall be perceived.

We see, therefore, that as Attractiveness is the means by which Endurance is to receive the impression of proper objects, the skin, or index of Attractiveness, is the medium through which the nerves of feeling are physically to receive these impressions. Both the signs of Attractiveness and the signs of Endurance are the *instruments* by which this important end is effected. Did not the mind so form the body that the indices of the powers and faculties of the mind should be their instruments, the body would be to the mind a dungeon, or a tomb in

which the person might be said to be buried alive. Even now the body is an encumbrance; and it is felt to be so by those who form a true estimate of the powers and capacities of the soul above senseless and inert matter, and who are sure that the body is matter and nothing else.

Allowing that there is no defect in the nerves which are the instruments of sensation, the thinner the skin the more delicate will be the sense of feeling and touch. Without the intervention of the skin, there could be no proper sense of feeling, but only pain and suffering; and if the skin were very thick, the perception of the qualities of things would be exceedingly dull, and the pleasure from this source would be cut off. When a person with much Attractiveness touches anything, it is lightly, and he chooses that the object shall be soft and light, for then the sensation is agreeable and natural, being suited to the softness and delicacy of the instrument, and to the fineness of the sense. He loves also to have the sensation *diffused* or spread over a more extended surface, for thus it is made more soft and exquisite, and the enjoyment from it is given to a greater capacity of endurance. A fluid element perfectly surrounding the body is capable of affording the greatest luxuriance of sensation. The delightful effects of a salubrious clime, or of a genial atmosphere like that of an Indian summer, are realized most by those who have most Attractiveness; and such persons have generally a large sign of Love of Enjoyment in the face. A person with a coarse, thick skin, handles things more roughly, and needs to come in contact with them more violently in order to feel them. He may even take more pleasure in blows and thumps from solid substances than in the gentle pressure of air, water, and the softest down. The ox has a thick skin, and heavy blows from a cartwhip do not appear to awaken very much sensation in him. A wooden yoke on the neck does not make him flinch from the shock and pressure of a heavy load. The horse, on the contrary, has a thin skin: he feels the lash keenly, and is easily galled in the harness. The elephant, with his very thick integument, must be driven with a sharp iron.

All animals, in short, that have thick skins, are tough and comparatively insensible; while those with thin skins are tender and easily hurt.

It is well known that the sense of feeling is different in different parts of the body—that in some parts it is dull and accompanied with a feeling of indifference, and that in others it is acute and exceedingly pleasurable. These differences are so great as almost to constitute a number of distinct senses, but they are only degrees of the same sense, and agree with the fineness or coarseness of different portions of the skin. In no part of the face is the sign of Attractiveness (or the fineness, thinness, softness, smoothness, delicacy, and transparency of skin) equal to that in the lips, and here certainly the quality of Attractiveness is in proportion to the sign. The ruby redness of the lips is owing to the transparency which accompanies the fineness and thinness, as before stated; and those whose lips are very red have a proportionate thinness of the skin of the face; so that, if the circulation be not deficient, they have rosy countenances, and show whatever emotion affects the heart, which is very apt on this account to be considered the fountain of the affections as it is the fountain of the blood. They have also very great delicacy of feeling and touch, and are so attractive in all respects, that the lips may not direct particular attention to themselves, but receive only their due share of admiration. This is especially the case with those whose minds are well balanced, or who have as much of one class of faculties as of another.

Next to the skin of the lips in thinness is that of the cheeks; and in those who have much Attractiveness these have a delicate carnation, together with a gentle softness, that places them next the lips in the estimation of lovers, and before the lips in the estimation of friends. Those, too, who are inclined to prudishness, or who wish to keep their hearts safely, think more highly of rosy cheeks than of ruby lips, because the attractiveness of the former is less powerful, and therefore less dangerous. The attractiveness of the faculties of love, which are connected

with the cerebellum, is indicated in the lips ; and the attractiveness of the social and domestic affections, which are connected with the posterior lobe, is indicated in the cheeks. The contact of cheek with cheek expresses the mutual confidence and love of intimate friends, of parents, children, brothers, and sisters : it is prompted by these affections as much as the meeting of lips expresses and is prompted by the responsive love of those who are more intimately related.

But, as the love between the sexes is more frequently perverted than the former, it appears in most cases less pure and beautiful in its outward manifestation. The practice of kissing the lips is unnatural when it is made the expression of any other feeling than conjugal love ; and in most instances when it does not express this feeling, it is a token of professions merely, or of flattery and hypocrisy, as it was in Judas Iscariot when he betrayed his Master. Even when it does express love between the sexes, and when there is no tie of consanguinity to prevent the conjugal relation, it is in the great majority of cases the token of a perverted and depraved affection—of a love that is only selfish and sensual, and that gradually leads to misery and ruin. If this be so, the lips should be invested with a kind of sacredness, like something set apart and consecrated to a holy use—to conjugal love, which is ordained of God, and hallowed by its correspondence to the sacred union of Good and Truth. When we make a solemn vow in a court of justice, we kiss the Bible ; and what is the significance of this, or why should the lips be associated with the most holy and sacred things, if what has been said of them be not true ?

There are moments when the affections which spring directly from the conjugal relation are so overflowed and baptized by it, that they seem to be but parts of the same blessed emotion—and then it is that the token of conjugal love is the language of them all. The husband and the wife kiss the pledge of their mutual love, in whom is the image of them both—and it is as if they bestowed this mark of affection upon each other with a more delicate sentiment than it would be otherwise possible to

express ; and the passive but seemingly active kiss of the child is but the echo of their own, as the filial affection is the response of the parental. There are moments, too, when the soul feels an inspiration of the love of Good and Truth, by which conjugal love is elevated almost to heaven ; and then it would imprint the seal of conjugal love on everything pure and noble—on everything which by its transcendent loveliness allies itself with heaven, and makes the soul feel that it is in the presence of angels. We will not deny that it is possible even for the social affections to become so sanctified by charity (which is the gift of God, and therefore holy), that the injunction of Paul, “ Greet one another with a holy kiss,” may be something more than a dead letter ; but let it be remembered also that the apostle warns against profanation and defiling the temple of the Holy Ghost !

In the skin of the eyelids there is a degree of transparency which enables us to distinguish between light and darkness when the eyes are closed, and which is accompanied with a softness and delicacy next in degree to that of the cheeks. This indicates the attractiveness of Submission, Subserviency, Love of Liberty, and of the other faculties connected with the middle lobe of the brain. It is most commonly observed and felt in the eyelids of women, who sustain in many respects a dependent relation, and who love liberty as much as they love to serve others and to comply with the apostle’s injunction respecting submission. It is most observable in the best female servants, who feel domestic and household duties to be attractive, and are held in high estimation for the readiness and alacrity with which they perform them. Children, too, who are dependent on their parents, and bound to submit to their wishes, and to serve them, and who are at the same time very fond of freedom, have this fineness of the skin of the eyelids in an uncommon degree. It is seen most in connection with the drooping of the lid when the feeling of accountability to parents, and of deference and submission, is most expressed ; and then it is the medium of a very attractive influence. When the child is asleep, and almost the perfect image of dependence and quiet

submission (confiding in the influences which surround him in his paternal home — perhaps under the very guardian eye of his mother, and certainly under that of his heavenly Parent), the sign of Attractiveness in the eyelids is very likely to draw particular attention. At such times, the mother, or whoever loves the child very much, feels a desire to kiss the lids, and not unfrequently yields to the prompting. When the feeling of the husband toward the wife is that she is domestic, good, and helpful, and free in all the services she renders him, and yet dependent on his stronger arm, and is the especial object of his guardian care — it may be that he transfers the token of his love from the lips to the eyes, and the wife may not feel that in this there is anything unnatural.

The attractiveness of the Perceptive and Reasoning faculties, and of Benevolence, Gratitude, and the other faculties connected with the anterior lobe of the brain, is indicated by the same qualities of the skin of the forehead which indicate attractiveness in the eyelids, cheeks, and lips. On the lips the fineness of the skin is greatest, on the cheeks it is less, on the eyelids it is still less, and on the forehead it is least. And as the fineness of the skin diminishes, so does the acuteness of sensation, being greatest in the lips, less in the cheeks, still less in the eyelids, and least in the skin of the forehead. This may be proved by an experiment as delicate as it is simple. Touch your finger very lightly on the middle of the forehead, so as to ascertain how much delicacy of feeling the skin is capable of; then touch the eyelids in the same manner, and note the degree of sensibility; then in like manner the cheeks, and lastly the lips — and you will perceive that the delicacy of sensation is increased from one to the other, and that the degrees, though slight, are distinct and perfectly equal, like the intervals in music.

Though the softness of the skin of the forehead is less than that of the eyelids, still it is often so great as to make the brow very beautiful, and to be the medium of a great deal of attractiveness; and that this is the attractiveness of the higher faculties of our nature — of Sensibility, Intelligence, Reason, Imagination,

Benignity, and Reverence—almost every person is capable of perceiving. It is in deference to some of these exalted qualities, or to them all combined, that a gentleman sometimes essays to kiss the brow of a lady with whom he is on terms of intimacy; and if the act is truly what it appears to be—the token of a high appreciation of an intelligent, virtuous, and exalted character,—then is it in reality a well-bestowed compliment, and it is rather a barrier against undue familiarity than an introduction to it. But compliments often degenerate into flatteries, and more often flatteries receive the name of compliments; and this is sufficient in most cases to throw a doubt upon the motives which might prompt such a demonstration.

## LETTER XI.

VERY many persons confound the *organs* of the senses with the senses themselves. The reason of this is, that they suppose each sense to be *dependent* on the peculiar apparatus which indicates it, and which is the instrument of its action. They say that the eye sees, the ear hears, the nose smells, the tongue tastes, and the skin feels, instead of saying the eye for seeing, the ear for hearing, &c. To be sure, it *appears* as if the eye saw, and as if sight was dependent on its material organ, and so of the other senses; but cause and effect have such a relation to each other, that in almost all cases the one appears to be the other: and it is only by a further observation of facts, and the exercise of reason, that the mistake can be corrected.

The earth moves in a certain path through the heavens, in obedience to the sun (for so we are accustomed to express it), but it appears as if the sun traversed the heavens in obedience to the earth. The deceptive appearance is inevitable, for it exists in the nature of the relation between cause and effect, and of our relation to both; and the consequence is, that the cause and effect are reversed in the minds of those who judge from appearances only. "Judge not from the outward appearance, but judge righteous judgment." Do not fall into the absurdity of thinking that the earth stands still, and that the heavens revolve about it; nor that the ear hears, nor that the brain thinks — for the heavens are less superior to the earth than the mind to the body.\*

\* SPURZHEIM, in speaking of certain philosophers who, in his judgment, have too high an opinion of man, as compared with the lower animals, says: "They attribute all his operations to his soul; several of them even give it unbounded power over the body." Such philosophy as this he calls the "blameable method pursued in the study of human nature," and "the principal artificial impediment to the improvement of psychology." Supposing he had said, "They attribute all man's operations to himself; several of them even give him unbounded power



The organs of the external senses indicate Endurance and Attractiveness in conjunction. The nerves of these senses belong to Endurance, and come from the brain; and the membranes which cover the nerves belong to Attractiveness, and are

over his own body?" What does he conceive man to be, if he is not "A LIVING SOUL?" Certainly he did not mean to say that those philosophers ascribe all man's operations to his soul instead of to God. No; he meant to say that most of man's operations should be ascribed to that part of his body called his brain, and that it was the height of absurdity to suppose that the body was dependent on the mind for all its actions. What would he think of us who hold that not only the *motions* of the body but the bodily *form* (not the substance), in every and the most minute part, is an *effect* of the mind—an *index*, and not the cause? An *occult effect and an ocular cause* is an absurdity. We aver that the mind can act independently of the body, but that the body can not act independently of the mind—and there are hundreds of facts to prove it. Every case of trance on record is proof positive of the capability of the soul to think, feel, and act, without the body, far better than with it, and of the incapability of the body to act of itself in the very slightest degree. In trance, the only sign of life the body exhibits is the absence of decomposition, and this is clearly owing to the insensible hold which the soul retains upon it; for if the soul were not going to return to the body, the body would rot and return to the dust whence it was taken.

The following case, which formed so pleasing an episode in the history of the epidemic of last season, is so recent, so near home, and so much to the purpose, that the temptation to quote it is not easily resisted:—

"An incident of the cholera occurred in this city a few days since, which, for several reasons, we think worth recording. Among the households which had been entered and stricken by the fatal disease was that of Mr. Hangley, a worthy Irishman who has long been employed by the commissioner of streets. His wife, a warm-hearted, motherly woman, devotedly attached to children, and self-sacrificing to promote their welfare and happiness, was taken with the cholera, and died and was buried on Thursday, September 20th. Next, a lovely little daughter, seven years of age, was taken sick, and she too died, and her body laid out and her limbs adjusted in the cold embrace of the King of Terrors. The father applied to Alderman Wingate for a coffin, but for some cause it could not be had immediately, and its delivery was postponed for an hour or two. During this time, Mr. Hangley returned home—when the supposed dead child stretched forth her arms, with the exclamation, 'Oh, father! I have been to heaven, and it is a beautiful place!'

"After the surprise and the excitement at the changed condition of the girl had subsided, she gave a relation of what she had seen, as she expressed it, 'in heaven.'

"She saw her mother in heaven, and she was taking care of little children, many of whom she called by name, and among them she said were 'four children of Uncle Hangley, and three children of Uncle Casey. Aunt Lynch is not there now, but she will be to-morrow; and on Sunday I shall go back again.'

"'But,' said an older sister, 'it can not be so, dearest, for there are but two of Uncle Casey's children dead!'

"'Yes,' I saw THREE of them in heaven, and dear mother was taking care of them. All were dressed in white, and all were very happy, and the children playing. Oh! it was beautiful there, and I shall go there again next Sunday afternoon at four o'clock.'

derived from the skin. In proportion to the size and extension of these nerves, and to the fineness of the parts which cover them, is the acuteness of these senses. This union of Endurance and Attractiveness, as indicated in the external senses,

“Mr. Hangley immediately informed Mr. Wingate that his daughter was not dead; when he, in company with Dr. Morrison, visited the house, and the little girl related substantially the same story. It seems, too, that shortly after this relation of the little girl, of what she had seen and heard in heaven, a message came from Mr. Casey, in Carmel, giving information of the death of another child, and inviting them to attend the funeral.

“Of the four children of her uncle Hangley, two died in this city, and two were drowned on their passage from Ireland.

“We called on Saturday to see and talk with this little girl, but she was very feeble, and just then in a drowse, and we would not allow her to be disturbed. She is said to have a very thoughtful and serious countenance, and to be a very interesting child. She had no wish to live, but preferred returning to her mother. The father and the sisters are seriously but very happily impressed with the relations of this sweet child, and joyfully believe the story she tells. Their house is a pattern of neatness, and they all possess hearts overflowing with affection, and are sincerely happy on account of their heavenly messenger.

“‘I was sorry,’ said Mr. Hangley to Dr. Morrison, in the honest, truthful simplicity of his heart, ‘when my good wife died, but I’m not now, but only wish to be with her.’ The elder sisters, too, live now in joyful hope of meeting at length (and they care not how soon, if it be God’s time) their dear mother in heaven, where she has been seen by their angel-sister, who has been permitted to return to the earth, and make the fact known to them. . . . .

“Since the above was published, there have been a great many inquiries respecting this little girl, some of which we will now answer:—

“Although at the time of the seeming death of this child, it was not supposed that her aunt Lynch was dangerously ill—she not having the cholera, but attacked with dysentery—yet she died the next day, as predicted!

“On Sunday afternoon, Mr. Daniel Warren, a very worthy, religious man, who has been much among the cholera patients, and feeling perhaps a little moved by curiosity, called to see the little girl, and addressing her cheerfully, told her that she appeared better, and would soon be well, and get out in a day or two.

“‘But I’m going to mother again at four o’clock,’ she quietly and softly said.

“‘When—to-morrow?’

“‘No, to-day.’

“Mr. Warren endeavored to turn her attention to hopeful prospects of recovery; but the little sufferer was fast sinking away—the death-rattle was heard, and she soon ceased to breathe; her pulse stopped, and the fixedness of death was impressed upon her beautiful countenance. She was dead!

“Mr. Warren looked at the town-clock, in the distance, from the window, for there was no time-piece in the house, and it was four o’clock. While pondering upon (to him) the singular coincidents in this case, and about half an hour had passed, when new signs of life appeared, and again the spirit of the sweet girl returned. She asked for water, and said she was tired, and sank away into a quiet sleep.

“Since then, she has been gradually recovering; but her elder sister, who watched her so tenderly, and who would so willingly have accompanied her to live with her blessed mother in heaven, was the next day taken with the cholera, and the following day died, and was buried.

constitutes a compound quality, which is both active and passive, —the activity of the latter and the passivity of the former being the property of both qualities in one. Endurance, as connected with Attractiveness, and manifested through the medium of the external senses, is thus something more than passive: it not only sustains the impressions of external objects, but it sees, hears, tastes, and feels them. The optic nerve, for example, is not only impressed by the images of objects, but the mind exerts an active power upon them—it *looks* at them, and thus *sees* them. As to the passive reception of impressions, we are often assured, by what appears to be an effort of memory, that the mind has been impressed with the images of objects that it did not see.

But in this union of Endurance and Attractiveness, not only is the first made active, as indicated in the organs of the external senses, but the latter is made passive by the same cause. This latter quality, as manifested through the medium of these organs, is something more than the active power of attracting the various objects of the faculties—it is also the *susceptibility of being attracted* by them. The objects of the conjugal, parental, filial, and fraternal affections, are husbands and wives, sons and daughters, fathers and mothers, brothers and sisters; and these objects are strongly attracted to those who have the attractiveness of these affections in a superior degree. This implies the susceptibility of being attracted in the objects themselves; and those who attract are themselves the objects of Attractiveness. Each individual, in short, possesses the power of attracting and the sus-

“The father of this girl is ignorant, yet a fine specimen of a pure, warm heart, with all the unsophisticated simplicity and truthfulness of nature. He is poor; he had a large family; and he says that for the whole season he had but two pounds of butter in his house, and they had had meat but twice. They had lived almost wholly upon bread and tea. ‘There were many of them,’ he said, ‘and his own hands must earn their living; and by prudence, a barrel of flour would last them four weeks, and he must do what he could for himself and the children, and they all were quite happy.’ The little boys had by their labor picked up the boards out of which his dwelling had been constructed, and he hoped after a time to have it all nicely of their own. Perhaps a more united, loving, and contented family, where all were willing to do and suffer for each other, can not be found.

“Such are the simple facts in the case, which we leave for the present without comment or attempted explanation.”—*Bangor Courier*, Oct. 16, 1849.

ceptibility of being attracted; for Attractiveness is both active and passive, and its action between different individuals, and even between human beings and animals, is mutual. Those who are most susceptible to the influence of attractiveness in others, have the greatest acuteness of the external senses; and they have generally an equal degree of attractiveness, as indicated in the face, the signs of which were mentioned in the last letter.

Those, too, who have great acuteness of the external senses, have great active power of Endurance. They are not so subject to satiety and *ennui* as others; they do not grow weary of seeing, hearing, smelling, tasting, and touching; and of this the French may be taken as examples. There are no people more fond of sight-seeing than they, and none who revel more in the gratification of the external senses—and certainly they have the organs of these senses in a very uncommon degree of perfection. They take almost if not quite as much pains to make their food savory and well flavored as the Chinese do, and they sit so long at table that it seems as if they would never weary of tasting. They are lavish in their use of perfumes; and they do not tire of a never-ceasing chit-chat, and of other noises, as most people do. It is well known, too, that the Frenchman thinks so highly of the sense of *touch*, that he sometimes admits into the category of realities only those things which are tangible, and that very few things are received by him as true that are not subject to the evidence of the senses. This agrees with what was said of the quality of Endurance in one of the former letters, viz., that a predominance of this quality predisposes an individual to put the effect before the cause—matter before mind—than which the putting of “the cart before the horse” is not a greater absurdity. What can exceed the folly of maintaining that the brain is the organ of the mind in the same sense that the liver is the organ of bile—making the mind a secretion, or at best a function of the brain? And yet the ultra-scientific French physiologists pride themselves in this.

There is a connection between Endurance and Repulsiveness,

like that between Endurance and Attractiveness. This also constitutes a compound quality, which is both active and passive, the passivity of Endurance being partly that of Repulsiveness, and the activity of Repulsiveness being partly that of Endurance. It is indicated by the posterior and anterior portions of the spinal marrow, and by the nerves of feeling and the nerves of motion proceeding therefrom. The activity of Repulsiveness in this intimate connection with Endurance, makes the latter active in connection with all kinds of muscular exertion, just as by its union with Attractiveness it is active in the matter of seeing, hearing, smelling, tasting, and feeling. That kind of active Endurance which enables a person to perform long marches, to sustain protracted fastings, and to bear up under privations and hardships in general, is in proportion to the size of the motor nerves and the accompanying vigor of the muscular contractions, and to the size of the nerves of feeling in connection with those of motion. The person whose sense of feeling is acute, and who is capable of very vigorous muscular contractions, has in the extremities of his body, particularly in the ends of his fingers, an acute *sense of touch*, or the power of discriminating the various qualities of plastic and solid substances; and the *acuteness of touch* in him *indicates the active power of Endurance*, as just described. The person, on the contrary, whose power of muscular contraction is feeble, or in any degree paralyzed, is deficient in touch, though his sense of feeling be ever so tender and delicate; and in him the union of Endurance and Repulsiveness, as manifested in touching, handling, and frequent contact with objects, is proportionably deficient.

But the acuteness of the sense of touch is indicated not only by the motor and sensitive nerves, but also by the thinness of the skin covering the ends of the fingers, the palms of the hands, and all parts of the body that are used in handling or in observing and changing the properties of things. The connection of the skin with the nerves of sensation and motion indicates the connection of Attractiveness with the first two qualities — with Endurance in the simple *sense of feeling*, and with Re-

pulsiveness *through the medium of Endurance* in the conversion of feeling into *touch*. The skin and the extremities of the nerves of motion are not directly united, but they are united through the medium of the nerves of feeling: and so Attractiveness and Repulsiveness, which are the opposites of each other, are not united directly, but through the medium of Endurance.

By its union with Endurance, therefore, Attractiveness manifests itself passively, not only in the susceptibility of being attracted by the objects of attractiveness, but in the susceptibility of being repelled by the objects of repulsiveness. A person with a very delicate sense of touch is very susceptible to the influence of repulsiveness in others, and in the lower animals; just as, with great acuteness of seeing, hearing, smelling, tasting, and feeling, he is very susceptible to the influence of Attractiveness. In the sense of touch, there is both the liability to be attracted and repelled, but the attractiveness of an object is perceived in the greatest degree by the sense of sight, and the repulsiveness of an object is perceived in the greatest degree by the sense of touch. The first sight generally decides whether there be any mutual attraction between individuals, or whether the traits of character which are attractive in one correspond to the traits of character to which belongs the susceptibility to attractiveness in the other. If, after a full use of the sense of sight, a person be not in some degree attracted by another, he will be decidedly repelled if he comes in contact with that individual. As females have more acuteness of touch than males, so are they more easily repelled; and it behoves a gentleman to know whether he be decidedly attractive to a lady, or, in other words, *pleasing in her eyes*, before he allows himself to take her *hand*—an act to which the influence of her superior attractiveness makes him peculiarly liable. Woman is more attractive, more susceptible to the influence of Attractiveness, and more susceptible to the influence of Repulsiveness, than man. She is more repelled by repulsive animals—worms, serpents, lizards, &c.—than he; and she is more attracted by attractive animals, as rabbits, sheep, deer, and horses. It may

be observed that men who are exceedingly fond of horses, have acute senses, and thin, smooth skins, and ruddy complexions (if the circulation be not deficient), like women. They seem to appreciate the soft, fine, smooth, and velvet-like skin of the horse's face about the mouth and nose, where they are very fond of caressing the animal. Who would think of doing so by a cow or an ox, unless it were for the sake of experiment, in which case they would experience a feeling of repulsion instead of the opposite?

Under the age of four years the motor nervous system is not developed proportionably to the nerves of feeling. Little children have not, therefore, that degree and activity of the sense of touch, which indicates a good degree of susceptibility to the influence of Repulsiveness. They are unsteady and uncertain in their motions, and do not observe accurately the form, size, density, sharpness, or the other properties of substances which come before them, and which they lay hold of. They scarcely distinguish even between objects animate and inanimate, as shown by the manner in which a child takes a kitten from the floor, laying hold of it as if it were a heap of cotton. So long as the sense of touch is thus undeveloped (no matter how acute the sense of feeling and the other senses may be), the liability to be repelled will not be manifested except in a very inferior degree. The presence of a snake will not excite that peculiar shock and recoiling which it does in older persons.\* But at

\* "BITTEN BY A MASSASAUGER.—One day last week," says the Allegan (N. Y.) Reporter, "a young child of Mr. Rockwell, in Trowbridge, about three years old, came upon a snake, and fell to whipping it with a switch, and was bitten in the hand three times, leaving six separate wounds. The hand and arm immediately began to swell, and before medical aid could be obtained the swelling had reached the body, and the child was beyond hope. It lived only twenty-four hours from the time it was bitten."

We fancy the child in this case striking the snake as he would any domestic animal—mischievously, and without the least feeling of repulsion. Very many children have this forward and familiar disposition, showing their combative feelings in a kind of wantonness, that seems to say, "I can do as I please."

In the following statement of Mrs. B— (who is an acquaintance of ours, and a most estimable lady) we place as much reliance as if it were communicated to the "Scientific Convention" by one of its most learned members. The occurrence took place in the very house in which these letters were written—a country residence, bordering on "the olden time." Her eldest son, when not quite old enough

just that age when the child manifests a clear perception of the properties of things, and shows mechanical skill, together with the desire to use tools, to whittle, to construct, to build, to sew, to draw with a pencil, &c., the development of a new and wonderful susceptibility manifests itself—the susceptibility to the influence of repulsiveness in others, and in worms, snakes, lizards, and all creatures that have much of this quality.

The lower animals manifest the susceptibility to the influence of repulsiveness in proportion to the acuteness of touch. This is very great in the snail that recoils from the slightest contact—and in the feelers of many kinds of insects and worms, the least interference with which causes an instantaneous shrinking. In the horse the sense of touch is manifested in the greatest degree in the lips, these being to him instead of hands. He moves them a great deal, which is an indication that they are endowed with a nice sense of touch, as we see by the constant motions of the antennæ of snails and insects, and by the similar motions of the arms, hands, and fingers, in the case of Laura Bridgman, the deaf, dumb, and blind girl, who is undoubtedly

to run alone, was left in the cellar kitchen, the outside door being open, while she busied herself with some duties up stairs. She heard him laugh—listened, and again his merry laughter reached her ears, and she thought some one had come in and was playing with him. To assure herself, however, she went down; and what was her excitement and alarm at seeing her little one playing with a snake! It was a common, harmless thing, of a little more than a foot in length. The child was amusing himself by raising the creature across his arm, and seeing it glide off upon the floor, at which he would laugh heartily. The mother, of course, ran to the little fellow as fast as possible; and the snake, frightened by her demonstrations, made his escape.

A still more remarkable event of this kind is one of the memorabilia of the family. An aunt of Mrs. B——, when a child, had, for a number of times, taken her bread-and-milk out of doors—to where, they had not observed. One morning she was forbidden to do so, and in consequence did not wish to eat her breakfast. It occurred to the mother to let her do as she pleased, and then to go and see what she was about. She was seated on the ground, and a large snake was helping himself to a share of the milk. The creature was a formidable-looking animal, and the mother was dreadfully frightened. She feared the snake might bite her child if she ran to it suddenly; and while in this state of hesitation, she heard the child say, while tapping the snake on the head with the spoon—“Who is 'ou? 'Ou say, s—s—s—, but 'ou a'n't goose!” The frightened mother found strength to snatch away the child, and the snake, not being in haste to depart, was despatched by other members of the family: but the child missed it, mourned for it, and showed that it had formed a real attachment for the reptile—as much as if it had been a pet, which no doubt it really was.



very sensible of the quality of Repulsiveness in those with whom she brings her wonderful fingers in contact. Though it is so easy to step from snails and insects to so charming a creature, it is not easy to step back again; but it is a duty, and must be done.

We were speaking of the acuteness of touch in the horse. In proportion to this is his susceptibility to the influence of Repulsiveness. He startles and recoils, or draws back, at the presence of all objects that have the general form of monsters, as serpents and alligators, either coiled up or stretched out—unless, indeed, his experience has before convinced him that that they are inanimate. All objects that are capable of being converted into forms of serpents and crocodiles are most likely to produce this effect on him. That this is not the fear which arises from Cautiousness is evident from the fact that the ass and the elephant, and other animals, which are much more cautious, do not exhibit it. This *skittishness*, as it is called, belongs to horses that are high-spirited, and is half spirit and half fear—very frequently the former more than the latter.

Birds have the sense of touch in a very inferior degree: their mouths are without lips, their feet are callous and scaly, and their upper extremities are not preensile, but covered with quills. They are equally deficient in the susceptibility of being repelled. Many of them live on worms, which they would not do if they were repelled by them; and some of them live on reptiles, not excluding from their catalogue of dainties even lizards and snakes. The snakes, who have a right to be revenged on them, have not much trouble in catching some of the smaller of the feathered tribe, who, though they have wings, do not always use them in flying away from their subtle enemies, but sometimes, it is said, fly directly into their mouths. It has been observed that the bird, when under the influence of the serpent's charm, manifests great fear: others say that the bird falls a prey to the monster in defending its nest. This may be so; but if the little creature were susceptible to the influence of Repulsiveness, would not its dexterity be sufficient to insure its

safety? The truth is, the bird has very great susceptibility to the influence of Attractiveness, indicated by very great acuteness of seeing, hearing, and feeling, and has scarcely any susceptibility to the influence of Repulsiveness; so that the great attractiveness exerted through the medium of the serpent's eye and indicated by it, may, after all, captivate the bird in spite of its fears, while the reptile's far greater repulsiveness goes for naught. In museums a serpent and a canary-bird are sometimes confined in the same cage, the latter appearing well enough suited with the companionship; but when it is attempted to bring the serpent into the neighborhood of the monkey, you see a great scrambling—the creature with hands acts as if he *would not touch him for all the world*.

## LETTER XII.

THE first three qualities of mind, in their connection with each other, constitute a compound quality, distinct and yet partaking of the nature of its elements. This triple quality seems to be identical with the temperament which the ancients denominated the *choleric* — otherwise the *nervous* — the name by which it is more commonly known in modern days. The latter appellation, as designating the part of the animal economy belonging to this temperament, is seen to be appropriate. The term *choleric* characterizes the temperament itself, which is therefore more properly called the *Choleric Temperament*.

The degree of this temperament is in proportion to the strength of Endurance, Repulsiveness, and Attractiveness, and to the balance and consequent unity of the three. Its indications are the signs of the *Susceptibility to the influence of Repulsiveness*, or the union of the first three qualities of the mind. An exquisite touch, which generally accompanies a nice perception of the properties of things, and a good deal of mechanical ingenuity, is a sign of the choleric temperament. Blind persons usually have very great nicety and delicacy of touch, together with excellent mechanical faculties; and they are, generally speaking, choleric: they take fire readily — are easily touched — they seem made of light combustibles, which a very little friction will set on fire, and it is necessary to be very cautious lest we make them angry. There is something like lightning in their composition — their temper being easily excited, quick, and soon over. These remarks do not apply to those who become blind at an advanced age, but rather to those who are born blind, and whose susceptibility to the influence of Repulsiveness “grows with their growth and strengthens with their strength.” Of several persons who have an equal degree of this

temperament, it must be observed that some have a greater power of self-control than others; and that some struggle hard to overcome their fiery tempers, while others give them loose rein. If they are governed by self-control, by prudence, by reason, or by moral and religious faculties, it may be seen in the face, where the signs of these faculties are to be found.

Artists who have much merit in their profession, are, generally speaking, remarkably choleric. A word of criticism not cautiously and prudently introduced excites in them often a sudden gust of passion, and not unfrequently they have been known to spoil a beautiful picture, or dash in pieces an exquisite model, in a sudden fit of anger. The electricity of the clouds generally flashes harmlessly and even beautifully in the heavens, but sometimes it strikes, and produces fearful destruction: and so it is with the choleric temperament. The tendency to take fire in this way, or the susceptibility to being highly incensed, piqued, or offended, by what is uncongenial and disagreeable in another, is the manifestation of the susceptibility to the influence of Repulsiveness in connection with the faculties of Sensibility, Sensitiveness, Self-Defence, Relative-Defence, Hurling, &c. If the signs of these faculties are large, together with the signs of the choleric temperament, it becomes a person to look out how he speaks to the individual, or how he treats him!

The nervous system circulates a fluid that is either electricity or something like it; and what this fluid is physically, the choleric temperament is mentally. In other words, the one corresponds to the other. The choleric individual is sudden, rapid, flashing and fiery, and there is a subtlety in his reasoning and imagination that does not belong to others; but it must not be supposed that his body is proportionably lively—on the contrary, it frequently seems made of the heaviest, the most inert, and the most substantial materials. In fact, they are the densest and most ponderable substances that have the most affinity for electricity, and whatever has an affinity for electricity affiliates most with the choleric temperament.

The Dutchman is pre-eminent for Endurance, Repulsiveness, and Attractiveness; for a large brain, powerful spine, and fine skin; for a delicate touch, and a fine talent for art; for susceptibility to the influence of repulsiveness, and a choleric temperament; for a heavy body and a subtle mind. The "choleric Dutchman" is almost a proverb. He is more easily repelled than the Frenchman, though not so easily attracted; and he has more taste and talent for the fine arts, though he is less luxurious. He is also less gross and sensual in his feelings and philosophy: but though he has more subtlety of reasoning and imagination, he is not so much more spiritual as is generally supposed. The most subtle substance approximates no nearer to the nature of the soul than the most dense and ponderable. Mere reason is the touchstone of truth with the German, as the external senses are with the Frenchman, and little or nothing is left for the exercise of faith. All that is above reason and the external senses receives the ban of the "supernatural," and this is the common foe of each. But as much as reason is higher than the external senses, it admits of more spirituality—the highest degree of which belongs to the highest faculties, viz., the moral and religious.

There is one very observable index of the Choleric Temperament that has not yet been mentioned. It is the growth of hair on the head. Those who have thick hair, growing down upon the forehead, as exhibited in the accompanying portrait of JOHN C. CALHOUN, are highly choleric. General Andrew Jackson is another striking example. In the Dutch, in very eminent artists, in many of the blind, and in boys and girls more than in little children and adults, this luxuriant growth and crowding of the hair upon the upper part of the forehead is to be met with; and the choleric temperament, as it has been described, will be found to accompany its sign. The head of a child is sparingly supplied with hair, and is bald just above the forehead, until the susceptibility to the influence of repulsiveness, or the choleric temperament, is fully developed; at which period of life the natural covering of the head is very



abundant and grows down upon the forehead, so as to lessen to a considerable extent that very important measure of human intellect. The fond parent is in that case very anxious to put a stop to the encroachment, as if the measure of intellect were in reality lessened thereby; and is even proud if he can include a part of the top of the head, as if the forehead had a right to claim it, and thereby denoted more lofty and towering abilities. How common it is for people to speak of high foreheads, which are in reality partially bald heads—and to say that foreheads are low, when the truth is, they are partially covered with hair! They must be cautious how they say anything derogatory to the talents of these people with apparently low foreheads, for there is a fiery element hidden under their forelocks, and old Father Time would not turn his back upon them quicker than they.

Perhaps this matter of high foreheads deserves something more than a passing notice. In a face of proper proportions, the height of the forehead, the length of the nose, and the distance from the nose to the base of the chin, are equal. No

other proportions can consist with harmony and balance between the different faculties and qualities of the mind, and no other can be perfectly beautiful. This rule is well understood by artists, and they never vary from it except it be in compliance with the deformity which is sometimes met with. The foreheads which the ancients gave to their models of beauty are such as would be called low in these modern days, when all men are ambitious to be approved as wise by the rules of phrenology. Even artists and poets, whose creations should be formed after the models of Nature, are possessed of the passion for broad, high, smooth foreheads, in which there is no expression, but only a bare and exposed surface. The ancients knew better than to take away from the expression of the face by expanding the forehead beyond its proper limits—or rather Nature knew better, and they followed Nature. Little did they think that bald heads would ever be considered a mark of beauty in young persons, or that the lack of expression in the brow could be considered expressive of intellect. When people desire the *name* of sense rather than the possession, they are pretty sure to show their lack of it.

But let that pass. There is greater strength and energy (other things being equal) of all the faculties in one who has a great deal of the choleric temperament, than in one who has but little of it; and the person who has a thicket of hair upon the head, extending down and laterally upon the forehead, and looking as if it would resist one's efforts to pull it out, has this temperament in an uncommon degree. There is something of the character of Samson in such an individual, whether his strength lay in his hair or not. It may be said at least that strength lies in the motor-nervous system, which has been shown to be another sign of the choleric temperament. As old age advances, feebleness of mind and body gradually take the place of vigor; and not only do the nervous system and the external senses decrease, but baldness gradually takes the place of flowing locks. Childhood is feeble, and the hair is weak; but boyhood is strong, vigorous, high-spirited, and passionate:

and the hair, which is the index of this, is strong, and is often subjected to a vigorous pulling in consequence of being connected with such a temper.

The horse has that balance and strength of Endurance, Repulsiveness, and Attractiveness, which constitutes the susceptibility of being repelled, and which is indicated by a large development of the motor-nervous system, together with the nerves of feeling and the fineness of the skin. He is in reality exceedingly choleric: he is fiery and high-spirited, and will not brook injury. You do not whip a high-spirited horse, but *touch* him.



When his pride has not been beaten out of him, his anger comes and goes like a flash: there is electricity in his movements, and lightning in his eye, corresponding to the choleric temperament;



and the sign of this is the mane—so that it may be said with truth, “his neck is clothed with thunder.” The mane is properly the hair of his head and neck, and distinct from that of the body. Steeds of high metal have the forelock growing farther down, and the whole mane thicker, more vigorous, and springing from a more extended surface, than those spiritless animals which no knight-errant, except he of La Mancha, would willingly bestride. It must be confessed, however, that the choleric temperament shows itself often in connection with uncontrollable viciousness in animals as well as in men. Besides the horse, there is no animal which very nearly approximates man in the manifestations and signs of the Nervous or Choleric Temperament.

THE END.