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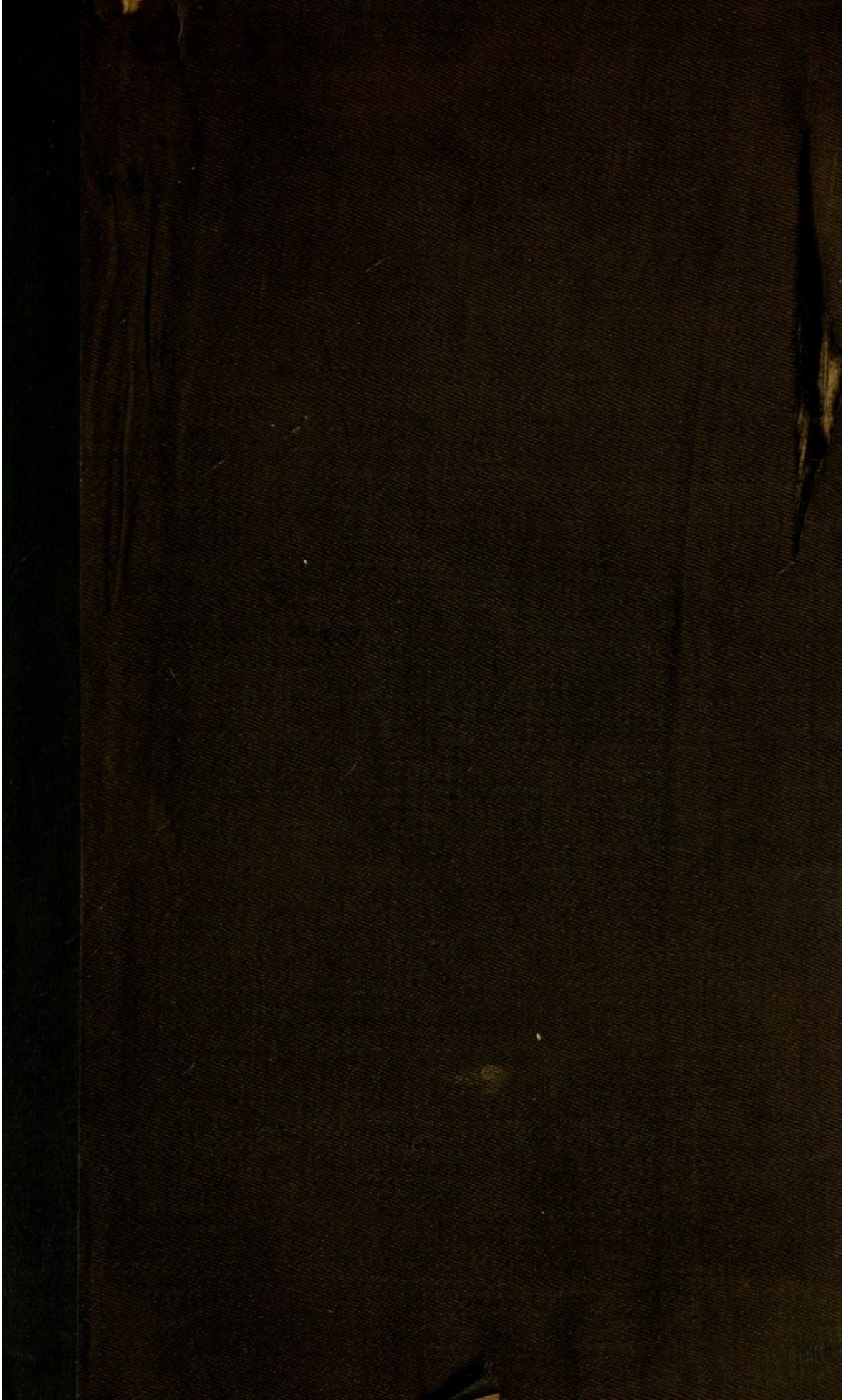

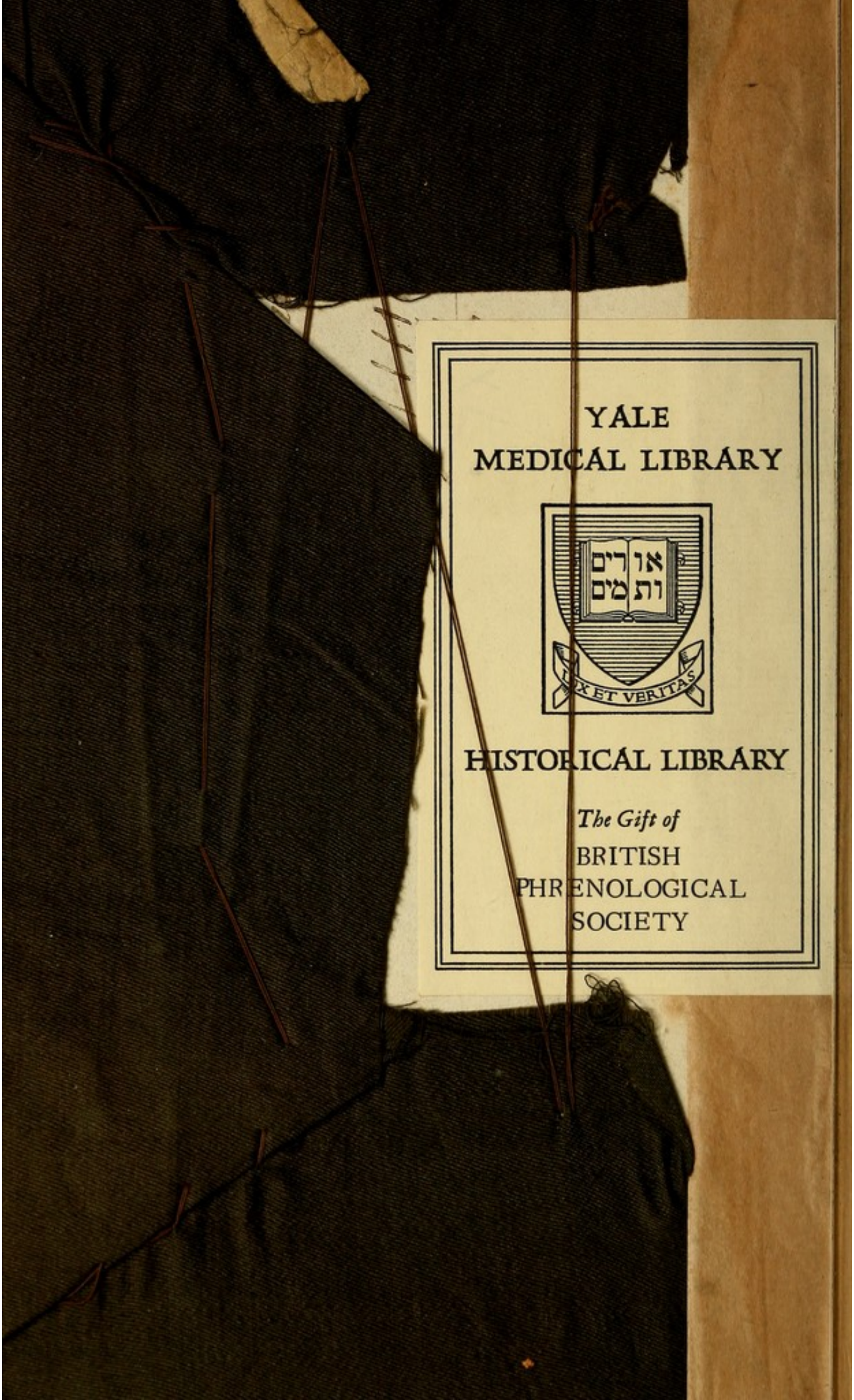

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A

SYSTEM

OF

PHRENOLOGY.

BY

GEORGE COMBE,

LATE PRESIDENT OF THE PHRENOLOGICAL SOCIETY.

SECOND EDITION.

Res non verba quæso.

JOHN ANDERSON JUN., EDINBURGH,
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1825.

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NAMES
of the
PHRENOLOGICAL ORGANS
referring to the figures indicating their
RELATIVE POSITION

I. Propensities.

1. *Amativeness*
2. *Philoprogenitiveness*
3. *Concentrativeness*
4. *Adhesiveness*
5. *Combativeness*
6. *Destructiveness*
7. *Constructiveness*
8. *Acquisitiveness*
9. *Secretiveness*

II. Sentiments.

10. *Self esteem*
11. *Love of approbation*
12. *Cautiousness*
13. *Benevolence*
14. *Veneration*
15. *Hope*
16. *Ideality*
    Wonder
17. *Conscientiousness*
18. *Firmness*

III. Intellect.

19. *Individuality* — *1 or higher* / *2 or lower*
20. *Form*
21. *Size*
22. *Weight*
23. *Colouring*
24. *Locality*
25. *Order*
26. *Time*
27. *Number*
28. *Tune*
29. *Language*
30. *Comparison*
31. *Causality*
32. *Wit*
33. *Imitation*

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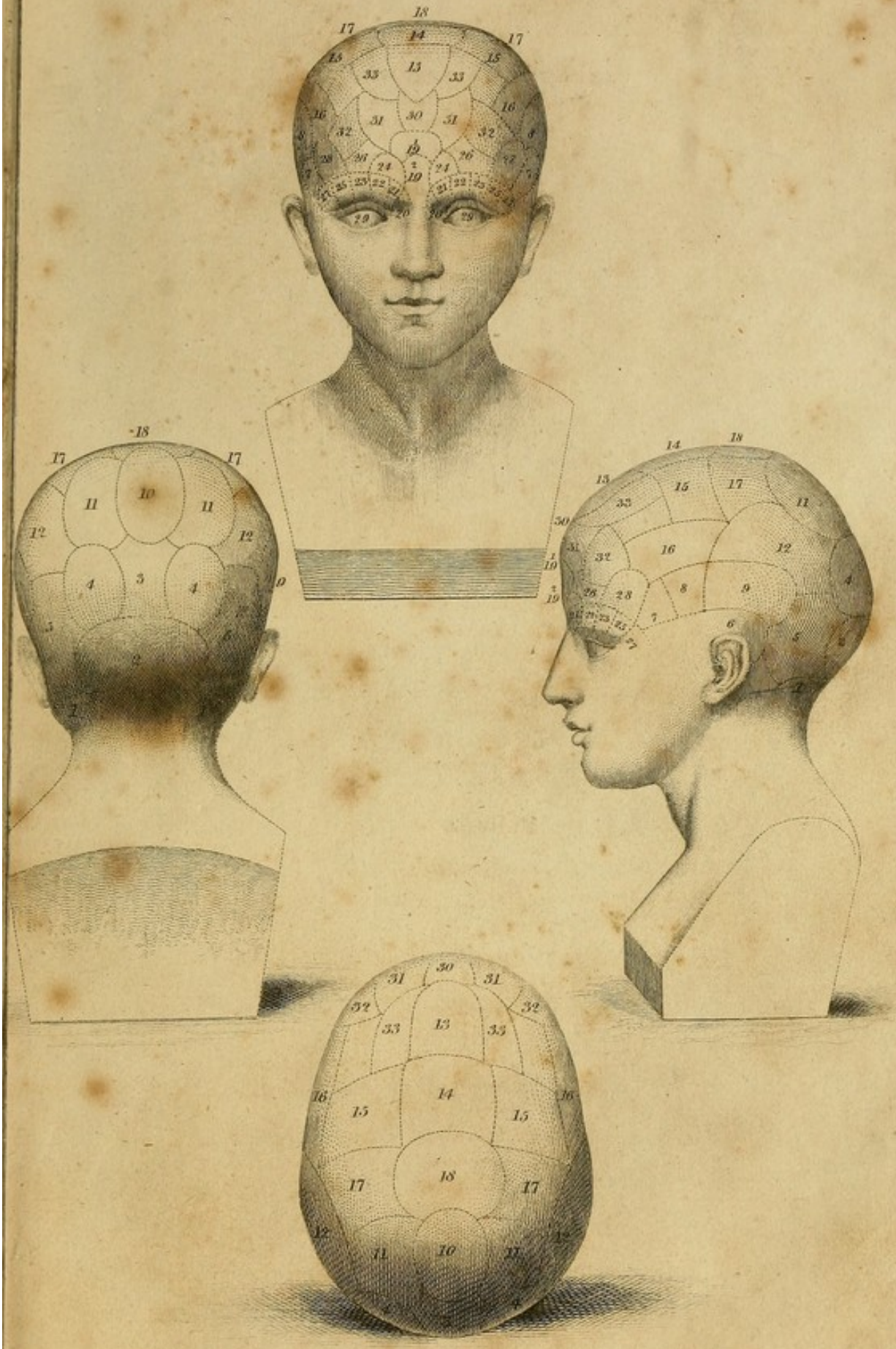

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ORTH BRIDGE STREET 1825.

PREFACE.

THE following are the circumstances which have led to the publication of the present Work.

My first information concerning the System of Drs GALL and SPURZHEIM, was derived from No. 49. of the Edinburgh Review. Led away by the boldness of that piece of criticism, I regarded their doctrines as contemptibly absurd, and their authors as the most disingenuous of men. In 1816, however, shortly after the publication of the Review, my friend Mr BROWNLEE invited me to attend a private dissection of a recent brain, to be performed in his house by Dr SPURZHEIM. The subject was not altogether new, as I had previously attended a Course of Demonstrative Lectures on Anatomy by Dr BARCLAY. Dr SPURZHEIM exhibited the structure of the brain to all present, among whom were several gentlemen of the medical profession, and contrasted it with the bold averments of the Reviewer. The result was a complete conviction in the minds of the observers, that the assertions of the Reviewer were refuted by physical demonstration.

The faith placed in the Review being thus shaken, I attended the next course of Dr SPURZHEIM's Lectures, for the purpose of hearing from himself a correct account of his doctrines. The Lectures satisfied me, that the system was widely different from the representations given of it by the Reviewer, and that, if true, it would prove highly important; but the evidence was not conclusive. I therefore appealed to Nature by observation, and at last arrived at complete conviction of the truth of Phrenology.

In 1818, the Editor of the "Literary and Statistical Magazine for Scotland," invited me to a free discussion of the merits of the system in his work, and I was induced to offer him some Essays on the subject. The notice these attracted led to their publication in 1819, in a separate volume, under the title of "Essays on Phrenology." A second edition of these Essays has since been called for, and the present volume is offered in compliance with that demand. In the present Work, I have adopted the title of a "System of Phrenology," on account of the wider scope, and closer connection, of its parts; but pretend to no novelty in principle, and to no rivalry with the great founders of the science.

The controversial portions of the first edition are here almost entirely omitted. As the opponents have quitted the field, these appeared no longer necessary, and their place is supplied by what I trust will be

found more interesting matter. Some readers may think that retributive justice required the continued republication of the attacks of the opponents, that the public mind, when properly enlightened, might express a just disapprobation of the conduct of those who so egregiously misled it; but Phrenology teaches us forbearance; and, besides, it will be misfortune enough to the individuals who have distinguished themselves in the work of misrepresentation, to have their names handed down to posterity, as the enemies of the greatest and most important discovery ever communicated to mankind.

In this Work, the talents of several living characters are adverted to, and compared with the development of their mental organs, which is a new feature in philosophical discussion, and might, without explanation, appear to some readers to be improper: But I have founded such observations on the *printed works, and published busts or casts*, of the individuals alluded to; and both of these being public property, there appeared no impropriety in adverting to them. In instances in which reference is made to the cerebral development of persons, whose busts or casts are not published, I have ascertained that the observations will not give offence.

ADVERTISEMENT.

THE present volume was put to press before Dr SPURZHEIM's recent work, "Phrenology," appeared; and not being aware that he intended to publish the Anatomy of the Brain in a separate form, I had arranged to include in the Appendix a Treatise on that subject by Dr A. COMBE, with illustrative Plates. The announcement of Dr SPURZHEIM's intention altered this view. Those readers who wish to study the Anatomy, will naturally prefer his Treatise, and, by omitting that subject here, the present volume is sold at a lower price. The reader is therefore requested to delete the reference to Plates I. and II. on page 30, and to the Anatomy of the Brain in the Appendix on page 35.

CONTENTS.

	Page.
INTRODUCTION, - - - - -	1
Principles of Phrenology, - - -	25
Discrimination of Dispositions and Talents, -	26
——————— of Form of Brain, - -	29
Difficulties in discovering Form of Brain, -	31
Practical application of Principles, - -	35
Size in organs indicates power in Faculties, -	36
Power distinguishable from Activity, - -	37
How to estimate Size, - - - -	38
Terms used in designating Size, - -	42
On the brains of the Lower Animals, - -	45
Circumstances which modify the effects of size,	46
ACTIVITY, - - - - -	49
Characteristics of a Primitive Faculty, - -	51
Division of the Faculties, - - -	57
ORDER I.—FEELINGS, - - - -	61
Genus I.—PROPENSITIES, - - -	ib.
1. Amativeness, - - - -	ib.
2. Philoprogenitiveness, - - -	65
3. Concentrativeness, - - -	77
4. Adhesiveness, - - - -	84
5. Combativeness, - - -	90
6. Acquisitiveness, - - -	97
Appetite for Food, - - -	113
7. Constructiveness, - - -	116
8. Acquisitiveness, - - -	127
9. Secretiveness, - - - -	141
Genus II.—SENTIMENTS, - - - -	153
I.—*Sentiments common to Man with Lower Animals,*	ib.
10. Self-Esteem, - - - -	154
11. Love of Approbation, - - -	165
12. Cautiousness, - - - -	174
13. Benevolence, - - - -	181

Page.

II.—*Sentiments proper to Man,* - - - 194
14. Veneration, - - - - ib.
15. Hope, - - - - - 204
16. Ideality, - - - - 208
Wonder, - - - - 225
17. Conscientiousness, - - - 237
18. Firmness, - - - - 252

ORDER II.—INTELLECTUAL FACULTIES, - 256

Genus I.—EXTERNAL SENSES, - - - ib.
Feeling or Touch, - - - 268
Taste, - - - - - 269
Smell, - - - - - ib.
Hearing, - - - - ib.
Sight, - - - - - 272

Genus II.—INTELLECTUAL FACULTIES WHICH PERCEIVE EXISTENCE, - - - - 274
19. Individuality, - - - - ib.
Upper Individuality, - - - 281
Lower Individuality, - - - ib.
20. Form, - - - - - 284
21. Size, - - - - - 288
22. Weight, - - - - - 290
23. Colouring, - - - - 296

Genus III.—INTELLECTUAL FACULTIES WHICH PERCEIVE THE RELATION OF EXTERNAL OBJECTS, 303
24. Locality, - - - - ib.
25. Order, - - - - 309
26. Time, - - - - - 310
27. Number, - - - - 312
28. Tune, - - - - 316
29. Language, - - - - 322
General Observations on Individuality, and the other Knowing or Perceptive Faculties, - 336

Genus IV.—REFLECTING FACULTIES, - - 339
30. Comparison, - - - - ib.
31. Causality, - - - - 342
32. Wit, - - - - - 355
33. Imitation, - - - - 365

Page.

Modes of Activity of the Faculties, - - 370
Of the Propensities and Sentiments, - - ib.
Of the Knowing and Reflecting Faculties, - 376
Perception, - - - - 377
Conception, - - - - 379
Spectral Illusions, - - - 380
Dreaming, - - - - 387
Imagination, - - - - 390
Memory, - - - - 393
Judgment, - - - - 395
Consciousness, - - - 401
Attention, - - - - 405
Association, - - - - ib.
Passion, - - - - 413
Pleasure and Pain, - - - ib.
Joy and Grief, - - - - 414
Sympathy, - - - - 417
Habit, - - - - - 425
Taste, - - - - - 428
Effects of Size in the Organs on the Manifestations of the Faculties, - - - - - 434
Combinations in Size, - - - - 441
Combinations in Activity, - - - - 453
On the Cerebral Development of Nations, - - 459
On the Harmony of the Faculties, - - - 478
On Insanity and Criminal Legislation, - - 493

Objections to Phrenology, - - - 516
1st, Materialism, - - - - - ib.
2d, Injuries of the Brain, - - - - 522

APPENDIX.

Dr Gall's arrangement of Organs, - - - 551
Dr Spurzheim's arrangement of Organs, - - 553
Note on Individuality by Mr Scott, - - 556
Note on Individuality by Mr Welsh, - - 560
Note on the Harmony of the Faculties, - - 561

ERRATA.

Page 52, line 8, *for* Memory, *read* Consciousness,
—— 227, — 17, *for* says *read* say

DIRECTIONS TO THE BINDER.

The Plate fronts the Title-Page

A

SYSTEM

OF

PHRENOLOGY.

INTRODUCTION.

PHRENOLOGY, derived from φρην mind, and λογος discourse, professes to be a system of Philosophy of the Human Mind, and, as such, it ought to throw light on the primitive powers of feeling which incite us to action, and the capacities of thinking that guide our exertions till we attain the object of our desires. In commencing our inquiries, it will be proper to take a view of the phenomena, which the human mind presents to our consideration.

In the first place, then, the Human Mind, as it exists in this world, cannot, *by itself*, become an object of philosophical investigation. Placed in a material world, it cannot act or be acted upon, but through the medium of an organic apparatus. The soul sparkling in the eye of beauty does not transmit its sweet

influence to a kindred spirit, but through the filaments of an optic nerve; and even the bursts of eloquence which flow from the lips of the impassioned orator, when mind appears to transfuse itself almost directly into mind, emanate from, and are transmitted to, corporeal beings though a voluminous apparatus of organs. If we trace the mind's progress from the cradle to the grave, every appearance which it presents reminds us of this important truth. In earliest life the mental powers are feeble as the body, but when manhood comes, they glow with energy, and expand with power; till, at last, the chill of age makes the limbs totter, and the fancy's fires decay.

Nay, not only the great stages of our infancy, vigour, and decline, but the experience of every hour, remind us of our alliance with the dust. The lowering clouds and stormy sky depress the spirits and enerve the mind;—after short and stated intervals of toil, our wearied faculties demand repose in sleep; famine or disease is capable of levelling the proudest energies in the earth; and even the finest portion of our compound being, the Mind itself, apparently becomes diseased, and, leaving Nature's course, flies to self-destruction to escape from pain.

These phenomena must be referred to the organs with which, in this life, the mind is connected; but if the organs exert so great an effect over the mental manifestations, no system of philosophy is entitled to consideration, which would neglect their influence, and

treat the thinking principle as a disembodied spirit. The phrenologist, therefore, regards man as he exists in this sublunary world; and desires to investigate the laws which regulate the connection betwixt the organs and the mind, but without attempting to discover the essence of either, or the manner in which they are united.

Hitherto the mind has been studied, by one set of philosophers, with too little reference to the body; and the laws of thought have been expounded with as much neglect of organization, as if we had already "shuffled off this mortal coil." From this erroneous practice of many distinguished authors, such as LOCKE, HUME, REID, STEWART, and BROWN, a prejudice has arisen against the physiology of man, as if the mind were degraded by contemplating it in connexion with matter; but man is the work of the CREATOR of the world, and no part of his constitution can be unworthy of regard and admiration. The whole phenomena of life are the result of mind and body joined, each modifying each; and how can we explain a result, without attending to *all* the causes which unite towards its production?

Another set of philosophers, in avoiding Scylla, have thought it necessary to dash into Charybdis, and taught, that the mind is nought but a combination of matter; and endeavoured to explain its functions by supposed mechanical motions in its parts: but, as we shall hereafter see, this course

of proceeding is equally erroneous as the other; and the only legitimate and philosophical method of investigation is that which is pursued by phrenologists, namely, observing the laws which regulate the union of the mental and corporeal parts of man, without pretending to discover the essence or *modus operandi* of either.

The second object which attracts our attention in surveying the phenomena of mind, is the variety of faculties with which it appears to be endowed. Philosophers and the vulgar equally admit the mind to be possessed of different powers. Thus, it is by one faculty that we reason; by another, that the imagination exerts its powers; and, by a third, that we discriminate between right and wrong.

If we inquire what progress has hitherto been made in ascertaining the primitive mental powers, and rendering the philosophy of man interesting and practically useful to persons of ordinary understanding, we shall find a lamentable deficiency indeed. From the days of ARISTOTLE to the present time, the most powerful intellects have been directed with the most persevering industry, to this department of science,—and system after system has flourished, fallen, and been forgotten, in rapid and melancholy succession. To confine our attention to modern times, Dr REID overturned the philosophy of LOCKE and HUME; Mr STEWART, while he illustrated REID, yet differed from him in many important particulars; and,

laterally, Dr THOMAS BROWN has attacked, with powerful eloquence and philosophical profundity, the fabric of STEWART, and it already totters to its fall. The very existence of even the most common and familiar faculties of the mind is still in debate among these philosophers. Mr STEWART holds out Attention to be a faculty, which all the other philosophers now mentioned deny. These other philosophers, again, state Imagination to be a primitive power of the mind, while Mr STEWART informs us, that "what we call "the Power of Imagination, is *not the gift of na-* "*ture*, but the result of acquired habits, aided by fa- "vourable circumstances *." Common observation informs us, that a taste for music, and a genius for poetry and painting, are gifts of nature, bestowed only on a few; but Mr STEWART, by dint of his philosophy, has discovered that these powers, and also a genius for mathematics, "are gradually formed by "particular habits of study, or of business †." Mr STEWART, on the other hand, treats of Perception, Conception, and Memory, as original powers; while Dr THOMAS BROWN denies them to be entitled to that appellation. REID, STEWART, and BROWN, admit the existence of moral emotions; but HOBBES, MANDEVILLE, Dr PALEY, and many others, resolve the sentiment of Right and Wrong into a regard to our own good, into perceptions of utility, obedience to the laws, or to the Divine command. Thus, after the

* Elements, chap. 7. § 1. † Outlines, p. 16.

lapse and labour of more than 2000 years, philosophers are not yet agreed concerning the existence of many of the most important principles of action, and intellectual powers of man. If, therefore, Phrenology could introduce into the philosophy of mind even a portion of the certainty and precision which attend physical investigations, it would confer no small benefit on this interesting department of science; and that it is fully competent to do so, shall be shewn after we have attended to a few preliminary points requiring consideration.

In the third place, supposing the number and nature of the primitive faculties to be ascertained, it is to be observed, that, in actual life, they are successively developed. The infant feels, before it is observant; and it observes occurrences long before it reasons; and it feels fear, love, attachment, before it is alive to the sublime or the beautiful. A correct theory of mind ought to unfold principles to which these facts also may be referred.

Farther, even after the full maturity of age is attained, how *different the degrees* in which we are endowed with the various mental powers. Admitting each individual to possess all the faculties the assemblage of which constitutes the human mind, in what a variety of degrees of relative strength do they appear in different persons. In one, the love of glory is the feeling which surpasses all; another is deaf to the voice of censure, and callous to the accents of applause. The soul of one melts with softest pity at a

tale of woe; while the eye of another never shed a sympathetic tear. One individual spends his life in an ardent chace of wealth, which he stops not to enjoy; another scatters in wasteful prodigality the substance of his sires, and perishes for want, from a mere incapacity to retain. One vast intellect, like NEWTON's, fathoms the profundities of science; while another feeble mind scarcely gropes its way through the daily occurrences of life. The towering imagination of a SHAKESPEARE, or a MILTON, soars beyond the boundaries of sublunary space; while the sterile fancy of another sees no glory in the heavens, and no loveliness on earth.

A system of mental philosophy, therefore, pretending to the truth of nature, ought not only to reveal the simple elements of feeling and of thought, but enable us to discover in what *proportions* they are combined in different individuals. In chemical science one combination of elementary ingredients produces a medicine of sovereign virtue in removing pain; another combination of the same materials, but differing in their relative proportions, brings forth a mortal poison. In human nature, also, one combination of faculties may produce the midnight murderer and thief; and another, a FRANKLIN, a HOWARD, or a FRY, glowing with charity to man.

If, however, we inquire at the philosphers on the mind, for rules by which to discriminate the effects upon the character and conduct of individuals, produ-

ced by different combinations of the mental powers, what information do we receive? Instead of light upon this interesting subject, we find in their works only disputes, whether such differences exist in nature, or are the result of education and other adventitious circumstances; many maintaining the one opinion, while some few advocate the other. This department of the philosophy of man, in short, is a perfect waste; and not one inch of ground in it is cultivated or improved. Mr STEWART is aware equally of its importance and its forlorn condition. The varieties of intellectual character among men, says he, present another very interesting object of study, which, "considering its prac-"tical utility, has not yet excited so much as might "have been expected, the curiosity of our countrymen*." The reason appears sufficiently obvious. The common modes of studying man afford no clew to the discovery desired.

In thus surveying the philosophy of man, as at present exhibited to us in the writings of Philosophers, we perceive, *first*, That no account is given of the influence of the material organs on the manifestations of the mental powers; that the progress of the mind from youth to age, and the phenomena of sleep, dreaming, idiocy and insanity, are left unexplained or unaccounted for, by any principles admitted in their system: *Secondly*, That the existence and functions

* Dissert. Part ii. p. 198.

of some of the most important primitive faculties are still in dispute; and, *thirdly*, That no light whatever has been thrown on the nature and effects of combinations of the primitive powers in different degrees of relative proportion. It is with great truth, therefore, that Monsieur DE BONALD quoted by Mr STEWART, observes, that "diversity of doctrine has increas-
" ed from age to age, with the number of masters, and
" with the progress of knowledge; and Europe, which
" at present possesses libraries filled with philosophical
" works, and which reckons up almost as many philo-
" sophers as writers; poor in the midst of so much
" riches, and uncertain with the aid of all its guides,
" which road it should follow; Europe, the centre and
" focus of all the lights of the world, has yet its *phi-*
" *losophy* only in expectation."

While philosophers have been thus unsuccessfully engaged in the study of mental science, human nature has been investigated by another set of observers,—Moralists, Poets and Divines. These have looked upon the page of life merely to observe the characters there exhibited, with the view of tracing them anew in their compositions: and certainly they have executed their design with great felicity and truth. In the pages of SHAKESPEARE, ADDISON, JOHNSON, TILLOTSON and BLAIR, we have the lineaments of mind traced with a perfect tact, and exhibited with matchless beauty and effect: But these authors had no systematic object in view, and did not aim at con-

necting their observations by principles which might render them subservient to the elucidation of the phenomena of life, in less skilful hands than their own. Hence, although in their compositions we find ample and admirable materials for the elucidation of a true system of the philosophy of man, yet, without other aids than they supply, we cannot arrive at the fundamental principles which ought at once to unite and explain their observations. Phrenology, therefore, if a true system of human nature, ought to furnish, to the popular reader, the key of philosophy, to unlock the stores of intellectual wealth, contained in the volumes of our most admired and instructive authors.

When, in the next place, we turn our attention to the works of the Physiologists, we discover the most ceaseless, but fruitless, endeavours to ascertain and determine the parts of the body with which the several mental powers are most closely connected. Some of them have dissected the brain, in the hope of discovering in its texture an indication of the functions which it performs in relation to the mind; but success has not hitherto crowned their efforts. When we examine, with the most scrupulous minuteness, the form, colour, and texture of the brain, no sentiment can be perceived slumbering in its fibres; nor half-formed ideas starting from its folds. It appears to the eye only as a mass of curiously convoluted matter, and the understanding declares its incapacity to pene-

trate the purposes of its parts. Imagination has been called in to afford information which philosophy withheld, and theories have been invented to supply the place of knowledge founded on fact and legitimate induction.

"The greater number of physiologists, physicians and philosophers," says Dr SPURZHEIM, "derive "the moral sentiments from various viscera, or from "the nervous plexus and ganglia of the great sympa- "thetic nerve, that is, from the nerves of the abdo- "men and thorax; but, comparative anatomy and "physiology entirely contradict this opinion. There "are animals, endowed with faculties attributed to "certain bowels or viscera, which do not possess these "viscera. Insects, for instance, become angry, and "have neither liver nor bile. Oxen, horses, hogs, &c. "have many viscera in structure analogous to those "of man, and yet they want many faculties which are "attributed to these viscera, and with which man is "endowed." The heart is supposed to be the seat of the tender affections; but the heart of the tiger and of the lamb are alike in structure, and the one ought to be the organ of cruelty, and the other of meekness, if this supposition were true *. Other physiologists have compared the size of the brain of man with that of the lower animals; contrasting at the same time their mental powers; and have been led to the con-

* New Phys. Syst. p. 133.

clusion that it is the organ of the mind, and that its superior development in man indicates his mental superiority over the brutes; but these philosophers have not succeeded in determining the functions of the *different parts* of this organ, and have not been able in any important degree to connect their discoveries with the philosophy of mind. CAMPER, in order to measure the extent of the brain, and, as he imagined, the corresponding energy of the intellectual faculties, drew a vertical line, touching the upper lip and the most prominent part of the forehead; and also a horizontal line, crossing the former, and touching the tips of the upper front teeth, and the external opening of the ear, or, at least, corresponding to these points in its direction; and he thought that man and animals have more understanding, the more the upper and inner angle formed by the two lines, or that including the upper jaw, nose, &c. is obtuse; and, on the contrary, that man and animals are more stupid, the more this facial angle is acute. But this manner of measuring the intellectual faculties is not more correct than those previously mentioned. The facial angle applies only to the anterior parts of the brain situated in the forehead, and is inapplicable to all the lateral and posterior parts; hence it could, even if there were no other objection, indicate only those faculties whose organs constitute the forehead. Besides, in many Negroes, the jaw-bones are extremely prominent, and the facial angle acute, while their

foreheads are in fact largely developed, and their intellectual faculties powerful, although, by CAMPER's rule, they ought to be inferior to many stupid Europeans, whose foreheads are deficient, but whose jaws recede. Hence, the facial angle cannot serve as a means of measuring the moral sentiments and intellectual faculties *.

" Some physiologists, as SŒMMERING and CU-
" VIER, have compared the size of the brain in general
" with that of the face; and, according to them, ani-
" mals are more stupid as the face is larger in propor-
" tion to the brain." But that this rule is not infallible, is easily proved, because LEO, MONTAIGNE, LEIBNITZ, HALLER, and MIRABEAU, had large faces and very considerable brains. BOSSUET, VOLTAIRE, and KANT, had, on the contrary, small faces and also large brains †.

The cerebral parts have likewise been compared with each other, in order to ascertain their functions, as, the brain with the cerebellum, the brain with the medulla oblongata, with the nerves, &c., but these modes also have led to no satisfactory results: for it is known to every one, that no theory of the functions of the brain is yet admitted and taught as certain science, such as the doctrine of the circulation of the blood, and the functions of the muscles, nerves, and bones.

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* New Phys. Syst., p. 197, 198, 199. † Id. p. 200.

The inquiry naturally occurs, therefore, in what manner do the phrenologists pretend to succeed in an investigation which has baffled so many ingenious men. The answer to the question leads me to state shortly a few particulars of the history of the science which is now to be expounded.

Dr GALL, a physician of Vienna, now resident in Paris *, is the founder of the system. From an early age he was given to observation, and was struck with the fact, that each of his brothers and sisters, companions in play, and schoolfellows, was distinguished from other individuals by some peculiarity of talent or disposition. Some of his schoolmates were characterized by the beauty of their penmanship, some by their success in arithmetic, and others by their talent for acquiring a knowledge of natural history, or languages. The compositions of one were remarkable for elegance; the style of another was stiff and dry; while a third connected his reasonings in the closest manner, and clothed his argument in the most forcible language. Their dispositions were equally different; and this diversity appeared also to determine the direction of their partialities and aversions. Not a few of them manifested a capacity for employments which they were not taught; they cut figures in wood, or delineated them on paper; some devoted their leisure to painting, or the culture

* Born at Tiefenbrun, in Suabia, on 9th March 1757.

of a garden; while their comrades abandoned themselves to noisy games, or traversed the woods to gather flowers, seek for bird-nests, or catch butterflies. In this manner, each individual presented a character peculiar to himself, and Dr GALL never observed, that the individual, who in one year had displayed selfish or knavish dispositions, became in the next a good and faithful friend.

The scholars with whom Dr GALL had the greatest difficulty in competing, were those who learned by heart with great facility; and such individuals frequently gained from him by their repetitions the places which he had obtained by the merit of his original compositions.

Some years afterwards, having changed his place of residence, he still met individuals endowed with an equally great talent of learning to repeat. He then observed, that his school-fellows, so gifted, possessed prominent eyes, and recollected, that his rivals in the first school had been distinguished by the same peculiarity. When he entered the University he directed his attention, from the first, to the students whose eyes were of this description, and found that they all excelled in getting rapidly by heart, and giving correct recitations, although many of them were by no means distinguished in point of general talent. This observation was recognized also by the other students in the classes; and although the connection betwixt the talent and the external sign was not at this time esta-

blished upon such complete evidence as is requisite for a philosophical conclusion, Dr GALL could not believe that the coincidence of the two circumstances was entirely accidental. From this period, therefore, he suspected that they stood in an important relation to each other. After much reflection, he conceived, that if Memory for words was indicated by an external sign, the same might be the case with the other intellectual powers; and, thereafter, all individuals distinguished by any remarkable faculty became the objects of his attention. By degrees, he conceived himself to have found external characteristics, which indicated a decided disposition for Painting, Music, and the Mechanical Arts. He became acquainted also with some individuals remarkable for the determination of their character, and he observed a particular part of their heads to be very largely developed. This fact first suggested to him the idea of looking to the head for signs of the Moral Sentiments. But in making these observations, he never conceived, for a moment, that the *skull* was the cause of the different talents, as has been erroneously represented; for, from the first, he referred the influence, whatever it was, to the Brain.

In following out, by observations, the principle which accident had thus suggested, he for some time encountered difficulties of the greatest magnitude. Hitherto he had been altogether ignorant of the opinions of Physiologists touching the brain, and of Me-

taphysicians respecting the mental faculties. He had simply observed nature. When, however, he began to enlarge his knowledge of books, he found the most extraordinary conflict of opinions every where prevailing, and this, for the moment, made him hesitate about the correctness of his own observations. He found that the moral sentiments had, by an almost general consent, been consigned to the thoracic and abdominal viscera; and that while PYTHAGORAS, PLATO, GALEN, HALLER, and some other Physiologists, placed the sentient soul or intellectual faculties in the brain, ARISTOTLE placed it in the heart, VAN HELMONT in the stomach, DES CARTES and his followers in the pineal gland, and DRELINCOURT and others in the cerebellum.

He observed also, that a great number of Philosophers and Physiologists asserted, that all men are born with equal mental faculties; and that the differences observable among them are owing either to education, or to the accidental circumstances in which they are placed. If all difference were accidental, he inferred that there could be no natural signs of predominating faculties, and consequently that the project of learning, by observation, to distinguish the functions of the different portions of the brain, must be hopeless. This difficulty he combated, by the reflection, that his brothers, sisters, and schoolfellows, had all received very nearly the same education, but that he had still observed each of them unfolding a dis-

tinct character, over which circumstances appeared to exert only a limited controul. He observed also, that not unfrequently those, whose education had been conducted with the greatest care, and on whom the labours of teachers had been most freely lavished, remained far behind their companions in attainments. "Often," says Dr GALL, "we were accused of want "of will, or deficiency in zeal; but many of us could "not, even with the most ardent desire, followed out "by the most obstinate efforts, attain in some pur- "suits even to mediocrity; while in some other points, "some of us surpassed our schoolfellows without an "effort, and almost, it might be said, without per- "ceiving it ourselves. But, in point of fact, our "masters did not appear to attach much faith to the "system which taught the equality of mental facul- "ties; for they thought themselves entitled to exact "more from one scholar, and less from another. They "spoke frequently of natural gifts, or of the gifts of "God, and consoled their pupils in the words of the "Gospel, by assuring them that each would be re- "quired to render an account, only in proportion to "the gifts which he had received *."

Being convinced by these facts, that there is a natural and constitutional diversity of talents and dispositions, he encountered in books still another obsta-

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* Preface by Dr GALL to the "Anatomie, &c. du Cerveau," from which other facts in this work are taken.

cle to his success in determining the external signs of the mental powers. He found that, instead of faculties for languages, drawing, distinguishing places, music, and mechanical arts, corresponding to the different talents which he had observed in his schoolfellows, the metaphysicians spoke only of general powers, such as perception, conception, memory, imagination, and judgment; and when he endeavoured to discover external signs in the head, corresponding to these general faculties, or to determine the correctness of the physiological doctrines taught by the authors already mentioned, regarding the seat of the mind, he found perplexities without end, and difficulties insurmountable.

Dr GALL, therefore, abandoning every theory and preconceived opinion, gave himself up entirely to the observation of nature. Being a friend to Dr NORD, Physician to a Lunatic Asylum in Vienna, he had opportunities, of which he availed himself, of making observations on the insane. He visited prisons, and resorted to schools; he was introduced to the courts of Princes, to Colleges, and the seats of Justice; and wherever he heard of an individual distinguished in any particular way, either by remarkable endowment or deficiency, he observed and studied the development of his head. In this manner, by an almost imperceptible induction, he conceived himself warranted in believing, that particular mental powers are indicated by particular configurations of the head.

Hitherto he had resorted only to physiognomical indications, as a means of discovering the functions of the brain. On reflection, however, he was convinced that Physiology is imperfect when separated from Anatomy. Having observed a woman of fifty-four years of age, who had been afflicted with hydrocephalus from her youth, and who, with a body a little shrunk, possessed a mind as active and intelligent as that of other individuals of her class, Dr GALL declared his conviction, that the structure of the brain must be different from what was generally conceived, —a remark which TULPIUS also had made, on observing a hydrocephalic patient who manifested the mental faculties. He therefore felt the necessity of making anatomical researches into the structure of the brain.

In every instance, when an individual, whose head he had observed while alive happened to die, he used every means to be permitted to examine the brain, and frequently did so; and found, as a general fact, that, on removal of the skull, the brain, covered by the dura mater, presented a form corresponding to that which the skull had exhibited in life.

The successive steps by which Dr GALL proceeded in his discoveries, are particularly deserving of attention. He did not, as many have imagined, first dissect the brain, and pretend, by that means, to discover the seats of the mental powers; neither did he, as others have conceived, first map out the skull into

various compartments, and assign a faculty to each, according as his imagination led him to conceive the place appropriate to the power. On the contrary, he first observed a concomitance betwixt particular talents and dispositions, and particular forms of the head; he next ascertained, by removal of the skull, that the figure and size of the brain are indicated by these external forms; and it was only after these facts were determined, that the brain was minutely dissected, and light thrown upon its structure.

At Vienna, in 1796, Dr GALL, for the first time, delivered lectures on his system.

In 1800, Dr J. G. SPURZHEIM * began the study of Phrenology under him, having in that year assisted, for the first time, at one of his lectures. In 1804 he was associated with him in his labours; and, since that period, has not only added many valuable discoveries to those of Dr GALL in the anatomy and physiology of the brain, but formed the truths brought to light, by their joint observations, into a beautiful and interesting system of mental philosophy. In Britain we are chiefly indebted to his personal exertions and printed works for a knowledge of the science.

In the beginning of his inquiries, Dr GALL did not, and could not, foresee the result to which they would lead, or the relation which each successive fact,

* Born at Longuich, near Tréves on the Moselle, 31st December 1776.

as it was discovered, would bear to the whole truths which time and experience might bring into view. He perceived, for instance, that the intensity of the desire for property, bore a relation to the size of one part of the brain; and he announced this fact by itself, and called the part the organ of Theft, because he had found it largest in thieves. When he had discovered that the propensity to destroy was in connection with another part of the brain, he announced this fact also as an isolated truth, and named the part the organ of Murder, because he had found it largest in criminals condemned for that crime. In a similar way, when he had discovered the connection between the sentiment of Benevolence and another portion of the cerebral mass, he called the part the organ of Benevolence; and so on in regard to the other organs. This mode of proceeding has nothing in common with the formation of an hypothesis; and, so far from a disposition to invent a theory being conspicuous, there appears, in the disjointed items of information which Dr GALL at first presented to the public, a want of even an ordinary regard for systematic arrangement. His only object seems to have been to furnish a candid and uncoloured statement of the facts in nature which he observed; leaving their value to be ascertained by time and farther investigation.

As soon, however, as observation had brought to light the great body of the facts, and the functions of

the faculties had been contemplated with a philosophical eye, a system of the Philosophy of Man appeared to emanate almost spontaneously from the previous chaos.

When the process of discovery had proceeded a certain length, the facts were found to be connected by relations, which it was impossible sooner to perceive. Hence the doctrines, at first, appeared as a mere rude and undigested mass, of rather unseemly materials, and the public mirth was not unnaturally excited, at the display of organs of Theft, Murder, and Cunning, as they were then named, and a degree of obloquy was brought upon the science, from which it is now only recovering. At this stage the doctrines were merely a species of physiognomy, and the apparent results were neither very prominent nor inviting. When, however, the system had been cultivated for years, and the torch of philosophy had been applied to the facts discovered by observation, its real nature, as the science of the human mind, and its high utility became apparent; and its character and name changed as it advanced. The following observations of Mr Locke are peculiarly applicable to its history and prospects. "Truth (says he) scarce ever yet carried "it by vote any where, at its first appearance. *New* "opinions are always suspected, and usually opposed "without any other reason, than because they are not "common. But truth, like gold, is not the less so,

" for being newly brought out of the mine. 'Tis trial
" and examination must give it price, and not any
" antique fashion; and, though it be not yet current
" by the public stamp, yet it may, for all that, be as
" old as nature, and is certainly not the less ge-
" nuine."

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PRINCIPLES

OF

PHRENOLOGY.

THE Brain is admitted by Physiologists in general, to be the organ of the Mind; but two obstacles have impeded the discovery of the uses of its particular parts.

1*st*, *Dissection* alone does not reveal the *functions* of any organ. No person, by dissecting the optic nerve, could predicate that its office is to minister to vision; or, by dissecting the tongue, could discover that it is the organ of taste. Anatomists, therefore, could not, by the mere practice of their art, discover the functions of the different portions of the brain.

2*dly*, The mind is not conscious of acting by means of organs; and hence the material instruments, by means of which it performs its operations in this life, and communicates with the external world, cannot be discovered by reflection or consciousness.

To avoid the difficulties attending these methods of investigation, the phrenologist compares development of brain with manifestations of mental power, for the purpose of discovering the functions of the brain, and the organs of the mind. This course is adopted, in consequence of the accidental discovery made by Dr GALL, that certain mental powers are vigorously

manifested, when certain portions of the brain are large, and *vice versa*, as detailed in the Introduction. It is free from the objections attending the anatomical and metaphysical modes of research, and conform to the principles of the inductive philosophy.

No inquiry is instituted into the Substance of the mind, or into the question, Whether the mind fashions the organs, or the organs constitute the mind? The foregoing principles, shew the impossibility of arriving at philosophical conclusions on these points, and speculative reasoning concerning them, although it may amuse the fancy, cannot instruct the judgment. The only object of phrenology is to discover the Faculties of the Human Mind, the organs by means of which they are manifested, and the influence of the organs on the manifestations. It does not enable us to predict actions.

A mental organ is a material instrument, by means of which the Mind in this life enters into particular states, active and passive. Dr GALL's discovery directs us to the Brain as a congeries of such organs. With the view of comparing mental manifestations with *cerebral* development, it is necessary to shew, 1*st*, That the dispositions and capacities of individuals can be discovered; and, 2*dly*, That the size of different parts of the brain can be ascertained during life.

1*st*, *Discrimination of mental Dispositions and Talents.*—In regard to the Feelings, men practised in the business of life have observed, that one individual is strongly addicted to covetousness,—another to cruelty,—another to benevolence,—another to pride,—another to vanity; and they are accustomed to regard these dispositions as natural, uniform and permanent. They have never believed, that a man, by an effort of the will, can totally change his nature, or that the true character is so little manifested, that a person may be prone to benevolence to-day, who yesterday was addicted to avarice; that one who is now sinking in the lowest abasement of self humiliation in his own eyes, may to-morrow become conceited, confident and proud; or that to-day an individual may be deaf to the voice of censure or of fame, who yesterday was

tremblingly alive to every breath that was blown upon his character. Nay, they have even regarded these dispositions as independent of one another, and separable; for they have often found that the possession of one was not accompanied with the presence of the whole. Hence, in addressing any individual, they are in the custom of modifying their conduct, according to their previous knowledge of his dispositions or genius, obtained by observing his actions. To the covetous man they address one motive; to the benevolent another; to the proud a third; and to the vain a fourth. When they wish to move such individuals to act, they speak to the first, of *his personal interest;* to the second, *of the pleasure of doing good;* to the third, *of the necessity of preserving his own dignity;* and to the fourth, *of the great praise* that will attend the performance of such an action.

As to intellectual endowments, a person who has heard, for the most fleeting moment, the bursts of melody which flow from the throat of CATALANI, cannot be deceived as to the fact of her possessing a great endowment of the faculty of Tune; he who has listened but for a few minutes to the splendid eloquence of CHALMERS, can have no doubt that he is gifted with Ideality; and he who has studied the writings of Dr THOMAS BROWN, cannot hesitate as to his having manifested profound discriminative and analytic talent. In surveying the prodigies performed by some individuals in mechanics, poetry, painting and sculpture, it is equally impossible to doubt the existence of peculiar instincts, conferring a capacity for excelling in these different branches of art. It is equally easy to find individuals, in whom these various powers are as indubitably deficient. Hence the difficulties of determining the existence of particular intellectual talents, and their degrees of strength, is not unsurmountable; especially if extreme cases are sought for, and these, as the *instantia ostentiva*, ought to be first resorted to. Men of observation have acted on these principles without hesitation, and without injury to themselves. They have not designed for the orchestra, the individual whom they found incapable of

distinguishing betwixt a rude noise and a melodious sound, on the notion, that "a genius for *music*" might be "acquired by habits of study or of business." They do not place in difficult situations, requiring great penetration and much sagacity, individuals who cannot trace consequences beyond the stretch of three ideas: nor do they conceive, that a man, who has no intellectual capacity to-day, may be a genius to-morrow, or in ten years hence, by an effort of the will.

They, no doubt, have always observed, that the faculties are developed in succession; that the child is not in possession of the powers of the full grown man; and that, hence, a boy may be dull at ten, who may turn out a genius at twenty years of age, when his powers are fully unfolded by time. But they do not imagine that *every* boy may be made a genius, by habits of study or of business; nor believe, that, after the faculties are fully developed, any individual may, by exertions of the will, become great in a department of philosophy or science, for which he had previously no natural capacity. They have observed, that cultivation may strengthen powers, in themselves vigorous; but they have not found that education can render eminently energetic, dispositions or capacities which nature has created feeble. On the other hand, they have observed, that, where Nature has bestowed a powerful disposition or capacity of a particular kind, it will hold the predominant sway in the character during life, notwithstanding every effort to eradicate or subdue it. They have observed, too, that where Nature has bestowed, in an eminent degree, the faculties which constitute genius, the individual will manifest his native superiority, in spite of great obstacles arising from circumstances or situation. The lives of poets, painters and artists, in every age, display examples of the truth of this observation.

An individual, no doubt, may do particular actions, or even for a time follow a course of action, the same in external appearance, from different internal motives. But few men can pass their whole lives in disguise, or acquire the art of *acting* in the business and enjoyments of life, so habitually and so

skilfully, as not to allow their true character to appear to those who are placed in a favourable situation to observe it; or if there are persons who do possess this power of dissimulation, it forms the predominent feature in their mental constitution; and, as will afterwards be shewn, it is indicated by a peculiar form of organization. But, farther, let it be observed, that it is only in so far as the *propensities* and *sentiments* of our nature are concerned, that disguise is possible, even in a single case. In every act that depends on the knowing and reflecting faculties, disguise is absolutely impracticable. No man can write logical discourses, nor trace profoundly an abstract principle, who has *not* powerful reflecting faculties. No one can compose exquisite music, who has *not* the faculty of Tune, nor can write exquisite poetry, who has *not* the sentiment of Ideality. When, therefore, we perceive, even with the most transient glance, such acts to be performed, we have evidence, insuperable and irresistible, of the existence of the faculties which produce them.

These opinions have been entertained by persons conversant with society, not in consequence of logical deduction or metaphysical investigations, but from the observation of plain facts, submitted to the cognizance of their understandings. They perceived the manifestations of the dispositions and intellectual qualities here described, and were directly convinced of the existence of corresponding mental tendencies.

Thus fortified, I venture to conclude that the first point is established in favour of Phrenology, viz. that it is possible, by accurate, patient, and continued observation of actions, to discover the true dispositions and capacities which individuals possess. As this philosophy is founded on a comparison betwixt the manifestations of these faculties, and the development of the brain,

The *second* point to be ascertained is, Whether it be possible, in general, to discover *the true form of the brain*, by observing the figure of the head. The proper subjects for observation are healthy individuals below the middle period of

life. The brain is embraced in its whole peripheral extent, by a very thin and delicate membrane called the *pia mater*, which serves to convey the bloodvessels to its different parts. Immediately above the *pia mater*, is an extremely thin membrane, named the *tunica arachnoidea*, which secretes matter, to lubricate the surfaces of the *pia* and *dura mater*. The *dura mater* is also a thin but strong membrane, which embraces the outer surface of the brain above the membrane already mentioned, and serves to attach it to the skull. All these membranes are pliant in the highest degree, and accommodate themselves minutely to the figure of the brain. The brain, inclosed in them, fills exactly the interior of the skull; so that a cast in plaster, of the interior of the skull, is a *fac simile* of the brain, covered by the *dura mater*. The skull is not an adamantine barrier, confining the brain within specific boundaries; but a strong, yet yielding covering, shielding it, and accommodating itself to its size, while in the progress of its growth. It resembles, in this respect, the shell of a crab or of a snail. At birth it is small; it increases as the brain increases; and it stops in development, when the brain has attained its full size. A process of absorption and deposition goes continually on in its substance; so that if the brain presses from within, the renovating particles arrange themselves according to this pressure, and thus the figure of the skull and of the brain in general correspond. (See Plates I. and II.)

The external and internal smooth surfaces of the bones of the skull, are called their external and internal *tables*, or *plates*, to distinguish them from the intermediate part called the *diploë*, which is of a looser and somewhat cellular texture, resembling the internal structure of the bones. As the diploe is nearly equally thick in every part, it follows that the two tables of the skull are nearly parallel to each other. The internal, indeed, receives some slight impressions from bloodvessels, glands, &c., which do not appear externally, but these are so small as not to interfere with phrenological observations. The departure from perfect parallelism, where it occurs, is

limited to a line, $\frac{1}{10}$th or $\frac{1}{8}$th of an inch, according to the age and health of an individual. The difference in development between a large and a small organ of the propensities and some of the sentiments, amounts to an inch and upwards; and to a quarter of an inch in the organs of intellect, which are naturally smaller than the others.

The integuments which cover the skull on the outside, indisputably lie close upon its surface, and are so completely parallel, as to exhibit its true figure. Thus, then, there is no obstacle in general to the discovery of the figure of the brain, by observations on the form of the skull. There are, however, cases in which it is *not* possible to make this discovery. These are instances of disease and old age. In disease, the skull may be enlarged or diminished in volume, by causes other than the development of the brain; and in old age, the inner table of the skull sometimes sinks, while the outer table preserves its original size; in such individuals, the true development of the brain cannot be accurately inferred from the development of the head.

There are parts at the base of the brain, in the middle and posterior regions, the size of which cannot be discovered during life, and whose functions in consequence are still unknown. From analogy, and from some pathological facts, they are supposed to be the organs of the sensations of Hunger and Thirst, Heat and Cold, and of some other mental affections, for which cerebral organs have not been discovered; but demonstrative evidence to this effect being wanting, this conjecture is merely stated to incite to farther investigation.

The Sutures which connect the bones with each other, also interrupt the absolute parallelism; but their situation is known, and only one of them, called the Lambdoidal, where it passes over the organ of Concentrativeness, presents any difficulty to the student. The sagittal suture, which runs longitudinally from the middle of the crown of the head forwards and downwards, sometimes so low as the top of the nose, occasionally presents a narrow prominent ridge, which is mistaken for a development of the organs of Firmness, Venera-

tion, Benevolence, and Self-esteem. It may, however, be easily distinguished by its narrowness and isolation, from the full broad swell of cerebral development. The mastoid process of the temporal bone, which is a small knob immediately behind the ear, serving for the attachment of a muscle, is sometimes mistaken for the indication of large Combativeness. It is, however, merely a bony prominence, and is to be found in every head, and does not indicate development of brain at all.

There is one part of the skull where the external configuration does not always indicate exactly the size of the subjacent parts of the brain, and upon which objections have been raised. At the part of the frontal bone, immediately above the top of the nose, a divergence from parallelism is sometimes produced by the existence of a small cavity called the *frontal sinus;* which is formed between the two *plates* or *tables* of the bone, either by the external table swelling out a little, without being followed by the internal, and presenting an appearance like that of a blister on a biscuit, or by the internal table sinking in without being followed by the external; and hence, as the outer surface does not indicate the precise degree of development of brain beneath, it has been argued that the existence of a frontal sinus must be an insuperable objection to Phrenology, because it throws so much uncertainty on our observations as completely to destroy their value; other opponents, however, more rationally confine their objection to those organs only, over which the sinus extends.

The first objection is manifestly untenable. Even granting the sinus to be an insuperable obstacle in the way of ascertaining the development of the organs over which it is situated, it may be observed, *first*, That, in ordinary cases, it extends only over three, viz, Size, Lower Individuality, and Locality; and, *2dly*, It cannot interfere with the other thirty or thirty-one organs, the whole external appearances of which it leaves as unaltered as if it did not at all exist. It would be quite as logical to speak of a snow-storm in Norway obstructing the high road from Edinburgh to London,

as of a small sinus at the top of the nose concealing the developments of Benevolence, Firmness, or Veneration, on the crown of the head.

To enable the reader to form a correct estimate of the value of the objection as applicable to the two or three individual organs particularly referred to, I subjoin a few observations. In the *first* place, Below the age of twelve or fourteen, the sinus almost never exists; *2dly*, In adult age, it frequently occurs to the extent above admitted *; and, *3dly*, In old age, and in disease, as chronic idiocy and insanity, it is often of very great extent, owing to the brain diminishing in size, and the inner table of the skull following it, while the outer remains stationary. Now, the first cases present no objection, for in them the sinus does not exist; and the third are instances of diseases, which are uniformly excluded in phrenological observations; and thus our attention is limited solely to the cases forming the second class. In regard to them the objection is, that large development of brain, and large frontal sinus, present so nearly the same appearance that we cannot be sure which is which, and, therefore, that our observations must be inconclusive.

To this the following answer is given:—1*st*, We must distinguish between the possibility of *discovering the functions* of an organ and of applying this discovery practically in *all* cases, so as to be able, in every instance, to predicate the exact degrees in which every particular mental power is present in each individual. The sinus does not in general exist before the age of twelve or fourteen, below which is precisely

* This may seem at variance with a statement given in the first edition of this work, on the authority of a friend in Paris, who, in the course of many months' dissections, had never found a frontal sinus except in old age and in disease. In sawing open the skull for anatomical purposes, the section is almost always made horizontally through the middle of the forehead, or *over the* organs of *Tune*, *Time*, and *Upper Individuality*, and in all the cases alluded to by the gentleman in Paris, this line was followed, and as the sinus rarely extends so high up, he could not, and did not, meet with it. On examining vertical sections, however, for the purpose of seeing the sinus, he has since frequently found it to the extent mentioned in the text.

the period when Individuality is most conspicuously active in the mind. If, then, in children, in whom no sinus exists, the mental power is observed to be strong when the part of the head is large, and weak when it is small, we ascertain the functions, whatever may subsequently embarrass us. If, in after-life, the sinus comes to exist, this throws a certain impediment in the way of the practical application of our knowledge; and, accordingly, phrenologists admit a difficulty in determining the exact degree of mental power, which, in adult age, may be expected to accompany any particular development of this organ, except in extreme instances, in which even the sinus itself forms but a small fraction of the difference between great development and deficiency. In the next place, the objection applies only to one set of cases. If there be a hollow or depression in the external surface of the skull at the situation of the organs in question, and the sinus be absent, then the organ must necessarily be deficient in proportion to the depression. If, with such an external appearance, the sinus be present, which is not generally the case, but which, for the sake of argument, I shall suppose, then it must be formed by the inner table receding more than the outer table, and hence a greater deficiency of organ will actually exist than is externally indicated; and, of course, the deficiency of mental power will be *at least equal* to the external indication of deficiency in the organ. In cases of this kind, therefore, the sinus forms no objection. Thus the only instances in which it can occasion embarrassment are those in which it causes a swelling of the parts of the skull in question outward, to which there is no corresponding development of brain within. Now if, in all cases in youth, when no sinus exists, and in all cases in mature age in which a depression is found, the mental power is ascertained to correspond with the external development; and if, in certain cases, in adult age, an external indication appears to which the mental power does not correspond, what conclusion falls to be drawn according to the rules of a correct logic? Not that the functions of the parts are uncertain, because they have been ascertained in cases not liable to impe-

diment or objection, but only that, in the particular cases in mature age, in which the external development is large, and the corresponding power absent, *there must be a frontal sinus.*

Finally, by practice in observing, it is possible, in general, to distinguish between external appearances produced by frontal sinus and those indicating a large development of organs. In the *first* instance, the forms of the elevations are irregular; in the *second*, they are symmetrical, and correspond to the shapes of the organs delineated on the busts.

If, then, men in general manifest their true and natural sentiments and capacities in their actions; and if the form of the brain in general, and in healthy individuals, may be discovered, by observing the figure of the head, it follows that the true faculties, and the true development, may be compared in living subjects; and, on these grounds, the proposition is established, That the Phrenological mode of philosophising is competent to enable us to attain the results sought for.

PRACTICAL APPLICATION OF THE PRINCIPLES OF PHRENOLOGY.

The Anatomy of the Brain is minutely described in the appendix. It is not indispensably necessary, although highly advantageous, to become acquainted with it, in order to become a practical phrenologist. A brief description will suffice to convey an idea of it to the general reader.

The brain is of a fibrous texture, and consists of two corresponding hemispheres, separated by a strong membrane, called the Falciform Process of the dura mater. Each hemi-

sphere is supplied with separate bloodvessels, forming a system in itself; and it consists of an aggregate of parts, each part manifesting a particular mental faculty. The two hemispheres, in general, correspond in form and functions; so that there are two organs for each mental power; one in each hemisphere. Each organ extends from the medulla oblongata, or top of the spinal marrow, to the surface of the brain or cerebellum; and every individual possesses all the organs in a greater or less degree. When the two organs of a faculty are situated immediately on the sides of the middle line separating the hemispheres, they are included in one space on the busts and plates. To save circumlocution, the expression, "organ" of a faculty will be used, but both organs will be thereby meant. The two hemispheres, and of course the organs of each side, are brought into communication and co-operation by fibres running transversely; these are called the *Corpus callosum*, and the Anterior and Posterior Commissures. The Cerebellum in man is situated below the brain. A thick membrane, named the *Tentorium*, separates them; but they are both connected with the medulla oblongata, and through it with each other.

The brain is not divided by lines corresponding to those delineated on the busts; but the forms assumed by its different parts, when extremely large or small, exactly resemble those there represented. Each part is inferred to be a separate organ; because its size, *cæteris paribus*, bears a regular proportion to the energy of a particular mental power.

There is a great distinction between *power* and *activity* of mind; and, as size in the organs is an indication of the former only, it is proper to keep this difference in view. In physics, *power* is quite distinguishable from activity. The balance-wheel of a watch moves with much rapidity, but so slight is its impetus, that a hair would suffice to stop it; the beam of a steam-engine traverses slowly and ponderously through space, but its power is prodigiously great.

In muscular action, these qualities are recognized with equal facility as different. The greyhound bounds over hill

and dale with animated agility; but a slight obstacle would counterbalance his momentum, and arrest his progress. The elephant, on the other hand, rolls slowly and heavily along; but the impetus of his motion would sweep away an impediment sufficient to resist fifty greyhounds at the summit of their speed.

In mental manifestations (considered apart from organization) the distinction between power and activity is equally palpable. On the stage, Mrs SIDDONS *senior* and Mr JOHN KEMBLE were remarkable for the solemn deliberation of their manner, both in declamation and action, and yet they were splendidly gifted in power. They carried captive at once the sympathies and understanding of the audience, and made every man feel his faculties expanding, and his whole mind becoming greater under the influence of their energies. This was a display of power. Other performers, again, are remarkable for vivacity of action and elocution, who, nevertheless, are felt to be feeble and ineffective in rousing an audience to emotion. *Activity* is their distinguishing attribute, with an absence of power. At the bar, in the pulpit, and in the senate, the same distinction prevails. Many members of the learned professions display great felicity of illustration and fluency of elocution, surprising us with the quickness of their parts, who, nevertheless, are felt to be neither impressive nor profound. They possess acuteness without power, and ingenuity without comprehensiveness and depth of understanding. This also proceeds from activity with little vigour. There are other public speakers, again, who open heavily in debate, their faculties acting slowly, but deeply, like the first heave of a mountain-wave. Their words fall like minute-guns upon the ear, and to the superficial they appear about to terminate ere they have begun their efforts. But even their first accent is one of power, it rouses and arrests attention; their very pauses are expressive, and indicate gathering energy to be embodied in the sentence that is to come. When fairly animated, they are impetuous as the torrent, brilliant as the lightning's beam, and overwhelm and take possession of fee-

bler minds, impressing them irresistibly with a feeling of gigantic power.

As size is a measure of power, the first object ought to be to distinguish the size of the brain generally, so as to judge whether it be large enough to admit of manifestations of ordinary vigour; for if it be too small, idiocy is an invariable consequence. The second object should be to ascertain the relative proportions of the different parts, so as to determine the direction in which the power is greatest.

It is proper to begin with observation of the more palpable differences in size. In some instances, the greater mass of the brain lies between the ear and the forehead; in others, between the ear and the occiput; and in others, above the ear in perpendicular height. Great differences in breadth are also remarkable; some being narrow throughout, and some broad. Some are narrow before, and broad behind, and *vice versa*. The busts of the Reverend Mr M., MARY MACINNES, PALLET, and HAGGART, may be contrasted with this view *.

Large size may consist in length or breadth, or in both. A line passing through the head from one ear to the other, would nearly touch the *medulla oblongata*, and hence the external opening of the ear is assumed as a convenient point from which to estimate length. The length of an organ is ascertained by the distance from the medulla oblongata to the peripheral surface. Thus, the organs of intellect are situated in the forehead, and in proportion to the length of the line from the ear to that region, is the length of these organs.

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* The Casts and Skulls, referred to in the subsequent pages, as illustrative of particular organs, are to be found in the collection of the Phrenological Society, which, by the liberality of the Society, is open to public inspection, in their Hall, Clyde Street, Edinburgh, every Saturday from One to Three o'clock.

Duplicates of most of these casts and skulls are exhibited and sold by Mr JAMES DE VILLE, 367. Strand, London; by Messrs LUKE O'NEILL and SON, 125. Canongate, Edinburgh; and by their agents, Mr COX, Bookseller, Castle Street, Oxford Street, London; Mr NORTON, Bookseller, Clare Street, Bristol; Mr HADDOCK, Bookseller, Warrington; Messrs W. and A. GALLETI, 10. Castle Street, Liverpool; and Mr DAVIES, Statuary, Pilgrim Street, Newcastle-on-Tyne.

The breadth of an organ is judged of by its peripheral expansion; and it is a general law of physiology, that the breadth of any organ thoughout its whole course, bears a relation to its expansion at the surface: the optic and olfactory nerves are examples in point. An organ may thus be likened to an inverted cone, with its apex in the medulla, and its base at the surface of the brain; the broader the base and longer the distance betwixt it and the apex, the greater will be the size, or the quantity of matter which it will contain *. Hence, if the line from the ear to the forehead is much larger than from the ear backward, and the breadth nearly the same, we infer that the organs in the forehead predominate. If, on the other hand, the forehead is very narrow, as in THURTELL, and the hind-head very broad, we hold the posterior organs to predominate, although the length were the same in both directions. Measurement by callipers is useful for ascertaining general size. The following are a few measurements from nature, taken promiscuously from many more in my possession.

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* "There are many convolutions," says Dr SPURZHEIM, "in the middle line "between the two hemispheres of the brain, and others at the basis and be- "tween the anterior and middle lobes which do not appear on the surface; but "it seems to me that a great part, at least, of every organ does present itself "there, and further, that all the parts of each organ are equally developed, so "that, though a portion only appear, the state of the whole may be inferred. "The whole cerebellum does not reach the skull, yet its function may be deter- "mined from the part which does. The cerebral parts, situated in the middle "line between the hemispheres, seem proportionate to the superincumbent con- "volutions; at least I have always observed a proportion in the vertical direc- "tion between them."—*Phrenology*, p. 116.

The cerebral parts, situated around "and behind the orbit, also require some "care and experience on the part of the Phrenologist, to be judged of accurately. "Their development is discoverable from the position of the eye-ball, and from "the figure of the superciliary ridge. According as the eye-ball is prominent or "hidden in the orbit, depressed or pushed sideward, inward, or outward, we "may judge of the development of the organs situated around and behind it." —*Ibid.* Particular directions for observing the parts there situated will be given, when treating of the relative organs.

Table of Measurements by Callipers.

Males between 25 and 50.	From Occipital Spine to Lower Individuality.	From Occipital Spine to Ear.	From Ear to Lower Individuality.	From Ear to Firmness.	From Destructiveness to Destructiveness.	From Cautiousness to Cautiousness.	From Ideality to Ideality.
1.	7 5/8	4 3/8	4 7/8	5 7/8	5 7/8	5 4/8	5 3/8
2.	6 5/8	3 4/8	4 3/8	5 6/8	5 5/8	5 6/8	4 6/8
3.	8 2/8	4 7/8	5 3/8	6 4/8	6 4/8	6	5 3/8
4.	7 4/8	4	5	5 4/8	6	5 4/8	5 2/8
5.	8	4 7/8	5 2/8	6 2/8	6 3/8	6	5 2/8
6.	8	4 6/8	4 5/8	5 7/8	5 6/8	5 6/8	5 3/8
7.	7 4/8	4 2/8	4 6/8	5 6/8	6 1/8	5 7/8	5 4/8
8.	7 4/8	4 2/8	4 6/8	5 5/8	5 7/8	5 4/8	5 1/8
9.	7 4/8	4 2/8	4 7/8	6	5 6/8	5 6/8	5 1/8
10.	8 2/8	5	5 3/8	5 7/8	6 2/8	5 4/8	5 4/8
11.	7 2/8	4 3/8	5	5 7/8	5 4/8	5 2/8	4 6/8
12.	7 4/8	4 5/8	5	6	5 6/8	5 7/8	4 6/8
13.	7 5/8	4 1/8	4 6/8	5 6/8	5 6/8	5 6/8	5 3/8
14.	7 1/8	3 7/8	4 4/8	5 5/8	6 2/8	5 6/8	5
15.	7 3/8	4 1/8	4 7/8	6 1/8	6	6	5
16.	7 7/8	4 3/8	5 3/8	6	6 2/8	5 3/8	5 3/8
17.	7 7/8	4 4/8	5 1/8	6 4/8	6 4/8	6 1/8	5 6/8
18.	7 4/8	4 1/8	5	5 7/8	5 6/8	5 3/8	4 7/8
19.	8	4 2/8	5 4/8	6 1/8	6	6	4 7/8
20.	7	4 1/8	4 5/8	5 5/8	5 6/8	5 2/8	4 6/8
	151 5/8	86 3/8	99 1/8	118 4/8	119 5/8	113 7/8	103 3/8
Total divided by 20 gives average	7 4/8	4 3/8	4 19/20	5 18/20	5 16/20	5 14/20	5 13/20

These measurements are taken above the muscular integuments, and shew the size of heads in these directions; but they are not given as indications of the absolute dimensions of any of the phrenological organs. The callipers are not suited for giving this latter information, for they do not measure from the medulla oblongata, nor do they indicate breadth of fibre. The new Craniometer is preferable for ascertaining absolute length, and the breadth may be judged of by means of the hand or eye. The average of these twenty heads will be higher than that of the natives of Britain generally, because there are several large heads among them, and none small.

After becoming familiar with the general size and configuration of heads, the student may proceed to the *observation of individual organs;* and, in studying them, the real dimensions, and not the mere prominence of each organ, should be looked for. The *whole* organs in a head should be examined, and their relative proportions noted. Errors may be committed at first; but, without practice, there is no expertness. Practice, with at least an average endowment of the organs of Form, Size, and Locality, are necessary to qualify a person to make observations with success. Individuals whose heads are very narrow between the eyes, and little developed at the top of the nose, where these organs are placed, experience great difficulty in distinguishing the situations and minute shades in the proportions of different organs. If one organ be much developed, and the neighbouring organ very little, the developed organ presents an elevation or protuberance; but if the neighbouring organs be developed in proportion, no protuberance can be perceived, and the surface is smooth. The student should learn from books, plates, and casts, or personal instruction (and the last is by far the best), to distinguish the *form* of each organ, and its *appearance*, when developed in different proportions to the others.

The phrenological busts shew only the situations of the organs, and their proportions in one head; and it is impossible by it to communicate more information. The different appearances in all the varieties of relative size, must be discovered by inspecting *a number* of heads; and especially by con-

trasting instances of extreme development with others of extreme deficiency. No adequate idea of the foundation of the science can be formed until this is done. In cases of extreme size of single organs, the form delineated in the bust is perceived distinctly standing out in nature.

When one organ is very largely developed, it sometimes pushes a neighbouring smaller organ a little out of its place. This may be distinguished by the greatest prominence being near the centre of the large organ, and the swelling extending over a portion only of the other. In these cases the *shape* should be attended to; for the form of the organ is then easily recognised, and is a sure indication of the particular one which is largely developed. The observer should learn, by inspecting a skull, to distinguish the mastoid process behind the ear, and several bony prominences which occur in every head, from elevations produced by development of brain; as also to discriminate bony excrescences sometimes formed by the sutures, when such occur.

The terms used to denote the gradations of size in the different organs, in an increasing ratio, are

Very small	Moderate	Rather large
Small	Rather full	Large
Rather small	Full	Very large

Captain Ross has suggested, that numerals may be applied with advantage to the notation of development. He uses decimals; but these appear unnecessarily minute. The end in view may be attained by such a scale as the following:

1.	8. Rather small	15.
2. Idiocy	9.	16. Rather large
3.	10. Moderate	17.
4. Very small	11.	18. Large
5.	12. Rather full	19.
6. Small	13.	20. Very large
7.	14. Full	

The intermediate figures denote intermediate degrees of size, for which we have no names. The advantage of adopting numerals would be, that the values of the extremes being known, we could judge accurately of the dimensions denoted

by the intermediate numbers; whereas it is difficult to apprehend precisely the degrees of magnitude indicated by the terms small, full, large, &c. except we have seen them applied by the individual who uses them.

In observing the *appearance* of individual organs, it is proper to begin with the largest, and select extreme cases. The mask of Mr Joseph Hume may be contrasted with that of Dr Chalmers for Ideality; the former being $5\frac{2}{8}$ inches in breadth at this organ, and the latter $6\frac{3}{8}$. The casts of the skulls of Raphael and Haggart may be compared at the same part; the differences being equally conspicuous. The cast of the Reverend Mr M. may be contrasted with that of Dempsey, in the Love of Approbation; the former having this organ large, and the latter small. Self-Esteem in the latter being exceedingly large, may be compared with the same organ in the skull of Dr Hette, in whom Love of Approbation is much larger than Self-Esteem. The organ of Constructiveness in Raphael may be compared with the same organ in the New Holland skulls. Destructiveness in Bellingham may be compared with the same organ in the skulls of the Hindoos; the latter people being in general tender of life. Firmness large, and Conscientiousness deficient in King Robert Bruce, may be compared with the same organs reversed in the cast of the head of a lady (Mrs H.), which is sold as illustrative of these organs.

In observing in nature also, it is proper to begin with the larger organs; and two persons of opposite dispositions, in the particular points to be compared, ought to be placed in juxta-position, and their heads observed. Thus, if we take the organ of Cautiousness, we should examine its development in those whom we know to be remarkable for timidity, doubts and hesitation. We should contrast the appearance of the organ in such cases with that which it presents in individuals remarkable for precipitancy, and into whose minds doubt or fear rarely enters: or a person who is unable to distinguish one note from another, may be compared, in regard to the organ of Tune, with another who has a high natural

genius for music. No error is more to be avoided, than beginning with the observation of the smaller organs, and examining these without a contrast.

It ought to be kept constantly in view, in the practical application of Phrenology, that it is the size of each organ in proportion to the others *in the head of the individual observed;* and not their *absolute size;* or their size in reference to any standard head, that determines the predominance in him of particular talents or dispositions. Thus, in the head of BELLINGHAM, *Destructiveness* is very large, and the organs of the moral sentiments and intellect are small in proportion; and according to the rule, that, *cæteris paribus*, size determines energy, BELLINGHAM's most powerful tendencies are inferred to have been towards cruelty and rage. In the skulls of several Hindoos, the organ of Destructiveness is small in proportion to the others, and we conclude, that the tendency of such individuals would be weakest towards the foregoing passions. But in the head of GORDON, the murderer of the pedlar boy, the measurement from Destructiveness to Destructiveness is $5\frac{1}{8}$, and in the head of RAPHAEL it is $5\frac{5}{8}$ inches. Here the *absolute* size of the organ is greatest in RAPHAEL, and yet he was an amiable man of genius, and GORDON an atrocious murderer. This illustrates the rule now under consideration. In GORDON, the organs of the moral sentiments and intellectual faculties are small, and that of Destructiveness is the largest in the brain; while in RAPHAEL, the moral and intellectual organs are large. On the foregoing principle, the most powerful manifestations of RAPHAEL's mind ought to have been in the department of sentiment and intellect, and those of GORDON's mind in Destructiveness and animal passion; and their actual dispositions corresponded. Still the dispositions of RAPHAEL would be characterized by the large size of this organ. It would communicate that warmth and vehemence of temper, which are found only when it is large, although the higher powers might restrain it from abuse.

An objection is frequently stated, that persons having large

heads have "little wit," while others with small heads are "very clever." The Phrenologist never compares mental ability in general with size of brain in general; for the fundamental principle of the science is, that different parts of the brain have different functions, and that hence the *same absolute quantity* of brain, if consisting of intellectual organs, may be connected with the highest genius, while, if consisting of the animal organs, lying immediately above and behind the ears, may indicate the most fearful energy of the lower propensities. The brains of Charibs seem to be equal in absolute size to those of average Europeans, but the chief development of the former is in the animal organs, and of the latter in the organs of sentiment and intellect; and no Phrenologist would expect the one to be equal in intelligence and morality to the other, merely because their brains are equal in absolute magnitude.

If we take two heads, in sound health, and of similar ages, in each of which the several organs are similar in their proportions, but the one of which is large, and the other small, and if the preponderance of power of manifestation is not in favour of the first, then Phrenology must be abandoned as destitute of foundation.

In comparing the brains of the lower animals with the human brain, the Phrenologist looks solely for the reflected light of analogy, to guide him in his researches, and never founds a direct argument in favour of the functions of the different parts of the human brain, from any facts observed in regard to the lower animals; and the reason is, that such different genera of animals are too dissimilar in constitution and external circumstances, to authorise him to draw positive results from comparing them. Many Philosophers, being convinced that the brain is the organ of mind, and having observed that the brain of man is larger than that of the majority of tame animals, as the horse, dog, ox, have attributed the mental superiority of man to the superiority in absolute size of his brain; but the Phrenologist does not acknowledge this conclusion, as in accordance with the principles of his

science. The brain of one of the lower creatures may be very large, and, nevertheless, if it be composed of parts appropriated to the exercise of muscular energy, or the manifestation of animal propensities, its possessor may be far inferior in understanding or sagacity to another animal, having a smaller brain, but composed chiefly of parts destined to manifest intellectual power *. Whales and elephants have a larger brain than that of man, and yet their sagacity is not equal to his; but nobody pretends that the parts destined to manifest intellect are larger, in proportion to the convolutions intended to manifest propensity, in these animals than in man, and hence the superior intelligence of the human species, is no departure from the general analogy of nature.

In like manner, the brains of the monkey and dog are smaller than those of the ox, ass, and hog, and yet the former approach nearer to man in regard to their intellectual faculties. To apply the principles of Phrenology to them, it would be necessary to discover what parts manifest intellect, and what propensity, in each species; and then to compare the power of manifesting each faculty with the size of its appropriate organ. If size were found not to be a measure of power, then, in that species, the rule under discussion would fail; but even this would not authorise us to conclude, that it did not hold good in regard to man; for human Phrenology is founded, not on analogy, but on positive observations. Some persons are pleased to affirm, that the brains of the lower animals consist of the same parts as the human brain, only on a smaller scale; but this is highly erroneous. If the student will procure brains of the sheep, dog, fox, calf, horse, or hog, and compare them with the human brain, or the casts of it sold in the shops, he will find a variety of parts, especially in the convolutions which form the organs of the moral sentiments and the reflecting faculties, wanting in these animals.

It is proper next to advert to certain conditions which may co-exist in the brain with size, and to attend to their effects.

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* Spurzheim's Physiognomical System, chap. 4.

Power in the manifestations, and size in the organ, are in the general case proportionate; and when differences in size are considerable, no circumstance, consistent with health, will render the manifestations equal in power; one brain, however, may be more perfect in constitution than another, and, in consequence, may act more vigorously, although not larger in dimensions; but these differences are slight, and their effects limited. Size, then, is not the *only* requisite to the manifestation of great mental power; the brain must possess also a healthy constitution, and that degree of activity which is the usual accompaniment of health. Now, the brain, like other parts of the body, may be affected with certain diseases which do not diminish or increase its magnitude, and yet impair its functions; and, in such cases, great size may be present, and very imperfect manifestations appear; or it may be attacked with other diseases, such as inflammation, or any of those particular affections whose nature is unknown, but to which the name of Mania is given in Nosology, and which greatly exalt its action; and then very forcible manifestations may proceed from a brain comparatively small; but it is no less true, that when a larger brain is excited to the same degree by the same causes, the manifestations become increased in energy in proportion to the increase of size. These cases, therefore, form no valid objection to Phrenology. The Phrenologist ascertains, by previous inquiry, that the brain is in a state of health. If it is not, he makes the necessary limitations in drawing his conclusions *.

Nature admits of no exceptions, and a single instance of decidedly vigorous manifestations, with a small organ, disease being absent, would overturn all previous observations in favour of that organ: but men are liable to err; and although an individual Phrenologist may have called an organ small, the manifestations of which are powerful, or *vice versa*, this is not to be precipitately charged against nature as an exception. Chemists occasionally fail in experiments, mathematicians err in demonstration, and arithmeticians are wrong in calculations; and, in like manner, Phrenologists may commit mistakes

* This subject is discussed at greater length in Phrenological Journal, No. II. p. 300.

in observing cerebral development. The test in such cases is, to compare the organ in regard to which an apparent discrepancy has occurred, with the same organ in the head of a person whose powers of manifestation are KNOWN to be diametrically opposite. If the organs are not perceived by an ordinary eye to differ, then the exception is proved. I have seen conviction carried home to an opponent, by such an appeal to nature, when he imagined himself sure of a triumph on the score of an error committed by an observer.

If, in each of two individuals, the organs of propensity, sentiment, and intellect, are equally balanced, the general conduct of one may be vicious, and that of another moral and religious. But the question here is not one of *power*, for as much *energy* may be displayed in vice as in virtue, but it is one of *direction* merely. Now, in cases where an equal development of *all* the organs exists, *direction* depends on *external* influences, and then no Phrenologist pretends to tell to what objects the faculties have been directed, by merely observing the size of the organs.

Suppose that two individuals possess an organization exactly similar, but that one is highly educated, and the other left entirely to the impulses of nature; the former will manifest his faculties with higher *power* than the latter; and hence it is argued, that size is not in all cases a measure of energy.

Here, however, the requisite of *cæteris paribus* does not hold. An important condition is altered, and the Phrenologist uniformly allows for the effects of education, before drawing positive conclusions *. It may be supposed, that, if exercise thus increases power, it is impossible to draw the line of distinction between energy derived from this cause and that which proceeds from size in the organs, and hence that the real effects of size can never be determined. The answer to this objection is, that education may cause the faculties to manifest themselves with the highest degree of energy *which the size of the organs will permit*, but that size fixes a limit

* Phrenological Transactions, p. 308.

which education cannot surpass. DENNIS, we may presume, received some improvement from education, but it did not render him equal to POPE, much less to SHAKESPEARE or MILTON: therefore, if we take two individuals whose brains are equally healthy, but whose organs differ in size, and educate them alike, the advantages in power and attainment will be greatest in the direct ratio of the size, in favour of the largest brain. Thus the objection ends in this,—that if we compare brains in opposite conditions, we may be led into error—which is granted; but this is not in opposition to the doctrine that, *cæteris paribus*, size determines power. Finally—extreme deficiency in size produces incapacity for education, as in idiots; while extreme development, if healthy, as in SHAKESPEARE, BURNS, MOZART, anticipates its effects, in so far that the individuals educate themselves.

In saying, then, that, *cæteris paribus*, size is a measure of power, phrenologists demand no concessions which are not made to physiologists in general; among whom, in this instance, they rank themselves.

ACTIVITY means the *rapidity* with which the faculties may be manifested. The largest organs in each head have the greatest, and the smallest the least, tendency to natural activity.

A certain combination in size, namely, Combativeness, Destructiveness, Hope, Firmness, Acquisitiveness, and Love of Approbation, all large, is commonly attended with general activity; and another combination, namely, Combativeness, Destructiveness, Firmness, and Acquisitiveness, small or moderate, with Hope, Veneration, and Benevolence, all large, is frequently attended with inactivity in the mental character; but the activity of the whole brain is constitutionally greater in some individuals than in others, and this frequently depends on causes altogether unknown. It may even happen, that, in the same individual, one organ is naturally more active than another, without reference to size; just as the optic nerve is sometimes more irritable than the auditory; but this is by no means a common occurrence. Exercise greatly in-

creases activity; and hence arise the benefits of education. Dr SPURZHEIM thinks that "long fibres produce more activity, and thick fibres more intensity."

The doctrine that size is a measure of power, is not to be held as implying, that power is the only, or even the most valuable quality, which a mind in all circumstances can possess. To drag artillery over a mountain, or a ponderous car through the streets of London, we would prefer an elephant, or a horse of great size and muscular power; while, for graceful motion, agility and nimbleness, we would select an Arabian palfrey. In like manner, to lead men in gigantic and difficult enterprises,—to command by native greatness, in perilous times, when law is trampled under foot,—to call forth the energies of a people, and direct them against a tyrant at home, or an alliance of tyrants abroad,—to stamp the impress of a single mind upon an age,—to infuse strength into thoughts, and depth into feelings, which shall command the homage of enlightened men in every period of time,—in short, to be a BRUCE, BUONAPARTE, LUTHER, KNOX, DEMOSTHENES, SHAKESPEARE, or MILTON, a large brain is indispensably requisite; but to display skill, enterprise, and fidelity, in the various professions of civil life,—to cultivate, with success, the less arduous branches of philosophy,—to excel in acuteness, taste, and felicity of expression,—to acquire extensive erudition and refined manners, a brain of a moderate size is perhaps more suitable than one that is very large; for wherever the energy is intense, it is rare that delicacy, refinement, and taste, are present in an equal degree. Individuals possessing moderate-sized brains easily find their proper sphere, and enjoy in it scope for all their energy. In ordinary circumstances, they distinguish themselves; but sink when difficulties accumulate around them. Persons with large brains, on the other hand, do not readily attain their appropriate place; common occurrences do not rouse or call them forth; and, while unknown, they are not trusted with great undertakings. Often, therefore, such men pine and die in obscurity. When, however, they attain their proper element, they

feel conscious greatness, and glory in the expansion of their powers. Their mental energies rise in proportion to the obstacles to be surmounted, and blaze forth in all the magnificence of genius on occasions when feebler minds would expire in despair.

The term Faculty, is used to denote a particular power of feeling or thinking, connected with a particular part of the brain. Phrenologists consider Man by himself, and also compare him with other animals. When the lower animals manifest the same propensities and feelings as those displayed by man, the faculties which produce them are held to be common to both. A faculty is admitted as primitive,

1. Which exists in one kind of animals, and not in another;

2. Which varies in the two sexes of the same species;

3. Which is not proportionate to the other faculties of the same individual;

4. Which does not manifest itself simultaneously with the other faculties; that is, which appears and disappears earlier or later in life than other faculties;

5. Which may act or rest singly;

6. Which is propagated in a distinct manner from parents to children; and,

7. Which may singly preserve its proper state of health or disease *.

As phrenological observation establishes the existence of a plurality of mental faculties, each connected with a particular part of the brain, the question occurs, Is the mind simple, or an aggregate of separate powers? It is extremely difficult to give a satisfactory answer to this enquiry. Looking at the facts presented to us by observation, the most obvious inference seems to be, that the mind consists of an aggregate of powers, and that one of them supplies the feeling of personal Identity, or the *I* of Consciousness, to which, as their substance, all the

* Phrenology by Dr Spurzheim, p. 126.

other feelings and capacities bear reference. This view is strongly supported by some of the phenomena of insanity; for patients are sometimes insane in the feeling of personal identity, and in no other faculty of the mind. Such individuals lose all consciousness of their past and proper personality, and imagine themselves different persons altogether; while, with the exception of this erroneous impression, they feel and think correctly. Under the head of Memory, in a subsequent part of this work, an abstract will be found of a case of divided personality, occurring through disease, reported by Dr Dyce of Aberdeen to Dr Henry Dewar, and by him published in the Transactions of the Royal Society of Edinburgh. A similar case is stated in "The Medical Repository," communicated by Dr Mitchell to the Reverend Dr Nott, dated January 1816. "When I was employed," says he, "early in December 1815, with several other gentlemen, in "doing the duty of a visitor to the United States Military "Academy at West Point, a very extraordinary case of "Double Consciousness, in a woman, was related to me by "one of the professors. Major Ellicott, who so worthily oc- "cupies the mathematical chair in that seminary, vouched "for the correctness of the following narrative, the subject "of which is related to him by blood, and an inhabitant "of one of the western counties of Pennsylvania:—Miss "R——— possessed, naturally, a very good constitution, "and arrived at adult age without having it impaired "by disease. She possessed an excellent capacity, and en- "joyed fair opportunities to acquire knowledge. Besides "the domestic arts and social attainments, she had improved "her mind by reading and conversation, and was well versed "in penmanship. Her memory was capacious, and stored "with a copious stock of ideas. Unexpectedly, and without "any forewarning, she fell into a profound sleep, which con- "tinued several hours beyond the ordinary term. On waking, "she was discovered to have lost every trait of acquired "knowledge. Her memory was *tabula rasa*,—all vestiges, "both of words and things, were obliterated and gone. It

" was found necessary for her to learn every thing again. She " even acquired, by new efforts, the arts of spelling, reading, " writing, and calculating, and gradually became acquainted " with the persons and objects around, like a being for the " first time brought into the world. In these exercises she " made considerable proficiency. But, after a few months, " another fit of somnolency invaded her. On rousing from it, " she found herself restored to the state she was in before the " first paroxysm; but was wholly ignorant of every event " and occurrence that had befallen her afterwards. The " former condition of her existence, she now calls the Old " State, and the latter the New State; and she is as unconscious " of her double character as two distinct persons are of their " respective natures. For example, in her old state, she pos- " sesses all her original knowledge; in her new state only " what she acquired since. If a gentleman or lady be introdu- " ced to her in the old state, and *vice versa*, (and so of all other " matters), to know them satisfactorily she must learn them " in both states. In the old state, she possesses fine powers " of penmanship, while in the new, she writes a poor awkward " hand, having not had time or means to become expert. " During four years and upwards, she has undergone perio- " dical transitions from one of these states to the other. The " alterations are always consequent upon a long and sound " sleep. Both the lady and her family are now capable of " conducting the affair without embarrassment. By simply " knowing whether she is in the old or new state, they regu- " late the intercourse, and govern themselves accordingly. " A history of her curious case is drawing up by the Rever- " end Timothy Aldin of Meadville." Such cases as the foregoing, have led some persons to the inference, that the feeling of personal Identity is a primitive mental affection, connected with a particular organ, and hence liable separately to disease; and because we have ascertained that each of the other primitive feelings and intellectual powers is also manifested by a separate organ, the mind has appeared to them to consist of an aggregate of powers acting together. This view

corresponds with the apprehension of mankind in general, for popular language is framed on the principle of the *I* of Consciousness being distinct from the other mental affections. We speak of *evil thoughts* intruding themselves into *our* mind; and of *our* having *strong desires* which *we* forbear to indulge. In such expressions, the *our* and *we* seem to mean the principle of personal identity; and the evil thoughts and desires appear to be regarded as affections of that principle, originating from sources distinct from it, and different from one another.

The more general opinion of philosophers is, that the mind is a simple and indivisible substance, and that the several faculties are merely different states of it. This view is espoused by my excellent friend the Reverend DAVID WELSH, who successfully shews, that it is consistent with the phrenological doctrine of a plurality of organs. "The leading doctrine" says he, "of phrenology is, that different portions or organs of the brain "are connected with the primitive feelings of the mind. The "truth of this position can obviously be ascertained only by "observation. But taking it for granted that it is true, it "may be asked, how it can be reconciled with the great prin- "ciple to which so frequent reference has been made, that the "powers, thoughts, and feelings of the mind are not different "from the mind, but merely the mind itself existing in diffe- "rent states?

"It requires but little reflection to be satisfied that the in- "troduction of cerebral organs does not in any degree affect "Dr BROWN's leading principle. The cerebral organs are "not the mind—nor is any state of these organs the mind. "The mind we believe to be a simple and indivisible sub- "stance. And the only difference that the doctrines of "phrenology introduce in regard to Dr BROWN's principle "is, that, instead of the feelings and thoughts being merely "the relations of the simple substance *mind*, to its own former "states or to external objects, they are the relations of the "simple substance *mind* to certain portions of the encephalon.

"In looking upon any object—as snow—we have the no-

" tion of a certain colour. Now, the notion is not in the snow " but in the mind. That is, the notion of colour is the mind " existing in a certain relation to an external object. But it " is allowed on all hands, that there is an intervening step be- " tween the snow and the mind. There is an affection of the " optic nerve. The notion of colour, then, is the mind existing " in a certain relation to the optic nerve. It will be conced- " ed, that this does not alter the question as to the simplicity " of the mind. And if this is conceded, it is abundantly ob- " vious, that another step in the process might be conceived, " without taking away from the simplicity of the immaterial " part, and that, instead of an affection of the optic nerve be- " ing the immediate antecedent of the notion of colour, it " might be a particular portion of the encephalon. As the " notion of colour, upon this supposition, is a relation of the " mind to the organ of colour, it follows, that, if that organ " were changed in any respect, the state of the mind would " also be changed. Thus, if it were larger, or of a finer " structure, or more active, the perception of colour would " be more delicate, or quick, or pleasing. The same remarks " might be extended to all the organs. Where the organ of " Causality is large, as in the case of Dr Brown himself, " then there will be a tendency to reason; which tendency is " a state of the mind in relation to a material organ, which " state would have been different had the organ been diffe- " rent.

" A multitude of organs may all be affecting the mind at " the same instant, and in that case a variety of feelings will " be experienced. But still themind is simple, and it is only " its relations to these different organs that are complex.

" When we say, then, that when we have any power, as for " example, of reasoning, we are not to suppose that the pow- " er is different from the mind. There is a material organ " which is separate from the mind, but the perception of re- " lation is a state wholly mental. One state of the organ may " give the perception of relation, another the desire to per- " ceive or discover it; but the perception and desire are both

" attributes, not of matter but of mind.—The effect of the " organ being large or small, active or inactive, in different in- " dividuals, or upon the same individual at different times, is " the subject to which I alluded in the chapter on Cause and " Effect, as that which Dr Brown had not considered."

It is not necessary in studying phrenology to decide which of these views is the correct interpretation of nature, because the effects of the organs on the mind is the same, whichever of them be adopted. Holding the mind to consist of an aggregate of powers,—then each acts by means of a particular organ, and is manifested with a degree of energy in proportion to its size. Viewing it as a simple substance, capable of existing in a variety of states, it enters into each state by means of a separate organ: when the organs are spontaneously active, they induce their relative states; without their influence these cannot take place: when they are large, the states are excited vigorously; when they are small, they exist feebly. The reader may therefore adopt whichever theory appears to himself preferable. In the following pages the faculties will be treated of as distinct mental powers, connected with separate organs, because this view enables me to bring out the doctrine more simply and luminously, than by considering them as merely particular states of the general power—the Mind; and this language, moreover, is correct even on the latter hypothesis, because, according to this view, when the organ of Causality, for example, is largely possessed, the individual is capable of reasoning logically and acutely; of which mental acts he is incapable, when it is greatly deficient. The word *faculty* or *power*, therefore, is used to express the quality which is possessed in the one, and not in the other case, and which, being *active*, is legitimately designated, and universally recognised, by either of these terms.

" It has occurred to me," continues Mr Welsh, " that " another difficulty of a metaphysical nature may suggest it- " self in regard to the principles of Phrenology. It may be " asked, What is the soul when deprived of the cerebral or- " gans? But the system of Dr Brown affords us no more

"light upon this point, than the system of Dr GALL. In-
"deed, a passage which I have quoted from his Lectures
"shews, that he considered that those who engaged in such
"inquiries were ignorant of the limits of our faculties. It is
"only experience that can teach us in what state the soul ex-
"ists when separated from the body. And in this sense the
"precept of the poet holds equally in a scientific and in a re-
"ligious point of view,

"Wait the great teacher Death, and God adore."

DIVISION OF THE FACULTIES.

DR SPURZHEIM divides the faculties into two orders, FEELINGS and INTELLECT, or into *affective* and *intellectual* faculties. The feelings are subdivided into two genera, PROPENSITIES and SENTIMENTS. He applies the name *propensities* to indicate internal impulses, which invite only to certain actions; and *Sentiments* designate other feelings, not limited to inclination alone, but which have an emotion of a peculiar kind superadded. Acquisitiveness, for example, is a mere impulse to acquire; Veneration gives a tendency to worship, accompanied with a particular emotion, which latter quality is the reason of its being denominated a Sentiment.

The second order of faculties, makes us acquainted with objects which exist, their qualities and relations; and they are called *intellectual.* They are subdivided by Dr SPURZHEIM into four genera. The first includes the external senses and voluntary motion; the second, those internal powers which make man and animals acquainted with external objects, and their physical qualities; and the third, the powers which perceive the relations of external objects. These three genera are named *perceptive faculties.* The fourth genus comprises the faculties which act on all the other powers, and these are named *reflective* faculties.

The names of the faculties employed in this work are, with few exceptions, those suggested by Dr SPURZHEIM. To designate *propensity*, the term *ive* is added to a root or fundamental word, and indicates *the quality of producing*; and *ness*, the abstract state, as Destructiveness. The termination *ous*, characterises a *sentiment*, as Cautious, Conscientious. To these is added *ness*, to express the abstract state, as Cautiousness, Conscientiousness. The names of the *intellectual* faculties are easily understood, and do not require any particular explanation.

Considerable difficulty attends the arrangement of the faculties and organs. In the first edition of this work, and in the Elements of Phrenology, they are arranged and numbered according to the order adopted in Dr SPURZHEIM's New Physiognomical System, published in 1815. The principle of that arrangement was, as far as possible, philosophical. The organs common to man and the lower animals came first, beginning with the lowest, and ascending. The organs of the moral sentiments were next treated of; and, lastly, the organs of intellect. This arrangement, however, is admitted to be imperfect; but it is difficult to determine how it ought to be amended. It appears impossible to arrive at a correct classification until all the organs, and also the primitive faculty or ultimate function of each, shall be definitely ascertained, which is not at present the case. Till this end be accomplished, every interim arrangement is in danger of being overturned by subsequent discoveries. Dr SPURZHEIM has exhibited a striking example of the truth of this observation, in his endeavours to arrive at a perfect order. One arrangement is followed in his New Physiognomical System, published in 1815; another in his "Observations sur la Phrænologie," in 1818; another in his "Essai Philosophique," in 1820; and a fourth in his English work "Phrenology," in 1825. The plates and busts marked and numbered according to one of these arrangements are extremely troublesome, when used with reference to any of the others, so that, on occasion of each change, the student would require to lay aside all his former busts

and plates, and purchase new ones. And this is not the only evil: the phrenologists of Britain have committed to memory the numbers of the organs, and arranged their ideas, according to the classification of 1815; and all the works on the science proceeding from the Edinburgh press have followed it. So familiar, indeed, have many persons become with these numbers, that they use them in conversation and private correspondence, in place of the names. Every alteration of this order would introduce confusion and perplexity into the minds of such individuals; and as some would be disposed to adhere to the old classification, and while others might adopt the new, the result would probably be the abandonment of the numbers entirely, as the only way to avoid errors and misunderstanding. These inconveniences would be greatly increased, if the changes in the numeration were frequent, and if every author followed his own notions on the subject. In the New Physiognomical System, for example, Dr SPURZHEIM places Wit and Imitation among the *intellectual* organs; while, in his French works, and in his recent work "Phrenology," he considers these faculties as *sentiments*, and arranges them accordingly. If, however, Mr SCOTT's analysis of the functions of Wit, stated in a subsequent part of this work, be correct, which appears highly probable, this organ will fall ultimately to be placed among the Reflecting Powers, and then Dr SPURZHEIM's new arrangement will be more incorrect than the old one. By adhering, till the science is farther advanced, to a particular order, and intimating that it is only temporary, the evil of such alterations is avoided; and when a change is at last made, it will be permanent. I prefer, therefore, in the mean time, the arrangement of 1815, not as the best, but as the most convenient, in consequence of the British public being most familiar with it. Dr GALL appears not to adopt any philosophical principle in his arrangement of the organs; but it is proper that his names and order should be known. I shall, therefore, add to the present work, a table of his order, and also of that followed by Dr SPURZHEIM in his last publication.

In the case of many of the organs, observations have been made to such an extent, that the functions are held to be *ascertained;* and in regard to others, where the observations have been fewer, the functions are stated as *probable.* There is no difference of opinion among Phrenologists, in regard to the kind of manifestations which accompany the organs set down as established; their differences touch only the result of the metaphysical analysis of the feelings and intellectual powers, and the order of their arrangement.

I shall notice briefly the history of the discovery of each organ, and state a few cases in illustration of its function; but the reader is respectfully informed, that I do not pretend to bring forward the evidence on which Phrenology is founded. I beg to refer those readers who are fond of perusing cases, to Dr GALL's quarto work, in 4 volumes, entitled, "Physiologie du Cerveau;" to Dr SPURZHEIM's work, "Phrenology;" to the "Transactions of the Phrenological Society," and to the "Phrenological Journal and Miscellany." Those persons who desire philosophical conviction, are requested to resort directly to *Nature,* which is always within their reach; for SELF-CONVICTION CAN BE OBTAINED ONLY BY SELF-OBSERVATION.

ORDER I.—FEELINGS.

GENUS I.—PROPENSITIES.

The faculties falling under this genus do not form ideas; their sole function is to produce a propensity of a specific kind. These faculties are common to Man with Animals.

1.—AMATIVENESS.

THE cerebellum is the organ of this propensity, and it is situated between the mastoid process on each side and the projecting point in the middle of the transverse ridge of the occipital bone. The size is indicated during life by the thickness of the neck at these parts *.

The cerebellum is separated from the brain by a strong membrane called the Tentorium; in animals which leap, as the cat and tiger, the separation is produced by a thin plate of bone. It is, however, connected with the brain; for its fibres originate in the *corpora restiformia,* from which also the organs of the other animal propensities arise. Certain fibres originating in that source, after passing through the optic *thalami*, expand into the organs of Philoprogenitiveness, Adhesiveness, Combativeness, Destructiveness, &c. The nerves of sight can be traced into the *nates*, lying very near the same

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* Partes genitales, sive testes hominibus et fœminis uterus, propensionem ad venerem excitare nequeunt. Nam in pueris veneris stimulus seminis secretioni sæpè antecedit. Plures eunuchi, quanquam testibus privati, hanc inclinationem conservant. Sunt etiam fœminæ quæ sine utero natæ, hunc stimulum manifestant. Hinc quidam ex doctrinæ nostræ inimicis, harum rerum minime inscii, seminis præsentiam in sanguine contendunt, et hanc causam sufficientem existimant. Attamen argumenta hujus generis verâ physiologiâ longè absunt, et vix citatione digna videntur. Nonnulli etiam hujus inclinationis causam in liquore prostatico quærunt; sed in senibus aliquando fluidi prostatici secretio, sine ulla veneris inclinatione, copiosissima est.—*Spurzheim's Phrenology*, p. 123.

parts, while the nerves of hearing spring from the medullary streaks on the surface of the fourth ventricle, lying immediately under the cerebellum. These arrangements of structure correspond with the facts, that the eyes express more powerfully than the other senses, the passion of love; that abuses of this propensity produce blindness and deafness; and, that this feeling frequently excites Adhesiveness, Combativeness and Destructiveness, into vivid action, rendering attachment irresistibly strong, and inspiring even females, who, in ordidinary circumstances, are timid and retiring, with courage and determination, when under its influence. The cerebellum consists of three portions, a central and two lateral. The central is in direct communication with the *corpora restiformia*, and the two lateral portions are brought into communication with each other by the *pons Varolii*.

Dr GALL was led to the discovery of this organ in the following manner. He was physician to a widow of irreproachable character, who was seized with nervous affections, to which succeeded severe nymphomania. In the violence of a paroxysm, he supported her head, and was struck with the large size and heat of the neck. She stated, that heat and tension of these parts always preceded a paroxysm. He followed out, by numerous observations, the idea suggested by this occurrence, of connexion betwixt the propensity and the cerebellum, and he soon established the point to his own satisfaction.

The faculty gives rise to the sexual feeling. In new-born children, the cerebellum is the least developed of all the cerebral parts. At this period, the upper and posterior part of the neck, corresponding to the small cerebellum, appears attached almost to the middle of the base of the skull. The cerebellum is then to the brain as one to thirteen, fifteen or twenty, and in adults as one to six, seven or eight. It attains its full size from eighteen to twenty-six. The neck then appears greatly more expanded behind. The cerebellum is less in females, in general, than in males. In old age it frequently diminishes. There is no constant proportion betwixt the brain and it in all individuals, just as there is no invariable pro-

portion betwixt the feeling and the other powers of the mind. Sometimes, however, the cerebellum is largely developed before the age of puberty. This was the case in a child of three years of age, in a boy of five, and in one of twelve; and they all manifested the feeling strongly. In the cast of the skull of Dr HETTE, sold in the shops, the development is small, and the feeling corresponded. In the casts of MITCHELL, DEAN, MARY MACINNES, and RAPHAEL, it is very large, and the manifestations were in proportion. Farther evidence of the functions of this organ will be found in Dr GALL's "Physiologie du Cerveau;" and several cases are mentioned in the following works, viz. "Journal of Pathological Observations kept at the Hospital of the Ecole de Médécine, No. 108, 15th July 1817," case of *Jean Michel Brigaud;* "Journal of the Hôtel Dieu," case of *Florat*, 19th March 1819, and of a woman, 11th November 1818; "WEPFERUS, Historiæ apoplecticorum," edit. 1724, page 487; "Philosophical Transactions," No. 228, case by Dr TYSON; "Mémoires de Chirurgie Militaire, et Campagnes," by Baron LARREY, vol. ii. p. 150, vol. iii. p. 262; "SERRES on Apoplexy;" "RICHERAND's Elements of Physiology," pp. 379, 380, KERRISON's Translation; "Dr SPURZHEIM's Phrenology," p. 130.

"It is impossible," says Dr SPURZHEIM, "to unite a greater number of proofs in demonstration of any natural truth, than may be presented to determine the function of the cerebellum;" and in this I completely agree with him. Those who have not read Dr GALL's section on this organ, can form no adequate conception of the force of the evidence which he has collected.

M. FLOURENS has lately performed some experiments on the lower animals, chiefly by inflicting injuries on their cerebella, and contends that these experiments shew that the cerebellum serves for the regulation of muscular motion. "On removing the cerebellum," says he, "the animal loses the power of executing combined movements." MAGENDIE performed similar experiments on the cerebellum, and found that they only

occasion an *irresistible tendency in the animal to run, walk, or swim, backwards.* He made experiments, also, on the *corpora striata* and *tubercula quadrigemina*, with the following results: when one part of these was cut, the animal *rolled;* when another, it *went forward, and extended its head and extremities;* when another, it *bent all these:* so that, according to this mode of determining the cerebral functions, these parts of the brain possess an equal claim with the cerebellum, to be regarded as the regulators of motion. The fact is, that all parts of the nervous system are so intimately connected, that the infliction of injuries is not the way to determine the functions of any, even its least important parts.

Mr Scott, in an excellent essay on the influence of this propensity on the higher sentiments and intellect *, observes, that it has been regarded by some individuals, as almost synonimous with pollution; and the notion has been entertained, that it cannot be even approached without defilement. This mistake has arisen, from attention being directed too exclusively to the abuses of the propensity,—like every thing that forms part of the system of nature, it bears the stamp of wisdom and excellence in itself, although liable to abuse. It exerts a quiet but effectual influence in the general intercourse between the sexes, giving rise in each to a sort of kindly interest in all that concerns the other. This disposition to mutual kindness between the sexes does not arise from Benevolence or Adhesiveness, or any other sentiment or propensity alone; because, if such were its sources, it would have an equal effect in the intercourse of the individuals of each sex among themselves, which it has not. "In this quiet and unobtrusive state of the feeling," says Mr Scott, "there is nothing in the least gross or offensive to the most sensitive delicacy. So far the contrary, that the want of some feeling of this sort is regarded, wherever it appears, as a very palpable defect, and a most unamiable trait in the character. It softens all the proud, irascible, and antisocial principles of

* Phrenological Journal, No. vii. p. 392.

" our nature, in every thing which regards that sex which is " the object of it; and it increases the activity and force of " all the kindly and benevolent affections. This explains " many facts which appear in the mutual regards of the sexes " towards each other. Men are, generally speaking, more " generous and kind, more benevolent and charitable, towards " women, than they are to men, or than women are to one " another." This faculty also inspires the poet and dramatist in compositions on the passion of Love; and it exerts a very powerful influence over human conduct. Dr SPURZHEIM observes, that individuals in whom this organ is very large, ought not to be dedicated to the profession of religion, in countries where chastity for life is required of the clergy.

The abuses of this propensity are the sources of innumerable evils in life; and, as the organ and feeling exist, and produce an influence on the mind, independently of external communication, Dr SPURZHEIM suggests the propriety of instructing young persons in the consequences of its improper indulgence, as preferable to keeping them in " a state of ig- " norance that may provoke a fatal curiosity, compromising " in the end their own and their descendants' bodily and men- " tal constitution."

The organ is established.

2.—PHILOPROGENITIVENESS.

THE attachment of the inferior animals to their young has often been the subject of admiration. In them it is attributed to instinct. Instinct means an original propensity, impelling the animal endowed with it to act in a certain way, without intention or purpose. Is the attachment of human beings to offspring, the consequence of a similar innate feeling, or is it the result of reason, or a modification of benevolence, or of other feelings? That it does not spring from reflection is abundantly evident. Reason only investigates causes and effects, and decides on a comparison of facts. The mother, while she smiles with ineffable joy on her tender offspring,

does not argue herself into the delightful emotion. The excitement is instantaneous; the object requires only to be presented to her eye or imagination, and the whole impetus of parental love stirs the mind. Hence a feeling or propensity is obviously the basis of the affection. It is not a modification of any other sentiment, but an original propensity; for, on going into society, we find, that the Love of Offspring bears no perceptible proportion to any other feeling or faculty of the mind. If it depended on Benevolence, no selfish individual should be ardently attached to offspring; and yet the opposite is frequently the fact. If it were a modification of mere Self-Love, as some have supposed, then parental affection should be weak, in proportion as generosity was strong; but this theory also is contradicted by experience. Neither do we find Love of Offspring bear a definite relation to intellectual endowment. Sometimes a woman of limited understanding loves her children ardently; occasionally another equally weak, is indifferent towards them. Some highly intellectual women add maternal affection to their other virtues; while others, not less acute in understanding, look on offspring as a burden. There are, therefore, the strongest reasons for holding it to be a primitive tendency of the mind; and phrenological observations coincide with this conclusion.

The organ is situated immediately above the middle part of the cerebellum, and corresponds to the protuberance of the occiput. Dr Gall gives the following account of its discovery. In the course of his observations he had remarked, that, in the human race, the upper part of the occiput is in general more prominent in the female skull than in the male; and inferred, that the part of the brain beneath was the organ of some feeling which is stronger in women than in men. But the question presented itself, What is this quality? During several years various conjectures occurred to him, which he successively adopted and rejected; and he frequently stated to his pupils the embarrassment he felt upon the subject. He remarked at last, that, in this particular point, the *crania* of monkeys bore a singular resemblance to those of women,—and concluded, that the cerebral part, placed imme-

diately under the prominence, was probably the organ of some quality or faculty, for which the monkey tribes and women were distinguished in a remarkable degree. He was led the more to entertain this idea, because, from the discoveries he had already made in this region, he was aware that he was not to look for the seat of any superior intellectual or moral faculty. He repeatedly revolved in his mind all the feelings manifested by the monkey tribe, so far as known to him. At last, in one of those favourable moments, when a lucky thought sometimes does more to elicit truth than years of labour and reflection, it suddenly occurred to him, in the midst of a lecture, that one of the most remarkable characteristics of monkeys, is an extreme ardour of affection for their young. This quality had been noticed in them by the most distinguished naturalists; and persons who have resided in countries where monkeys are common, have also observed it, and remarked, that it led them to bestow caresses even on the young of the human species, especially negro children, when these were so unlucky as to fall in their way. The thought flashed upon his mind that this might be the feeling or quality of which he was in search. Impatient to put this conclusion to the test, by a comparison of all the male with the female skulls of animals in his extensive collection, he begged his hearers to go away, and leave him to his researches;—and on this examination he found, that there existed, in fact, the same difference between the male and female skull of the lower animals in general, which he had observed between the male and the female skull in the human species. This seemed a confirmation of the idea, that the quality of which this cerebral part is the organ, is that of affection for offspring—which, he had already remarked, was possessed in a greater degree by the females of the animal tribes, than by the males. The inference appeared to him more plausible, from the circumstance, that this organ was placed in close vicinity to that of the instinct of propagation. Many subsequent observations established the conclusion *.

* Gall Sur les Fonctions du Cerveau. Edit. 1823. v. iii.—Phren. Journ. vol. ii. p. 23.

The faculty produces the instinctive love of offspring and delight in children.

The feeling is beautifully represented in the following lines of Lord Byron:

ADAH.

Where were then the joys,
The mother's joys of watching, nourishing,
And loving him? Soft! He awakes. Sweet Enoch.
(She goes to the child.)
Oh CAIN! Look on him; see how full of life,
Of strength, of bloom, of beauty, and of joy.
How like to me,—how like to thee, when gentle,
For *then* we are *all* alike: is't not so, CAIN?
Mother, and Sire, and Son, our features are
Reflected in each other.
Look! how he laughs, and stretches out his arms,
And opens wide his blue eyes upon thine,
To hail his father; while his little form
Flutters as wing'd with joy. Talk not of pain!
The childless cherubs well might envy thee
The pleasures of a parent! Bless him, CAIN,
As yet he hath no words to thank thee, but
His heart will, and thine own too.

Cain, Act III. *Scene* 1.

The organ may be verified in the easiest manner by any person who chooses to observe nature. It is one of the most conspicuous and easily distinguished in the head, particularly in the human species; and the manifestations may be recognised with equal facility. Those who possess the feeling in a strong degree, shew it in every word and look, when children are concerned; and these, again, by a reciprocal tact, or, as it is expressed by the Author of Waverley, by a kind of "free-masonry," discover at once persons with whom they may be familiar, and use all manner of freedoms. It is common, when such an individual appears among them, to see him welcomed with a shout of delight. Other individuals, again, feel the most marked indifference towards children, and are unable to conceal it, when betrayed into their company. Romping disconcerts them, and having no sympathy with children's pranks and prattle, they look on them as the

greatest annoyances. The same novelist justly remarks, that if such persons sometimes make advances to children, for the purpose of recommending themselves to the parents, their awkward attempts are instinctively recognised, and fail in attracting reciprocal attention. On examining the heads of two persons thus differently constituted, a prominence, corresponding to this organ, will be discovered in the hind part of the one, which will not be found to the same extent in the other.

It is a remarkable ordination of nature, that the intensity of this feeling bears a proportion to the weakness and helplessness of its objects, rather than to any other of their moral or physical qualities. The mother doats with fondest delight on the infant in the first months of its existence, when it presents fewest attractions to other individuals; and her solicitude and affection are bestowed longest and most intensely on the feeblest member of her family. On this principle, the youngest is the reigning favourite, unless there be some sickly being of maturer age, who then shares with it the maternal sympathies. The primitive function of the faculty seems to be to inspire with an interest in the helplessness of childhood; but it gives also a softness of manner, in treating the feeble and the delicate even in advanced life; and persons in whom this organ is large in combination with Benevolence, are better fitted for the duties of a sick chamber, than those in whom Philoprogenitiveness is small. The natural language of the faculty is soft, tender, and condescending. It is essential to a successful teacher of children. Individuals in whom the organ is deficient, have little sympathy with the feelings of the youthful mind, and their tones and manner of communicating instruction repel, instead of engaging, the affections of the scholar. This is the cause why some persons, whose manner, in intercourse with their equals, is unexceptionable, are nevertheless greatly disliked as teachers; and children are generally in the right in their antipathies, although their parents and guardians, judging by their own feelings, imagine them actuated altogether by caprice.

It has been remarked by Mr Scott, that the fondness which

unmarried females, or married ladies who have no children, sometimes lavish "on animals, generally of the smaller and "more delicate kinds, whom they nurse and pamper with a "degree of devotedness and affection, which can be compared "only to that of a mother for her children," probably has its origin in this faculty. The feeling seems the same, its objects only being different; and, instead of overwhelming such individuals with ridicule, they deserve our forbearance at least, if not respect, as "they are merely following the bent of a strong "natural propensity, implanted in them for the wisest pur-"poses, and which, in more favourable circumstances, would "have rendered them affectionate mothers, and excellent mis-"tresses of families."

This propensity furnishes the spirit of lullabies, and inspires the poet and dramatist in many of their representations. Wordsworth manifests it strongly, and some of the faults of his manner are clearly attributable to an excess of its influence. It characterises the Lake school of poetry in general.

The feeling produced by this faculty is so intense and delightful, that no other is more liable to abuse. When too energetic, and not regulated by judgment, it leads to pampering and spoiling children; to irrational anxieties regarding them, and sometimes to the most extravagant conceit of their supposed excellencies. When misapplied, it defeats the object of its institution; for, instead of conducing to the protection and happiness of children, it renders them highly miserable. When the organ is deficient, indifference and regardlessness about offspring are the consequences. Children are then felt as a heavy burden; they are abandoned to the care of menials, or altogether neglected, and left to encounter the perils and distresses incident to tender age, without solace or protection. Instances have been known (as in the case of the Countess of Macclesfield, mother of the poet Savage), of mothers who conceived an unaccountable and seemingly causeless hatred against their own offspring, and who persecuted them with relentless severity. Dr Gall knew, at Vienna, a lady who loved her husband tenderly, and who ma-

naged the concerns of her household with intelligence and activity, but who sent from home, as soon as they saw the light, all the nine children to whom she successively gave birth, and for years never asked to see them. She herself was somewhat ashamed of this indifference, and could not account for it to herself. To quiet her conscience, she insisted upon her husband seeing them every day, and taking a charge of their education. From deficiency of the organ also, combined with other feelings in a strong degree, probably arises the cruelty of such barbarous mothers as ISABEL of Bavaria, of whom history relates that she stifled all the sentiments of affection due to her children.

Among twenty-nine infanticides whom Drs GALL and SPURZHEIM had occasion to examine, the organ of the Love of Children was very feebly developed in twenty-five. Dr GALL has oftener than once made the remark, that it is not this defect in development alone which determines a mother to child-murder; but that individuals, defective in this respect, yield sooner than others to those unfavourable circumstances which lead to the crime, because they are not endowed with that profound feeling which, in the heart of a good mother, will rise victorious over every such temptation.

In selecting a nurse or child's maid, the phrenologist will be directed by the development of this organ. This application of the science, when mentioned to those who have not studied the subject, generally excites a smile; and certainly, if the size of the part of the brain in question were no indication of instinctive affection for children, no test of qualification could be more justly deserving of ridicule than the one now recommended; but, on the other hand, if the organ be an unerring index of this disposition (which it is, otherwise all we are now considering is a delusion), no weakness can be greater than that which would fear to appeal to it, because it might provoke a smile in those who are ignorant that nature has established the function.

The head of the male is generally broader and rounder, and that of the female longer and narrower, when contrasted

with each other. This arises partly from the organ of philoprogenitiveness being more developed in the female head, and causing the occiput to project. The portion of brain placed in the occiput is greater in women than in men, though the entire brain of the woman is smaller than that of the man. This difference is observable in the fœtal skull of the two sexes; and is conspicuous in boys and girls. The manifestations even in the earliest periods of life correspond; for the girl shews attachment to dolls and infants, while the boy is addicted to romping and athletic sports. A curious practical example of the difference in this feeling betwixt males and females in general occurs in MORIER's Travels in Persia. "The surgeons "of the Embassy" says he, "endeavoured to introduce vac- "cination among the Persians, and their efforts at first were "very successful; but on a sudden its progress was checked "by the government itself. Several of the King's Ferashes "were placed at the gate of the Ambassador's hotel, nominal- "ly as a mark of attention to his Excellency, but really to "stop all women from going to our surgeons. They said, "that if the people wanted their children to be vaccinated, "the *fathers*, and not the *mothers*, were to take them to the "surgeons, by which means the eagerness for vaccination was "stopped; for we soon discovered that the *males* did not feel "one-half the same anxiety for their offspring as the *women*." —*Second Journey through Persia, p.* 191.

There are, nevertheless, exceptions to this general rule. Sometimes the occipital part of the brain is feebly developed in a woman, and has acquired a very large size in a man. In such cases, the manifestations will be found to correspond to the development, and this *quite uniformly and without any exception*. Dr GALL conjectures, that in these cases the woman will be found to resemble her father, and the man his mother, unless this peculiar conformation should be hereditary in the family. There are men thus organized who have a particular affection for children, and in whom the organs of Amativeness and Adhesiveness are small,—who have been found to bear the loss of an affectionate wife with a resignation which appears very

philosophic, while the death of an infant plunges them into a deep and lasting grief. The want of children is with such men a constant source of uneasiness, and often this circumstance causes them to treat with unkindness a partner exceedingly estimable in all other respects.

Dr GALL observes, that we find this organ more developed in some mothers than in others. It is generally large in Negroes; and infanticide is a crime almost unknown among that variety of the species. Persons well acquainted with their character assure us, that they never heard of such a crime committed by a black. The organ is commonly well developed even in male Negroes; and we find that Negro men often consent to take charge of children. Travellers report that the Tungusians and the inhabitants of North America are singularly fond of their children. Dr GALL mentions, that, in the skulls of two Tungusians and a North American Indian, which he had seen at Gottingen, in the collection of Professor BLUMENBACH, this organ was large. Dr MURRAY PATERSON states, that the Hindoos, both male and female, are highly endowed with this feeling;—it is manifested by them, he says, "in their predilection for domestic quiet; in the happi-"ness they seem to feel when surrounded by their children; "in the spirit of their lullabies, and in their frequent and ar-"dent embraces." Out of twelve Hindoo skulls which are now in the possession of the Phrenological Society, eleven have this organ largely developed, and only one moderately so.

The feeling in question, so necessary for the preservation and continuance of the species, is found strong in the most savage tribes. The organ is decidedly marked even in the casts of the skulls of the Caribs, unquestionably the most unfavourably organized, in other respects, of all the races of which we possess any knowledge. Out of five casts of Carib skulls in the Phrenological Society's collection, one has the organ very large, three have it large, and the remaining one rather full. This tribe appears, from their cerebral development, and the accounts of travellers and historians with regard to their manners and character, to be endued with the most brutal ferocity, totally unregulated either by benevolence or in-

tellect; and, unless they possessed an instinctive propensity, prompting them to take care of their children, they would soon become extinct, without the intervention of famine, pestilence, or an exterminating enemy. A satisfactory answer is here afforded to those cavillers, who object that there is no necessity for such a propensity as this, as the feeling of Benevolence alone would be sufficient to prompt parents to bestow the requisite care on their offspring. We have only to point to the Caribs, and say, What reliance could be placed on the benevolence of such beings? And yet they show attachment to their young, and submit to the inconveniences of rearing them, amidst all the toils, privations, and hardships, that abound in savage life.

This, like the other cerebral organs, is liable to disease, and derangement in the manifestations of the propensity are the consequence. Sometimes the most painful anxiety is felt about children, without any adequate external cause; and this arises from involuntary activity of the organ.

Dr Andrew Combe attended a woman, while labouring under a temporary alienation of mind, whose constant exclamations during three days, which the fit lasted, were about her children—she imagined that they were in distress, murdered, carried away, exposed to every calamity. On recovery she complained of having had pain in the hind part of her head during the attack, pointing to the situation of Philoprogenitiveness; but she had no other recollection of what had passed. She was altogether unacquainted with Phrenology.

Dr Gall mentions a case of a woman in the great hospital at Vienna, who was seized with a very peculiar kind of madness—maintaining that she was about to be delivered of six children. He was led, by his previous observations, to conjecture that this hallucination was owing in part to a great development, and partly to an over-excitement of the organ of Philoprogenitiveness. The patient died, and he mentions that the development of this organ in her head was quite extraordinary. The posterior lobes of the brain not only overhung the cerebellum more than is usual in females, but were rounded and voluminous in a very remarkable degree. At Paris,

Dr GALL attended a young lady of perfect modesty, who laboured under mental disease. She lived in the best society, and went to Vienna accompanied by some most respectable friends. She was hardly arrived, when she ran to all her acquaintances, and announced to them, with the most lively joy and in the openest manner, that she was pregnant. The circumstances of this declaration, and the known character of the lady, were sufficient to lead her friends to conclude her to be insane. In a short time her joy gave place to anguish of mind, and to a mournful and invincible taciturnity. Soon afterwards she died of consumption. In her, also, this organ was extremely developed; and during her life this lady had been remarkable for her love of children. In the Lunatic Hospital at Amsterdam, Drs GALL and SPURZHEIM saw a female patient, who spoke of nothing but of being with child, though no such thing was the case. Her head was small, and the organ of Philoprogenitiveness alone was very largely developed. In another hospital for lunatics, they saw a man who maintained that he was with child of twins. They announced that he ought to have this organ large, and, on examining his head, found it to be so. These cases of the diseased state of the organ add to the already numerous proofs that this is an original and a special propensity.

Dr GALL relates, that he has examined, with all the attention in his power, the skulls of birds, from the smallest up to the greatest, and of mammiferous animals, from the shrew-mouse to the elephant; and he has found throughout, that, in the females, the cerebral part, which corresponds to the organ of Philoprogenitiveness in the human species, is more developed than in the males. He says, that if there be presented to him, in water, the fresh brains of two adult animals of any species, one male and the other female, he will distinguish the two sexes without ever being deceived. In the male, the cerebellum is larger and the posterior lobes of the brain are smaller. In the female, on the contrary, the cerebellum is smaller, and the posterior lobes, or the convolutions connected with this function, are larger and longer. When

these two organs are distinctly marked in the cranium, the two sexes may be distinguished by the simple inspection of the skull. In those species where the sexes differ very much in their regard for their young, the crania differ sometimes so much in form, that they have been placed in collections as belonging to different varieties of the same species, though in fact they belonged to individuals of the same variety, but of different sexes.

Dr Gall adduces innumerable facts in support of this proposition; but as these can hardly be made intelligible, without the assistance of plates, I must refer those who wish to pursue this inquiry, to his work, and to observations in nature. In pursuing it, the utmost patience and attention are necessary, in order to avoid mistakes. The differences will be found uniformly greatest in those species of which the males pay no regard to their young; but it requires a practised eye and great attention, to discern the difference in classes, of which both the male and female bestow care on their offspring. There is, however, a marked difference in this respect, even in females of the same species, who are fondest of their young. Every cottager knows, and can distinguish in her poultry-yard, particular female fowls, ducks, geese, and turkeys, who cover their eggs and bring up their young ones with the greatest care, while there are others who spoil their nests, and neglect or abandon their young. On comparing the heads of the animals who show these opposite qualities, a decided difference of conformation will be found in the organ of Philoprogenitiveness.—Those, therefore, who wish to form collections with this view, should know not only the natural history of every species, but the peculiar disposition of each individual.

Almost all metaphysical writers admit the Love of Children as an instinctive propensity of the human mind. Phrenological observation points out the organ, and the effects of its different degrees of development, and also of its healthy and sound state, on the manifestations of the feeling; and to this extent adds to the stock of general knowledge.—Established.

3.—CONCENTRATIVENESS.

The organ is situated immediately above Philoprogenitiveness, and below Self-Esteem. A bony excrescence of the suture sometimes presents itself at this part, which may be mistaken for the organ of Concentrativeness; but the former is much narrower and more pointed than the elevation caused by the latter, when it is large.

Observation proves that this is a distinct organ, because it is sometimes found large, when the organs of Philoprogenitiveness and Self-Esteem lying below and above it are small, and sometimes small when these are large. Dr Gall conceives it to be connected in animals with the love of physical elevation, and in man with pride or Self-Esteem. Dr Spurzheim observed it to be large in those animals and persons who seemed attached to particular places. "I consider," says he, "in animals, the cerebral part immediately above the "organ of Philoprogenitiveness, as the organ of the instinct "that prompts them to select a peculiar dwelling, and call it "the organ of Inhabitiveness. My attention has been and "is still directed to such individuals of the human kind as "shew a particular disposition in regard to their dwelling-"place. Some nations are extremely attached to their coun-"try, while others are readily induced to migrate. Some "tribes wander about without fixed habitations, while others "have a settled home. Mountaineers are commonly much "attached to their native soil, and those of them who visit "capitals or foreign countries, seem chiefly led by the hope "of gaining money enough to return home, and buy a little "property, even though the land should be dearer there than "elsewhere. I therefore invite the phrenologists, who have "an opportunity of visiting various nations particularly fond "of their country, to examine the development of the organ "marked No. III., and situated immediately above Philo-"progenitiveness. In all civilized nations some individuals "have a great predilection for residing in the country. If "professional pursuits oblige them to live in town, their en-"deavour is to collect a fortune as speedily as possible, that

" they may indulge their leading propensity. I have exa-
" mined the heads of several individuals of this description,
" and found the parts in question much developed."—*Phre-nology*, p. 126. The function, however, is stated by him as only conjectural. From a number of observations, the faculty appears to me to have a more extensive sphere of action than that assigned to it by Dr SPURZHEIM.

I have noticed that some persons possess a natural facility of concentrating their feelings and thoughts, without the tendency to be distracted by the intrusion of emotions or ideas foreign to the main point under consideration. Such persons possess a command over their feelings and intellectual powers, so as to be able to direct them in their whole vigour to the pursuit which forms the object of their study for the time, and hence they produce the greatest possible results from the particular endowment which nature has bestowed on them. Other individuals, on the other hand, have been observed, whose feelings do not act in combination, who find their thoughts lost in dissipation, who are unable to keep the leading idea in its situation of becoming prominence, are distracted by accessories: and, in short, experience great difficulty in combining their whole powers to a single object. These persons, even with considerable reflecting talents, fail to produce a corresponding general effect, and their mental productions are characterised by the intrusion of irrelevant emotions and ideas, and the unperceived omission of others that are important, arising from the disjointed action of their several faculties. The organ was perceived to be large in the former and small in the latter.

Finally, I have met with persons, possessed of undoubted ability and information, who had little talent for sustained, relevant, and consecutive conversation or thinking, who passed from one idea to another very little connected, and had no tendency to dwell on any topic till they had viewed it even in its most interesting lights. Such persons, when they speak, lecture, or write, do not draw close the attention of the auditors or readers, and a painful effort is required to follow them. In them I have found this organ small, with-

out a single exception, although frequently their development, in other respects, was admirable. I have met with individuals whose mental character was precisely the reverse, and in them the organ was large. These observations have been communicated, for some years, to a numerous body of phrenologists in Scotland, and have generally been recognised by them as accurate, after putting them to the test of their own experience.

The following passage contains what appears to me a correct and precise description of the mental features of an author deficient in this organ. "What we complain of here," (says the reviewer of Murray's Literary History of Galloway,) "the want of close thought and distinct conception, "seems to be the besetting sin of this author. We are ever "and anon presented with scattered morsels of ratiocination, "which, though animated and legitimate enough, seldom in- "dicate, by their presence, from whence they originate, or "to where they lead. He does not look behind him, nor cast "an eye before, with an aim sufficiently steady, to be enabled "to embody with distinctness a set of relations fitted to give "unity to a narrative, nor, by rejecting associations of inferior "interest, that serve only to distract, to bring together those "main aspects of character which give individuality to a pic- "ture, and render it expressive. The solidity, in short, of on- "ward purpose seldom pervades his pages. In the perusal a "thousand fleeting assemblages of momentary importance "are perpetually hovering round us: each minor incident, "that he chances to fall in with in the course of his story, has "a claim on his attention; he often deserts his theme com- "pletely, and resolutely stops the current of interest, in "order to give a prominent place to some object which hard- "ly deserved a place in the back-ground of any painting; so "that, in this way, the most ordinary rules of composition "are violated, and the thread of the story often entangled or "interrupted altogether."

I am not acquainted with the size of the organ in the author alluded to by the reviewer, but the mental qualities de-

* Christian Instructor, No. 140. p. 190, March 1822.

scribed are so precisely those which I have found uniformly to accompany a small development, that I should be strongly shaken in my conclusions if the organ in such a head were large. The styles of TACITUS and GRATTAN appear to me highly characterized by Concentrativeness, while that of Mr DUGALD STEWART is so only in a moderate degree. The quality is much more conspicuous in the poetry of THOMAS CAMPBELL and CRABBE than in that of Sir WALTER SCOTT. It seems to have been recognized by the late Dr THOMAS BROWN, who names it a "Comprehensive Energy," and it abounds in his own writings.

It has been answered, that concentration in style is, in many instances, the result of labour and condensation, and in this I agree; but before an author will bestow pains in communicating this quality to his compositions, he must have a relish for it himself; and this, according to my notion, is inspired by the organ in question. The object of his exertions is to bring his style up to a state which pleases his own faculties; and if the organ be small, he will not find pleasure in concentration either of feeling or thought.

According to this account of the faculty, an individual may have great liking for a particular pursuit, Botany, for example, or Phrenology, if he possess the combination of faculties which takes pleasure in it; and he may pursue it with ardour, and nevertheless be deficient in Concentrativeness. I know such persons, but in all of them deficiency of Concentrativeness is observable. They make efforts, collect knowledge, or communicate ideas, but do not take a comprehensive and concentrated view of the objects and their relations about which they treat. I have observed, that individuals in whom the organ is small, although acute and steady in their general habits, have great difficulty in transcribing or engrossing papers correctly.

The question occurs, What is the primitive feeling which gives rise to these phenomena? The first idea that led me to the conclusion, that it is the tendency to concentrate the mind within itself, and to direct its powers in a combined effort to one object, was suggested by a lady, who had remarked this quality in individuals in whom the organ was large.

The Reverend DAVID WELSH and Dr HOPPE of Copenhagen, having been informed of these views, unknown to each other, communicated to me the inference, that the faculty gives a tendency to dwell in a place, or on feelings and ideas, for a length of time, till all, or the majority, of the other faculties are satisfied in regard to them. Both of these phrenologists acquiesce in the manifestations being such as I have described them, when the organ is large or small. Dr SPURZHEIM, however, objects to these ideas, and states, that his experience is in contradiction to them. Facts alone must determine between us. At the same time, there appears to be nothing in the notions of Dr SPURZHEIM concerning Inhabitiveness, inconsistent with the more extensive views now taken of the functions of this faculty.

It has been objected by him, that "Concentrativeness can-" not possibly be a primitive faculty, since it can neither act " alone, nor appear diseased singly; and since its very ex-" istence only becomes apparent by the presence of other " powers directed to one object." In answer, I observe that Concentrativeness, in bearing reference to other powers, destined, from their very nature, to act along with it, resembles a variety of other faculties, about which there is no doubt. Firmness produces perseverance, but we must always persevere in some effort; and the special feeling or intellectual exertion, in which determination is shewn, is furnished by other faculties. Thus perseverance in Observation is derived from Firmness acting along with Individuality; perseverance in Justice, from that faculty aiding Conscientiousness. In like manner, Self-Esteem never acts alone; a man must esteem himself for knowledge, for wealth, for virtue, or for some other quality, and these depend on other powers. It is the same with Cautiousness: we fear loss of friends from Cautiousness and Adhesiveness, or loss of property from Cautiousness and Acquisitiveness. In this respect, then, Concentrativeness is not singular.

As to disease of Concentrativeness, this organ appears to suffer in those lunatics whose attention is immoveably fixed

on some internal impression, and who remain absorbed in silent and profound meditation, insensible alike to the threats and caresses of those around them, and to the effects of external objects. They differ from ordinary monomaniacs in this, that the latter, with certain unsound feelings or intellectual perceptions, or with unsound associations on the presentment of certain external objects, can still direct their attention to other feelings or ideas, and concerning them can hold rational conversation. The state now attributed to diseased Concentrativeness, must be distinguished also from one for which it has been sometimes mistaken, viz. *dementia*, approaching to idiocy, in which a fixed look and silent calmness appear, not from internal meditation, but from utter insensibility to stimuli. In disease of Concentrativeness, the patient possesses intense consciousness, and, when cured, is able to give an account of all that passed in his mind during the malady; in *dementia*, the period of the disease forms a blank in existence, the individual recollecting nothing. Dr A. Combe, to whom I owe these observations, states, that he has heard Esquirol, in his lectures at the Salpetrière, speak of cases such as those now described; and he has seen examples which proved the accuracy of his account of them, although, owing to the function not having been discovered at the time, he did not observe the condition of this particular organ. I am acquainted with a gentleman in whom the organ is large, and who, while labouring under a nervous affection, in which Cautiousness and Conscientiousness were diseased, experienced a feeling as if the power of concentrating his mind were about to leave him, and who used vigorous efforts to preserve it. He directed his attention to an object, frequently a spire at the end of a long street, and resolutely maintained it immoveably fixed there for a considerable length of time, excluding all other ideas from his mind. The consequence was, that in his then weak state, a diseased fixity of mind ensued, in which feelings and ideas stood as it were bound up and immoveable, and thereafter a state in which every impression and emotion was floating and fickle like images in water. He was then unacquainted with phrenology, but knows it now, and expresses

his conviction that the circumstances detailed were probably referable to a diseased affection of the organ in question.

Dr Spurzheim objects farther, that "no one, in concentrating his mind, and directing his powers to one object, "exhibits gestures and motions indicating activity in the back "part of the head; the whole of the natural language shews, "that concentration takes place in the forehead." With the greatest deference to Dr Spurzheim's superior skill and accuracy, I take the liberty of stating, that, so far as my own observation goes, those persons who really possess the power of concentration, while preparing to make a powerful and combined exertion of all their powers, naturally draw the head and body backwards in the line of this organ. Preachers and advocates in whom it is large, while speaking with animation, move the head in the line of Concentrativeness and Individuality, or straight backwards and forwards, as if Concentrativeness supplied the impetus, and the organs in the forehead served as the instruments to give it form and utterance.

"This organ," continues Dr Spurzheim, "is also commonly larger in women than in men, and I leave every one "to decide upon the sex which supports the more close and "vigorous attention." In Scotland, and I may almost say in England, although my observations there have been less extensive, this is not the case; the development being larger in men in general than in women. "It is, moreover," says he, "larger in Negroes and in the Celtic tribes than in the Teutonic races; in the French, for instance, it is larger than in the "Germans. The national character of these nations not only "does not confirm the opinion of Mr Combe, but is in direct "contradiction to it." From this and some other objections of Dr Spurzheim, which I pass over without comment, I am convinced that he has not correctly apprehended the quality of mind which I designate by Concentrativeness. This must, no doubt, be my fault; but it affords a good reason for not prolonging disputation. So far as my knowledge of French literature extends, it is not marked by deficiency of Concentrativeness. The intellectual range of the French is

limited, but no nation attains to greater perfection within the sphere which their faculties are calculated to reach: they write the best elementary works on science of any people of Europe; and to this Concentrativeness is essential. They bring their powers to bear in a regulated manner on the point under consideration, and present it clearly and definitely to the understanding. The Germans have more powerful reflecting faculties than the French, and also greater perseverance; but, if I may judge from the limited knowledge of their literature which I have been able to obtain, they appear inferior to them in Concentrativeness. They introduce more frequently extraneous ideas and feelings, and do not arrive at so neat and complete a whole in their compositions.

The leading object of these discussions is to enable the reader to form an idea of the mental quality, if it be such, intended to be designated by Concentrativeness, so that he may be able to decide on the function of the organ by his own observations. It acts along with the feelings as well as with the intellect. Abstract reasoning is not admitted in Phrenology as proof in favour of any organ or faculty; and I have observed that, by leading the mind insensibly to adopt a conclusion for or against particular ideas, it produces a tendency to seek support for opinions rather than truth, and thereby retards the progress of accurate investigation.—The function is stated as only probable, and stands open for further elucidation.

4.—ADHESIVENESS.

This organ is situated at the middle of the posterior edge of the parietal bone, on each side of Concentrativeness, higher up than Philoprogenitiveness, and just above the lambdoidal suture. When very large, two annular protuberances will be observed there; or a general fulness, if the neighbouring organs be large; when small, that part of the head is narrow or depressed.

Dr GALL was requested to mould for his collection the head of a lady, who was described to him as a model of friendship. He did so, more through complaisance, than in expectation of making any discovery. In examining the head, he found two large prominences, in the form of a segment of a circle, on the sides of the organ of Philoprogenitiveness. These prominences, which he had not previously observed, were symmetrical, and manifestly formed by part of the brain; and he therefore concluded, that they indicated organs; but the question was, what are their functions? He enquired at the friends of the lady concerning her dispositions and talents, and also obtained her own opinion of the feelings and capacities which she most strongly possessed. All the information concurred in the fact, that she was distinguished by inviolable attachment to her friends. Although at different periods of her life, her fortune had undergone great changes, and on several occasions she had passed from poverty to riches, her affection for her former friends was never forgotten. The idea naturally presented itself, that the disposition to attachment might be connected with a particular part of the brain. This inference acquired greater probability from the circumstance, that the prominences on the head of this lady were placed immediately above the organ of sexual love, and on the two sides of that of the love of children, and that the three feelings have obviously some analogy to each other. Many subsequent observations confirmed this conjecture, and the organ has long been regarded as established.

The faculty gives the instinctive tendency to attachment, and causes us to experience the greatest delight in a return of affection. Those in whom it is large, feel an involuntary impulse to embrace, and cling to any object which is capable of experiencing fondness. It gives ardour and a firm grasp to the shake with the hand. In boys, it frequently displays itself by attachment to dogs, rabbits, birds, horses, or other animals. In girls, it adds fondness to the embraces bestowed upon the doll. The feelings which it inspires abound in the

poetry of MOORE. He beautifully describes its effects in the following lines:

> The heart, like a tendril accustomed to cling,
> Let it grow where it will cannot flourish alone;
> But will lean to the nearest and loveliest thing,
> It can 'twine with itself, and make closely its own.

It also inspires the verse,

> The heart that loves truly, love never forgets,
> But as truly loves on to the close;
> As the sun-flower turns to her god as he sets,
> The same look that she turned when he rose.

The old Scotch ballad, "There's nae luck about the house," breathes the very spirit of this faculty.

The organ is generally larger, and the faculty stronger, in women than in men; and the extreme constancy with which, in general, they adhere to the objects of their attachment, may be attributed to this faculty. "Man boasts of his ca-"pacity for friendship," says Mr SCOTT, "and falsely speaks "of its joys as the purest of all human enjoyments. But, it "is only in the heart of feeling, confiding, generous woman, "that friendship is to be found in all the fulness of perfec-"tion. It was part of the doom pronounced upon her at the "fall, that 'her desire should be to her husband, and that "'he should rule over her;' and, conformably to the first "clause in this sentence, we find Adhesiveness to be, in gene-"ral, far more powerful in the woman than in the man. The "most generous and friendly man is selfish in comparison "with woman. There is no friend like a loving and af-"fectionate wife. Man may love, but it is always with a re-"serve, and with a view to his own gratification; but when "a woman bestows her love, she does it with her heart and "soul."—*Phren. Journ.* vol ii. p. 280.

Even in the most degraded criminals, this faculty sometimes manifests itself with a fervour and constancy of affection worthy of a better fate. MARY MACINNES, executed in Edinburgh for murder, had gained the affections of a person whose name need not here be mentioned; and her attachment

to him continued strong in death, and assumed even a romantic appearance in the last moments of her mortal career. He had sent her a pocket-handkerchief, having his name written in one corner, and also half an orange, with a desire that she would eat the latter on the scaffold, in token of their mutual affection, he having eaten the other half the preceding morning at the corresponding hour. She held the corner of the napkin in her mouth almost all the night preceding her execution, and even on the scaffold. When seated on the drop, the turnkey gave her the half orange. She took it out of his hand, and, without the least symptom of fear, said, "Tell "him (the object of her attachment) that I die perfectly sa- "tisfied that he has done all in his power for my life, and "that I eat the orange as he desired me. May God bless "him. Say to him that it is my dying request that he may "take care of drink and bad company, and be sure never to "be late out at night." She seemed to forget eternity in the ardour of her attachment to earth. The organ is very large in the cast of her head.—*Phren. Trans.* p. 376.

This great proneness to, and ardour in, attachment on the part of the female sex, render those men doubly guilty, who, on the false hypothesis that affection readily and warmly bestowed, may be lightly withdrawn and directed to another, sport with this beautiful trait of female nature, and gain the affections of women, to betray their honour, or gratify a silly vanity by being loved.

There is a great difference among individuals in regard to the strength of this feeling. Some men have many acquaintances but no friends; while others remain attached to certain individuals during every change of circumstances, and do not readily enlarge the circle of their intimates. When the organ is large, great delight is felt in friendship and attachment, the idea of distant friends often presents itself, and the glow of affection rushes into the mind, with all the warmth and vivacity of a passion. Those in whom it is small care little for friendship; out of sight, out of mind, is their maxim. We frequently see individuals of very different characters and genius, lastingly attached to each others. This faculty, strong in both,

seems to me to be the bond of union. They perhaps feel many points of repulsion, and are not happy if too long and too closely united; but still, on being separated, they experience a longing for each other's society, which makes them forget and forgive every thing to obtain its gratification. There are husbands and wives who cannot live together, and yet who become miserable when long separated. I conceive this to arise from a large Adhesiveness in both, combined with other faculties in each, which do not harmonize.

This faculty is clearly distinguishable from Benevolence, for many persons are prone to attachment who are not generous. It, however, has a more extensive influence than the production of friendship among individuals, and appears to give rise to the instinctive tendency to congregate, whence society has originated. Man is created obviously with a view to the social state. His feelings of benevolence, love of praise and justice, require society for their objects, as much as the stomach requires food to enable it to perform the process of digestion; and nature, by means of this faculty, seems to give the instinctive tendency to associate, by means of which the whole powers of the mind may find scope for exercise. If this view be correct, deficiency in the organ will be essential to an anchorite or hermit.

Some of the lower animals possess this propensity as well as man: It is remarkably strong in the dog; and horses and oxen sometimes become sick and pine, when deprived of accustomed companions. "It is to be observed, however," says Dr Spurzheim, "that the instinct of being attached for life, "and that of living in society, are not mere degrees of energy, "so that a lower degree produces attachment for life, and a "higher degree for society. For there are animals which live "in society without being attached for life; as the bull, the "dog, cock, &c.; others live in society, and in family, as starlings, ravens, crows, &c.; others again are attached for life "without living in society, as the fox, magpie," &c. The instinct, therefore, of living in society, and that of living in family, are *modifications* of the faculty in question; just as smell, although the same sense in herbivorous and carnivorous ani-

mals, is modified in the former to take cognizance of vegetable substances, and in the latter, of the animal fibre and effluvia. "Man belongs to the animals which are social and attached "for life; society and marriage are consequently effects not "of human reflection, but of an original decree of nature." —*Spurzheim's Physiog. Syst.* p. 200. *and Phrenology*, p. 152.

Dr Gall does not coincide in the opinion, that attachment for life in man and animals results from this organ. It appears to him, so far as his knowledge of natural history extends, that, in all species where both the male and female concur in rearing the young, marriage for life exists; and that, on the other hand, where the unaided female is sufficient to this end, the connection is temporary. At the same time, he speaks with much reserve on the subject, and is not prepared to decide, whether there is a separate organ for attachment for life,—whether it is the result of a combination of several organs, or a modification of Adhesiveness.—Vol. iii. p. 485.

Excessive energy of this faculty produces extreme regret at the loss of friends, or at leaving our country. Nostalgia is supposed to result from disease of the organ.

Mr Stewart * and Dr Thomas Brown †, admit this tendency as a primitive instinct of our nature, and concur in general with the views of the Phrenologists in regard to it.

J. J. Rousseau founds his celebrated Essay on the Origin of the Inequality of Ranks, which obtained the prize from the Academy of Dijon, on the non-existence of such a propensity in the human mind. He views man in his natural state, as an isolated and wandering animal, satisfying his hunger by the chase, or by the fruit of the forest, and quenching his thirst at the spring or the brook, and having no more need or desire of society with his kind, than the eagle or the wolf. He conceives, that the individual who first inclosed a spot of ground and called it mine, and who first cajoled his fellow men to settle around him and assist him in his projects, was the author of all the evil with which human nature is now af-

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* Outlines, p. 87. † Lecture 67.

flicted. Many volumes have been written in answer to this absurd lucubration; but, I submit, that Phrenology, by shewing, that those who have this part of the brain large, are inspired with an instinctive tendency to attachment and society, affords a brief and satisfactory refutation of the hypothesis.

The organ is established.

5.—COMBATIVENESS.

This organ is situated at the posterior-inferior angle of the parietal bone.

Dr Gall gives the following account of its discovery. After he had abandoned all the metaphysical systems of the mind, and become anxious to discover the primitive propensities of human nature, by means of observation, he collected in his house a number of individuals of the lower classes of society, following different occupations, coach-drivers, servants, &c. After acquiring their confidence, and disposing them to sincerity, by giving them wine and money, he drew them into conversation about each other's qualities, good and bad, and particularly about the striking characteristics in the disposition of each. In the portraits which they drew of each other, they paid particular attention to those who every where provoked quarrels and disputes; they also distinguished individuals of a pacific disposition, and spoke of them with contempt, calling them poltroons. Dr Gall became curious to discover, whether the heads of the *bravoes* whom they described, differed in any respect from those of the pacific individuals. He ranged them on opposite sides, and found, that those who delighted in quarrels had that part of the head immediately behind, and a little above the ear, much larger than the others.

He observes, that there could be here no question about the influence of education, and that this prominent feature in the character of each, could never be attributed to the influence of external circumstances. Men in the rank to which they belonged, abandon themselves without reserve to the impulse of their natural dispositions.

The spectacle of fighting animals was, at that time, still existing at Vienna. An individual belonging to the establishment, was so extremely intrepid, that he frequently presented himself in the arena quite alone, to sustain the combat against a wild boar, or a bull. In his head, the organ was found to be very large. Dr GALL next examined the heads of several of his fellow students, who had been banished from Universities for exciting contentions, and continually engaging in duels. In them also, the organ was large. In the course of his researches, he met with a young lady, who had repeatedly disguised herself in male attire, and maintained battles with the other sex; and in her, also, the organ was large. On the other hand, he examined the heads of individuals who were equally remarkable for want of courage, and in them, the organ was small. The heads of the courageous persons varied in every other point, but resembled each other in being large in this part. Equal differences were found in the other parts of the heads of the timid, when compared with each other, but all were small at Combativeness.

This faculty has fallen under the lash of ridicule, and it has been objected, that the Creator cannot have implanted a faculty for fighting in the mind. The objectors, however, have been equally shallow in learning, as in observation of human nature. The profoundest metaphysicians admit its existence, and the most esteemed authors describe its influence and operations. The character of Uncle TOBY, as drawn by STERNE, is in general true to nature, and it is a personification of the Combative propensity, combined with great Benevolence and Integrity. "If," says Uncle TOBY, "when I was a school-boy, I could not hear a drum "beat but my heart beat with it, was it my fault? Did I "plant the propensity there? Did I sound the alarm within, "or nature?" He proceeds to justify himself against the charge of cruelty supposed to be implied in a passion for the battle field. "Did any one of you," he continues, "shed "more tears for HECTOR? And when King PRIAM came to "the camp to beg his body, and returned weeping back to

" Troy without it,—you know, brother, I could not eat my " dinner. Did that bespeak me cruel ? or, because, Brother " SHANDY, my blood flew out into the camp, and my heart " panted for war,. Was it a proof that it could not ache for " the distresses of war too ?"

TACITUS, in his history of the war by VESPASIAN against VITELLIUS, mentions, that, " Even women chose to enter the " capitol and abide the siege. Amongst these, the most sig- " nal of all was VERULANA GRACILIA, a lady, who neither " followed children, nor kindred, nor relations, but followed " only the war."—Lib. iii. " Courage," says Dr JOHNSON, " is a quality so necessary for maintaining virtue, that it is " always respected, even when it is associated with vice."

Mr STEWART and Dr REID admit this propensity under the name of " sudden resentment ;" and Dr THOMAS BROWN gives an accurate and beautiful description of it, under the name of " instant anger." " *There is a principle in our* " *mind*," says he, " *which is to us like a constant protector*, " which may slumber indeed, but which slumbers only at " seasons when its vigilance would be useless, which a- " wakes at the first appearance of unjust intention, and which " becomes *more* watchful, and *more* vigorous, in proportion " to the violence of the attack which it has to dread. What " should we think of the providence of nature, if, when ag- " gression was threatened against the weak and unarmed, at " a distance from the aid of others, there were instantly and " uniformly, by the intervention of some wonder-working " power, to rush into the hand of the defenceless, a sword or " other weapon of defence? and yet this would be but a feeble " assistance, if compared with that which we receive from " those simple emotions which heaven has caused to *rush*, as " it were, into our mind, for repelling every attack."—Vol. iii. p. 324. This emotion is exactly the phrenological propensity of Combativeness. The chief difference between Dr BROWN's views and ours, is, that he regards it as a mere susceptibility of emotion, liable to be called into action when provocation presents itself, but slumbering in quiescence, in ordinary cir-

cumstances; while we look upon it as an active impulse, exerting an influence on the mental constitution, independent of unjust attack. It is to express this active quality, that "Combativeness" is used to designate the faculty, in preference to "Courage."

Combativeness, then, inspires with courage, and, when properly directed, is useful to maintain the right. On this account, a considerable endowment of it is indispensable to all great and magnanimous characters. Even in schemes of charity, or in plans for the promotion of religion or learning, opposition will arise, and Combativeness inspires its possessor with that instinctive boldness which enables the mind to look undaunted on a contest in virtue's cause, and to meet it without shrinking. Were the organ very deficient in the promoters of such schemes, they would be liable to be overwhelmed by contention, and baffled in all their exertions. I conceive that Mrs Fry would require no small Combativeness to give her courage to undertake the reformation of Newgate. Without it, her mind could not have felt that boldness to encounter difficulty, which must have preceded the resolution to undertake so great an enterprise. Howard, the philanthropist, also must have been supported by it in the perils he voluntarily undertook, in visiting the dungeons of Europe. Indeed, I have observed, that the most actively benevolent individuals of both sexes, those who, in person, minister to the relief of the poor, and face poverty and vice in their deepest haunts, to relieve and correct them, have this organ fully developed. Luther and Knox would require a large portion of it, to enable them to perform the services which they rendered to Christendom.

The organ is large in valiant warriors. In the skulls of King Robert Bruce, and General Wurmser, who defended Mantua against Buonaparte, it is exceedingly conspicuous. In feudal times, great Combativeness was more essential to a leader than it is in modern warfare. Richard Cœur de Lion, Bruce and Wallace, could command the fierce barbarians whom they led to the field only by superior personal prowess; and, indeed, hope of victory was then found-

ed chiefly on the dexterity with which the chief could wield his sword. In modern warfare, comprehensiveness of intellect is more requisite in a General; but still Combativeness is a valuable element in his constitution. NAPOLEON distinguished accurately between these two qualities. He describes NEY and MURAT as men in whom instinctive courage predominated over judgment; and notices their excellence in leading an attack, or a charge of cavalry, combined with their incapacity for great affairs. The most perfect military commander, he says, is formed when courage and judgment are *in æquilibrio*;—in phrenological language, when the organs of Combativeness, and Sentiment, and Reflection, are in just proportion.

This faculty is of great service to an advocate: it furnishes him with the spirit of contention, and causes his energies to rise in proportion as he is opposed.

It inspires authors with the love of battles. HOMER and Sir WALTER SCOTT are fired with more than common energy, when describing the fight, the slaughter, and the shouts of victory. From this sympathy of historians, orators and poets, with deeds of arms, warriors are too inconsiderately elevated into heroes, and thus the trade of butchery is fostered and rendered glorious, with small reference to the merits of the quarrel. I trust that Phrenology, by revealing the true source of the passion for war, will one day direct the public sentiment, to mark with its highest disapprobation every manifestation of this faculty, that is not sanctioned by justice, and then we should have fewer battles and inflictions of misery on mankind.

When too energetic and ill directed, it produces the worst results. It then inspires with the love of contention for its own sake. In private society it produces the controversial opponent, who will wrangle and contest every point, and "though vanquished who will argue still." When thus energetic and active, and not directed by Conscientiousness, it becomes a great disturber of the peace of the domestic circle: Contradiction is then a gratification, and the hours that ought to be dedicated to pure and peaceful enjoyment, are embitter-

ed by strife. On the great field of the world, its abuses lead to quarrels, and, when combined with Destructiveness, to bloodshed and devastation. In all ages, countless thousands have thronged round the standard raised for war, with an ardour and alacrity which shewed that they experienced pleasure in the occupation.

Persons in whom the organ is large, and not directed by superior sentiments, are animated with an instinctive tendency to oppose every measure, sentiment, and doctrine, advocated by others; and they frequently impose upon themselves, so far as to mistake this disposition for an acute spirit of philosophy prompting them to greater vigour of investigation than other men. Bayle, the author of the Historical Dictionary, appears to have been a person of this constitution; for, in writing, his general rule was to take the side in opposition to every one else; and hence it has been remarked, that the way to make him write usefully, was to attack him only when he was in the right, for he would then combat in favour of truth with all the energy of a powerful mind. William Cobbet mentions, that, in his youth, the rattle of the drum inviting him to war was enchanting music to his ears, and that he ardently became a soldier. In his maturer years, the combative propensity seems to glow with equal vivacity in his mind, although exerted in a different direction. By speech and writing he now contends in favour of every opinion that is interesting for the day. To Combativeness is probably owing no small portion of that boldness which even his enemies cannot deny him to possess.

The organ is large also in persons who have murdered from the impulse of the moment, rather than from cool deliberate design. The casts of Haggart and Mary Macinnes are examples in point. The organ is large also in several casts of Charibs' skulls, a tribe remarkable for the fierceness of their courage. Dr Spurzheim mentions, that the ancient artists have represented this organ large in their statues of gladiators. The practice of that art, as also the prize-fights of England, have for their object the gratification of this propensity.

When the organ is very large and active, it gives a hard thumping sound to the voice, as if every word contained a blow. Madame De Stael informs us, that Buonaparte's voice assumed this kind of intonation when he was angry; and I have observed similar manifestations in individuals, whom I knew to possess this part of the brain largely developed.

When the organ is small, the individual experiences great difficulty in resisting attacks; nor is he able to make his way in paths where he must invade the prejudices or encounter the hostility of others. Excessively timid children are generally deficient in this organ, and possess a large Cautiousness. I conceive the extreme diffidence and embarrassment of Cowper the poet, to have arisen from such a combination; and in his verses he lothes war with a deep abhorrence. Deficiency of Combativeness, however, does not produce fear; for this is a positive emotion, often of great vivacity, and cannot originate from a mere negation of an opposite quality.

Combativeness is generally more developed in men than in women; but, in the latter, it is sometimes large. If it predominates, it gives a bold and forward air to the lady; and when a child she would probably be distinguished as a romp.

When the organ is large, and excited by strong potations, an excessive tendency to quarrel and fight is the consequence. Hence some individuals, in whom it is great, but whose moral and intellectual faculties are capable of restraining it when sober, appear, when inebriated, to be of a different nature, and extremely combative. The organ is liable also to excessive excitation through disease. Pinel gives several examples of monomania clearly referable to this organ. "A maniac," says he, "naturally *peaceful* and *gentle* in disposition, appeared "inspired by the demon of malice during the fit. He was "then in an unceasingly mischievous activity. He locked up "his companions in their cells, provoked and struck them, "and at every word raised some new quarrel and fighting." Another individual, who, during his lucid intervals, was mild, obliging, reserved, and even timid in his manners, became, during the fit, highly audacious, "and experienced the most

"violent propensity to provoke those who approached him, "to irritate and fight them, *avec outrance*." On visiting London Bedlam in 1824, I examined the head of a male patient, and pronounced Combativeness and Destructiveness to be uncommonly large. I was desired to look at his hands. They were fastened to rings in an iron girdle round his waist. He had murdered, in an access of fury, and was liable to relapses, in which he manifested these propensities with inordinate vehemence.

This organ is found also in the lower animals; but there are great differences among them in respect to its energy. Rabbits, for instance, are more courageous than hares; and one dog looks incessantly for an opportunity of fighting, while another always flies from the combat. The bull-dog forms a contrast in this propensity to the grey-hound; and the head of the former is much larger betwixt and behind the ears than the latter. "This also is an unfailing sign to recognise if a "hare be shy and timid, or bold and sure. The same diffe- "rence is observed in game-cocks and game-hens, in compa- "rison with domestic fowls. Horse jockeys, and those who "are fond of fighting cocks, have long made this observation." —*Physiogn. System*, *p.* 302.

The organ is established.

6.—DESTRUCTIVENESS.

This organ is situated immediately above, and extends a little backwards and forwards from, the external opening of the ear, and corresponds to the lower portion of the squamous plate of the temporal bone. In Dr GALL's plates it extends a few lines farther back than in those given by Dr SPURZHEIM; and Dr GALL mentions, that when it is excessively large, the whole portion of the skull from the inferior margin of the parietal bones to the ears is elevated; and that, in cases of smaller development, the prominence is confined to the temporal bones. I have seen examples of both kinds.

Dr GALL gives, in substance, the following account of the discovery of this organ. In comparing attentively the skulls of several of the lower animals, he observed a characteristic difference betwixt those of the carnivorous and the graminivorous tribes. In graminivorous animals, only a small portion of the brain lies behind the external opening of the ear; while in the carnivorous, a considerably larger mass is situated there. For a long time he merely communicated these observations to his hearers, without making the least application of them to phrenology. He only pointed out that, by inspecting the cranium, even when the teeth are wanting, it is possible to distinguish whether the animals belong to the graminivorous or carnivorous genera. It happened, at length, that some one sent him the skull of a parricide; but he put it aside, without ever imagining that the skulls of murderers could be of any use to him in his researches. Shortly afterwards he received also the cranium of a highwayman, who, not satisfied with robbing, had murdered several of his victims. He placed these two crania side by side, and frequently examined them. Every time that he did so he was struck with this circumstance, that although they differed in almost every other point, each of them presented a distinct and corresponding prominence, immediately above the external opening of the ear. Having observed, however, the same prominence in some other crania in his collection, he thought that it might be by mere accident that these two parts were so much developed in the skulls of the murderers. It was, only, therefore, after a considerable time, that he began to reflect upon the different conformation of the brain in carnivorous and graminivorous animals; and then observing that the part which was large in carnivorous animals, was precisely that which was so much developed in the murderers, the question occurred to him, Is it possible that there can be any connection betwixt the conformation of brain thus indicated and the propensity to kill? "At first," says Dr GALL, "I revolted from this idea; but "when my only business was to observe, and to state the re- "sult of my observations, I acknowledged no other law than "that of truth." "Let us not, therefore," says he, "fear to

" unfold the mysteries of nature, for it is only when we shall " have discovered the hidden springs of human actions, that " we shall know how to guide the conduct of men."

The organ has been subjected to much ridicule, owing partly to its having been at first named the organ of Murder, from having been found largest in individuals who had suffered for this crime. The general tendency, however, now designated Destructiveness, is recognised by many authors as existing in the human mind. Lord KAMES observes, that " there is a contrivance of Nature, no less simple than effec- " tual, which engages men to bear with cheerfulness the fa- " tigues of hunting, and the uncertainty of capture ; and that " is *an appetite for hunting*."—" It is an illustrious instance " of providential care, the adapting the internal constitution " of man to his external circumstances. The appetite for " hunting, though among us little necessary for food, is to " this day remarkable in young men, high and low, rich and " poor. Natural propensities may be rendered faint or ob- " scure, but never are totally eradicated."—*Sketches*, B. i.

VICESIMUS KNOX, in his Essays, gives a similar theory of hunting. The delight felt in this sport has been ascribed to the excitement of the chase, to emulation, and to the pleasure of succeeding in our aim ; but if these were the sole sources of the enjoyment, then it ought to be as pleasant to gallop over hill and dale, and leap hedge and ditch, without as with an animal in chase, and as agreeable to shoot at any object thrown into the air as at a bird. This, however, is not the case ; unless there is a creature to suffer the effects of the hunting and shooting, these acts afford but little pleasure.

The feeling is familiar to poets and authors who delineate human nature. The description by Sir WALTER SCOTT, of King ROBERT BRUCE avenging on CORMAC DOIL the death of ALLAN, is written in the very spirit of Destructiveness.

> Not so awoke the King ! his hand
> Snatched from the flame a knotted brand,
> The nearest weapon of his wrath,
> With this he crossed the murderer's path,
> And venged young Allan well !

The spattered brain and bubbling blood
Hissed on the half-extinguished wood
The miscreant gasp'd and fell.

The same author recognises several of the phrenological faculties in the following lines; and, in particular, Love of Approbation and Destructiveness: the latter, however, only in a state of abuse. The verses refer to the battle of Bannockburn.

But O! amid that waste of life,
What various motives fired the strife!
The aspiring noble *bled for fame*,
The patriot for his *country's claim*;
This knight his youthful strength to prove,
And that to earn his lady's love:
Some fought from ruffian thirst of blood,
From habit some, or hardihood.
But ruffian stern, and soldier good,
The noble, and the slave,
From various cause the same wild road,
On the same bloody morning trode,
To that dark Inn the grave.

In Recollections of the Peninsula, by the author of Sketches in India, the following passage occurs: "As the chill dews "of evening were descending on our bivouack, a staff-officer, "with a courier, came galloping into it, and alighted at the "quarters of our general. It was soon known among us that "a severe and sanguinary action had been fought by our "brother soldiers at Talavera. Disjointed rumours spoke of "a dear-bought field, a heavy loss, and a subsequent retreat. "I well remember how we all gathered round our fires to "listen, to conjecture, and to talk about this glorious, but "bloody event. We regretted that we had borne no share in "the honours of such a day; and *we talked with an undefined* "*pleasure about the carnage*. Yes! strange as it may ap- "pear, soldiers, and not they alone, talk of the slaughter of "battle-fields with a sensation which partakes of pleasure *."

The function of the faculty in the human mind, and its

* P. 39.

utility, are easily discovered. In regarding this scene of creation, we perceive man surrounded by ferocious animals, such as lions, tigers, bears, and wolves; which are not only incapable of being tamed and put to use, but which would be fatal to him, if he did not destroy them. To maintain himself in existence, therefore, he must put many animals to death. Moreover, he has received from nature a stomach fitted to digest animal food, and a bodily system that is nourished and excited, and preserved in health and activity, by the stimulus which it affords. To gratify this appetite, he must bereave animals of life by sudden destruction; for their flesh is unwholesome and unfit for use, if they die of old age or disease. In the last place, some human beings themselves are so inspired by evil passions, that no terror short of that of death, will suffice to curb their appetites, and prevent them from injuring their fellow men. Now, let us consider in what condition man, placed in these circumstances, would have stood, if he had wanted this propensity. The hare has no Destructiveness; and its only safety is in flight. Man, without this faculty, would have been as little formidable to his foes as the hare; he would have been the timid prey of every ferocious animal in want of a meal. With Destructiveness, the lion and tiger read their fate in his eye; they recognise the natural expression of this power in him, as readily and strongly as in their fellows of the forest, and dread the encounter, unless irresistibly impelled by hunger.

Let us imagine, also, a community of men, known to exist, in whom no Destructiveness was found; who would reason, entreat, or fly from their adversaries, but never raise a weapon against their lives; how speedily would the profligate and unprincipled flock to the mansions of such a people, as to their appropriate prey; and what contumelies and sufferings would they not compel them to endure? But let the community possess the propensity in question—let them in short, raise their standard, and, like Scotland's monarch, inscribe on it, "*Nemo me impune lacesset;*" a motto inspired

by Destructiveness and Conscientiousness combined; and let them act up to the spirit of the words, by hurling vengeance on every wanton aggressor; and such a people will subsequently live in peace under their olive and their vine, shielded and protected by the terror which this faculty inspires into those who, but for it, would render the world a scene of horror and devastation. When any power is so indispensable to human safety as this, nature implants it in the mind; and such an instinct is Destructiveness.

Combativeness, then, gives courage to meet danger unappalled, and to resist it. Destructiveness makes the onset perilous and terrible to the aggressor. Combativeness enables us to meet and overcome obstacles, and having surmounted them, desires no more. Destructiveness prompts us to exterminate the causes of them, so that they may never rise up to create fresh embarrassments. Combativeness would inspire Luther and Knox with courage to oppose the doctrines of the Church of Rome, and to maintain the truth as revealed in the Scriptures; Destructiveness would prompt them utterly to destroy the Roman Hierarchy, and to trample its insignia under foot.

In actual life, a good endowment of the organ is an indispensable requisite to a proper discharge of the duties of several situations. What restrains the domination of the proud, but a knowledge, that, if they press too heavily even on the meanest, the feeling of resentment will start into activity to repel the insult; and resentment is the result of wounded Self-esteem, aided by Destructiveness. In the case of officers conducting difficult and dangerous enterprizes, what weight would the word of command carry, if every stubborn mind that received it knew, for certain, that the leader's dispositions were so soft, that he could inflict no vengeance for disobedience?—and vengeance or punishment flows from Destructiveness directed by justice. The sword, accordingly, is carried before the supreme magistrate, and is an emblem of Destructiveness ready to fall on the contemners of the law.

These are not mere theoretical ideas, but views founded on actual observations. In the Hindoo head, Combativeness and Destructiveness are small, compared with the size of these organs in the European head, and we see millions of the former conquered by hundreds of the latter. In actual life, I have met with persons who were so soft that they scarcely struck fire, however hardly they were hit; who shrunk and retreated, yet agonised under every insult that was offered; whose anger was so feeble, that its manifestations excited only a deeper scorn, and incited to further outrages, from a perception of its impotency. Such individuals possessed small Combativeness and Destructiveness, and were carried through life on the shoulders of others, being incapable of fighting their own way amidst the turmoils of the world. Those who have an ample endowment of these organs, well regulated by superior sentiments, are not aware how much they owe to it. In civilized society, we pass years without a contest, but it is because all know that the sentinels are at their post, and that attack is dangerous. A man in whom society recognises a deficiency of these powers, is not equally safe from aggression.

Destructiveness has been regarded by some phrenologists as communicating a more general species of energy to the mind. In endeavouring to trace analytically the manner in which it produces this last effect, it has been supposed to give an impatient craving appetite for excitement; a desire to vent the mind, as it were, on something; a feeling which would be delighted with smashing and turmoil, or with any great irregular commotion, rather than with the listlessness of repose; and, hence, a large development of it is held to be incompatible with that drowsiness of disposition which dreams life away in vapid inactivity; which is contented to hold absence of suffering for enjoyment, and which feels excitement as pain, rather than a source of the most ardent pleasure. In this view, it is supposed to give a general stir and impetus to the mental faculties. The organ is small in the Hindoos, and they are remarkable not only for great tenderness of animal life, but for deficiency in energy of character. The brain in general, how-

ever, must be large, before great general power can be manifested, and the real effect of Destructiveness appears to be, to communicate ability to act with energy in certain situations in which, with that organ small, the individual would be completely paralyzed. In this view, it may add vigour even to the manifestations of Benevolence, to which, at first sight, it appears directly opposed; but it does so, not by increasing the positive amount of that feeling, which depends on its own organ, but by fitting the possessor to perform acts of real kindness, which require severity as their means.

Destructiveness gives edge to sarcasm, satire, and invective, and prompts to the conception of images of terror, which become sublime or horrible, according as they are clothed with Ideality, or presented in naked deformity. In Lord Byron's works, it is strongly manifested. His appetite for fierce excitement,—the dark and dismal scenes of suffering and murder which generally abound in his stories, together with the deadly venom, and the fearful vehemence of his pen, when directed against his enemies, could proceed from no source but the faculty in question. It leads a poet, in general, to imagine scenes of devastation and destruction, and to delight in the description of them. Byron's poem of "Darkness," exhibits in every image the very form and pressure of Destructiveness.

When the energy of this faculty is great, indifference at suffering and destruction is the result. When too weak and inactive, positive pain and poignant distress are felt at the sight of death, and suffering of every kind. We are surrounded every day by death in all its forms, and by destruction in its every shape; and nature, by means of this faculty, steels our minds so far as to fit us for our condition, and to render scenes which our situation constrains us to witness not unsupportable. A certain degree of obduracy of feeling, regardless of suffering, and indifference to the calamities of our race, is absolutely necessary to render existence tolerable in this world of mingled joy and woe. I have seen individuals miserable from too feeble an energy of this faculty. Every object in a state of pain, harrowed up their feelings, and

lacerated their hearts, and produced a degree of continued uneasiness scarcely conceivable by persons of more obdurate dispositions.

The abuses of this faculty are easily recognised in society. There are persons who fly into a passion upon every trifling occurrence, and vent their rage on all who are subjected to their authority. This is a rude and vulgar manifestation of the propensity. There are others, however, who avoid this form of misapplication, but who indulge in making severe remarks and cutting observations, altogether uncalled for, and introduced with no view but to give pain; others issue their commands in harsh and angry terms, backed by loud threatenings and terrible gesticulations,; others are severe to excess, on account of failures in duty, and little mindful of the happiness of those who live under their controul: all these are abuses of Destructiveness. When very active, this propensity gives a dark expression to the countenance, and harsh and discordant tones to the voice. If, in a friendly converse with a person in whom the organ is large, and Secretiveness small, one happens to touch on some irritating topic, in an instant the softness of Benevolence, and the courtesy of Love of Approbation, will be gone, and the hoarse growl of Destructiveness will indicate an approaching storm. I have seen it stayed, by referring the rising wrath to its source in this propensity, and calling on reflection to subdue it.

Cursing is an abuse of this faculty; and I have observed among the lower orders, that some boys who attempted to practise this abominable vice through imitation, deeming it manly, could never infuse into their imprecations that force and expression which seemed to come quite instinctively to others; and this natural incapacity for swearing proceeded from Destructiveness being moderately developed in proportion to the organs of the moral sentiments. I have said that this faculty furnishes the threat which gives force to command. In the Bible, every variety of motive is held out to deter men from sin; and I have noticed, that those individuals in whom Destructiveness predominates, have a natural tendency to dwell

on the *threatenings* of the Gospel, while those in whom Benevolence, Hope and Veneration are large, and Destructiveness deficient, hold out almost exclusively its promises; or, if they do mention its denunciations, these are so diluted by the softness of their own minds, through which they pass, that more than half their terrors are abated. Preachers of the first class, while they sometimes harrow up the minds of more susceptible individuals, and cause them great uneasiness, frequently please those of sterner natures by their vehemence. The latter class, on the other hand, are acceptable to those naturally mild in disposition, and appear insipid to the others. Fear is a lower motive than love, and where the mind can be led by the higher feeling, it ought always to be preferred; but many are open to the influence of terror, who are not alive to Hope and Veneration, and hence the use of both is necessary. It is only inordinate dwelling upon the one to the exclusion of the other that is reprehensible. The higher the cultivation of the audience, the less is fear likely to be requisite to make an impression.

The pleasure which even humane and cultivated individuals experience in witnessing an execution, is inexplicable on any principle, except that of the existence of such a faculty as this, aided no doubt by the love of excitement, arising from Wonder, and some other faculties. "We have," says Mr Scott, in an admirable Essay on this propensity, "too much humanity ourselves to put a man to death. But, if a man is "to be killed, we have no objection to witness the fact, or, if "I may be allowed to say so, to enjoy the pleasure of seeing "it performed."—"Were Destructiveness wanting, and Benevolence favourably developed, in persons present at an "execution, they would be terrified, not delighted, by such a "scene."—*Phren. Trans.* p. 147.

In children, and even in adults, Destructiveness frequently vents itself in destroying inanimate objects. The people destroy mile-posts, bridges, statues, and public buildings, wherever they can get access to them, and "no object of art, or even "of utility," says a late writer, "is safe from their depreda-

" tions." He ascribes this tendency " to the spirit of pure " mischief,"—a correct designation for unguided Destructiveness. The statute 3d Geo. IV. chap. 71., which ordains, " That, if any person or persons, shall *wantonly and cruelly* " BEAT, ABUSE OR ILL TREAT, any horse, mare, gelding," &c. he shall pay certain penalties to the King, is clearly directed against the abuses of this propensity, and, of course, supposes its existence. The adjectives *severe*, *harsh*, *angry*, *cruel*, *fierce*, *ferocious*, *savage*, *brutal*, *barbarous*, *atrocious*, indicate states of mind all originating from it.

Metaphysical authors in general do not treat of any power resembling this faculty. Accustomed to reflect in the closet more than to observe actions, they were not likely to discover it. At the same time, it is surprising that the contemplation of the pages of history did not suggest a tendency of this kind to their mind. CALIGULA is represented cutting out the tongues of his victims,—delivering them to be devoured by wild beasts,—forcing individuals to assist in executing their relations,—torturing and putting to the rack unhappy wretches as an amusement to his own ferocious mind,—and finally expressing a wish that the Roman people had but one head, that he might cut it off by one blow. Turning our eyes to NERO, we discover him indulging in equal atrocities, causing BRITANNIA to be poisoned,—murdering his own mother,—setting fire to Rome in four quarters at once, and ascending a tower to enjoy the spectacle of the conflagration. In modern times, we are presented with the horrors of the Sicilian Vespers, the carnage of St Bartholomew's, and the massacres of the French Revolution. These actions are inexplicable, on the supposition that no propensity of Destructiveness exists; and, if the metaphysicians had applied their systems to human conduct, they must have discovered that they contained no principle, capable of accounting for the transactions alluded to. In the ancient busts of NERO, the organ of Destructiveness is represented as enormously large.

The organ is large in the heads of cool and deliberate murderers. It is very large, and Benevolence small, in the skull

of BELLINGHAM, who murdered Mr PERCIVAL. The temporal bones protrude at least half an inch in the situation of the organ of Destructiveness, on each side, and the frontal bone presents a receding surface at the organ of Benevolence, where the skulls of individuals remarkable for benevolence generally rise into an elevation of half an inch or more. A cast of BELLINGHAM's skull may be inspected in the Phrenological Society's Collection. The organ of Destructiveness is also largely developed in the skull of GORDON, who accompanied a poor half-fatuous pedlar boy, and, in the middle of a muir, beat out his brains with the heel of his clog, and robbed him of his pack, not worth twenty shillings. The skull itself is in the Society's Collection, and the bones protrude nearly half an inch on each side at the region in question. It is large in CHARLES ROTHERHAM, who pulled a stake from a hedge and beat out the brains of a poor woman on the highway, and robbed her of some very trifling articles. It is large also in the skulls of HUSSEY, NISBET, and LOCKEY, who were executed for murder. It, and the organ of Acquisitiveness, appear to have been very largely developed in the head of HEAMAN, executed at Edinburgh for piracy and murder; also in the head of ROBERT DEAN, executed for murdering a child without any rational motive; and in the head of MITCHELL, executed for murdering a young woman whom he had seduced. In the heads of DAVID HAGGART and MARY MACINNES, executed at Edinburgh, and of BOOTH, a poacher, executed at York, all for murders committed on the impulse of the moment, it appears considerably developed; while in them Combativeness is also very large.

The Society possesses casts of the skulls of five Caribs, who are well known to have been a ferocious tribe, and in all of them the organ of Destructiveness is decidedly large. On the other hand, Dr GEORGE MURRAY PATTERSON, surgeon in the Honourable East India Company's service, mentions, as the result of three thousand actual examinations, that the organ is small in the heads of Hindoos in general, who are known to be extremely tender in regard to animal life. In the skulls

of fourteen Hindoos, twelve of which were presented to the Society by this gentleman, and two by Dr J. S. COMBE of Leith, the development of the organ will be found to be decidedly less than in the skulls of Europeans in general.

When excited by intoxication, the organ sometimes becomes ungovernable; and hence arises the destruction of glasses, mirrors, chairs, and every frangible object at the close of many a feast. Hence also the temptation, often almost irresistible, experienced by many a worthy citizen, when inebriated, to smash a lamp in his progress home. One gentleman assured me that the lamps have appeared to him, when in this state, as it were twinkling on his path with a wicked and scornful gleam, and that he has frequently lifted his stick to punish their impertinence, when a remnant of reason restrained the meditated blow. In him Destructiveness is decidedly large, but, when sober, there is not a more excellent person.

The organ is also liable to excitement by disease, and then the propensity is manifested with irresistible vehemence. The author of Sketches in Bedlam, describes the case of PAT. WALSH, a ferocious maniac, who has been deranged altogether about twelve years, and has, it is said, uniformly evinced a character of desperation, vengeance, and sanguinary cruelty, scarcely conceivable even in madness. Notwithstanding every precaution that was taken, he has killed three persons since his confinement. "His propensity to mischief, malice, and "personal abuse, is as incessant as his taste for bloodshed "and slaughter. He has contrived, notwithstanding his re-"striction of hands and feet, to break about seventy panes of "glass within the last two years, in the dining-room win-"dows, although guarded on the inside by a strong iron wire "lattice-work. This amusement he contrived to effect by "standing on a form placed at some distance from the win-"dows, and taking the bowl of his wooden spoon in his "mouth, he poked the handle through the meshes of the wire-"work, and thus broke the pane." As this man is said to be confined in an iron cincture that surrounds his waist, with strong hand-cuffs attached to it, I infer that he is the same

whose head I examined in Bedlam in 1824, and in whom the organs of Combativeness and Destructiveness were inordinately large.

Dr GALL cites a variety of cases of diseased manifestations of this propensity, which had fallen under his own observation, and quotes several others highly illustrative from PINEL. I select one of these, in which the organ of Destructiveness seems to have been affected singly, the other organs remaining entire. The patient, during periodical fits of insanity, was seized with an "uncontrollable fury, which inspired him with an irresistible propensity to seize an instrument or offensive weapon, to knock on the head the first person who presented himself to his view. He experienced a sort of internal combat between this ferocious impulse to destroy, and the profound horror which rose in his mind, at the very idea of such a crime. There was no mark of wandering of memory, imagination, or judgment. He avowed to me, during his strict seclusion, that his propensity to commit a murder was absolutely forced and involuntary,—that his wife, whom he tenderly loved, had nearly become his victim, he having scarcely had time to bid her fly to avoid his fury. All his lucid intervals were marked by melancholy reflections and expressions of remorse; and so great did his disgust of life become, that he had several times attempted, by an act of suicide," (this is common in the excess of Destructiveness) "to bring it to a close. What reason have I," said he, "to cut the throat of the superintendant of the hospital, who treats us with so much kindness? and yet in my moments of fury I am tempted to rush upon him, as well as others, and plunge a dagger in his bosom. It is this unhappy and irresistible propensity which reduces me to despair, and makes me attempt my own life."—*Sur l'Alienation Mentale, deuxième édition, p.* 102 *et* 103. *sect.* 117.

Individuals who occasionally commit murder, or set fire to property, without any rational motive, sometimes ascribe their actions to the temptation of the devil, asserting that the devil whispered into their ears, "kill him," "kill him;" and never

ceased to repeat the exhortation till they complied with it. Diseased activity of this organ, filling the mind habitually with a desire to destroy, probably gives rise to this impression.

One form in which disease of this organ sometimes appears, requires particular notice; it is when it prompts females of the most unquestionable reputation to child-murder. I cite the following from the public newspapers of May 1822. "On "Sunday morning, about half-past ten o'clock, a most horrid "murder of unparalleled inhumanity, was perpetrated on the "body of a fine female infant, about eight months old, named "SARAH MOUNTFORD, by her own mother, wife of Mr "MOUNTFORD, weaver, No. 1. Virginia Row, Bethnal Green. "The husband, who is a Methodist, had gone to chapel, "leaving his wife to clean, and send to the Sunday school, "her young family. Having done this, it appeared she "cleaned herself and her infant, when, overcome by some ex- "traordinary aberration of intellect, she cut off the head of "the child with a razor, and, besmeared with the blood, im- "mediately told the persons in the house of the bloody deed, "desiring to be given into custody, as she wanted to be hang- "ed. From the conduct of the wretched woman after the "transaction, no doubt can be entertained of her insanity. "Mrs MOUNTFORD underwent a short examination on Mon- "day, and was committed for trial. A coroner's inquest has "since been held, which returned a verdict of wilful murder "against the wretched woman. The distress of the family is "extreme. The unhappy husband and two of the eldest "daughters are seen running about the streets in a state of "distraction. One of the latter has been deprived of utte- "rance since the horrid transaction." This woman is said to have been "overcome by some extraordinary aberration of in- "tellect;" which mode of expression may be forgiven in the writer of a newspaper paragraph, but, viewed philosophically, it is absurd. The intellectual powers enumerated by the metaphysicians, such as Perception, Conception, Memory, Imagination, and Judgment, furnish no propensities to action, which, being deranged, could produce such a piece of barba-

rity. Derangement of intellect causes the patient to reason incorrectly, and speak incoherently; but, if his *feelings* be sound, he is not mischievous. Here, however, the unhappy woman seems to have been inspired with a blind and irresistible impulse to kill, arising from disease of Destructiveness.

These details are exceedingly painful, and the reader may question the taste which permits their insertion; but great ignorance prevails in the public mind on this subject, and the records of our criminal courts still shew cases of wretches condemned to the gallows, who, if Phrenology were known to the judges and juries, would be consigned to a lunatic asylum.

This organ is larger in the male head than in the female; and hence the male head is in general broader. The manifestations correspond; for the propensity is less vigorously manifested by women than by men.

As already noticed, the organ is common to man with carnivorous animals. Dr GALL, however, remarks, "that the "organ is not, in all carnivorous animals, situated with rigor- "ous exactness above the external opening of the ear. Among "some species of birds, for example, in the stork, the cormo- "rant, the heron, the gull, &c., the external opening of the "ear is considerably drawn back, and the organ of the pro- "pensity to kill is placed immediately behind the orbits, form- "ing a large prominence upon each side, the size of which "is found to bear an uniform proportion to the degree in "which the animal manifests the propensity to kill. In "comparing the crania of carnivorous birds with the skulls "of those that can live indifferently either upon animals or "vegetables, this prominence is found to be less conspicuous "in the latter; in the duck, for example, and in the different "species of thrushes; and it becomes less and less prominent "in proportion as the birds exhibit a more distinct preference "for vegetables, such as the swan, the goose," &c. The differences are illustrated by plates in Dr GALL's work.

The organ is established.

ORGAN OF THE APPETITE FOR FOOD.

In the sheep, the olfactory nerves, which are very large, are perceived to terminate in two cerebral convolutions, lying at the base of the middle lobe of the brain, adjoining and immediately below the situation occupied by the organs of Destructiveness in carnivorous animals. The sheep is guided in the selection of its food by the sense of smell; and the inference suggests itself, that these parts may be the organs of the instinct which prompts it to take nourishment. Corresponding convolutions occur in the human brain, but the functions of them are not ascertained, owing to their local situation presenting obstacles to the determination of their size during life. The conjecture, however seems plausible, that they may serve a similar purpose to that here supposed to belong to them in the sheep. Drs Gall and Spurzheim think it probable that there are organs in the brain for this instinct, although they have not succeeded in discovering their situation.

This subject has attracted the notice of that ingenious phrenologist, Dr Hoppe of Copenhagen, and he has treated of it in two valuable communications, published in the Phrenological Journal, Nos. V. and VII. He is of opinion, that, besides the nerves of the stomach and palate, an affection of which gives rise to the sensations of hunger and thirst, there must also be an organ in the brains of animals for the instinct of *nutrition* (taking nourishment for the preservation of life), which incites them to the sensual enjoyments of the palate, and the activity of which is *independent* of hunger and thirst. "How," says he, "should the mere sense of hunger, more than any other disagreeable or painful sensation, make the animal desire food, the necessity of such not being known to him by experience? This could only be effected by *instinct*, because either an instinct, *i. e.* the immediate impulse of an organ, or else experience and reflection, are the causes of all actions.

"We observe, that the chicken is no sooner out of the egg,

than it picks the grain that lies on the ground, and the new-born babe sucks the nipple. Is this to be explained without the supposition of an organ analogous to that which makes the duckling immediately plunge into the water, or makes the kitten bite the first mouse it meets with ?

" Neither am I able otherwise to conceive how the new-born animal can discriminate what is useful for its nutrition; that, for instance, the chicken never mistakes gravel for grain, and that the wild beasts always avoid poisonous plants without ever tasting them.

" When, the child, even enjoying perfect health, sucks till the stomach is filled, in a literal sense of the word, it surely feels no hunger or thirst; yet, if laid to the breast, it will continue sucking, even sometimes having thrown off the last draught from overfilling.

" If nothing but hunger and thirst impelled man to take food, he would, when satiated, have no appetite for meat and drink; yet we every day observe people that cannot resist the temptation of surfeiting themselves both with meat and drink, though they know it to be noxious, and others again that never are tempted to gluttony."

Dr Hoppe adds several other reasons in support of an organ of nutrition, and sums up his views in the following words: " According to my opinion, *hunger* and *thirst* must be discriminated from the desire of food which we call *appetite*; for those I consider as only affections of the stomachical and palatic nerves, caused by the defect of necessary supply; but appetite as an activity of a fundamental animal instinct, which has in the brain an organ analogous to the rest of the organs. Yet there is a very intimate connexion between these; thus, nothing can more effectually rouse appetite than hunger."

In lecturing on Phrenology, I have for some years pointed out the part of the brain above alluded to as the probable seat of this organ; and Dr Hoppe, without being aware of this circumstance, or the reasons on which this conjecture was founded, has arrived at a similar conclusion. He proceeds

even so far as to point out an external indication of the size of the organ. "Regarding," says he, "the organ for taking nourishment, I have been led to think, since I wrote last, that the place where its different degrees of development are manifested in the living body, is in the *fossa zygomatica, exactly under the organ of Acquisitiveness, and before that of Destructiveness.* Before I had thought at all of Phrenology, I was struck with the remarkable largeness of the face or head of a friend of mine, caused, not by prominent cheek-bones, as in some varieties of mankind, but more towards the ears, by the great convexity of the zygomatic arch. Knowing that this individual was exceedingly fond of good living, and that, even in spite of a very powerful intellect, and propensities moderate in almost every other respect, he was prone to indulge too freely in the joys of the table, I afterwards thought that this form of the head and tendency of the mind might bear a nearer relation to each other than had at first occurred to me; and in some other persons, notoriously known to be fond of good eating and drinking, I found a confirmation of my suppositions. This prominence of the bony arch, I think, must be an absolute consequence of the part of the cranium lying under the temporal muscle being pushed outwards, and diminishing, in that direction, the space of the *fossa.* Besides this greater convexity of the arch, the part also of the skull situated immediately above it, under the organ of Acquisitiveness, will in this case be observed to be more full and protruding. The largeness of head produced in this way can by no means be mistaken for a mere prominent cheek-bone, nor for the organs of Acquisitiveness, or Destructiveness, or Constructiveness, situated higher, behind, and in front of it. Having found the said parts in some persons much compressed, in others less so, and, as I think, the disposition of mind always proportionate to it, and not yet having met with any exceptions, I cannot but hold my opinion to be true."

The external part to which Dr Hoppe alludes, is included by Dr Spurzheim within the limits of Destructiveness; but in Dr Gall's busts and plates, that organ is not carried so

far forward as in Dr SPURZHEIM's, and the function of the part in question is marked by Dr GALL as unascertained.

This organ is regarded as only conjectural.

7. CONSTRUCTIVENESS.

THIS organ is situated at that part of the frontal bone immediately above the spheno-temporal suture. Its appearance and situation vary slightly, according to the development of the neighbouring parts. If the zygomatic process is very projecting, or if the middle lobes of the brain, or the forehead in general, or the organs of Language and Order in particular, are greatly developed, its size is less easily distinguished. The leading object ought to be to determine the actual size of each organ, and not its mere prominence; and, on this account, it is proper farther to notice, that, if the base of the brain is narrow, this organ holds a situation a little higher than usual, and there will then frequently be found a slight depression at the external angle of the eye, betwixt the zygomatic process and the organ in question, especially when the muscles are thin. In such cases, it has sometimes appeared as high up as Tune. This slight variation from uniform situation occurs in the distribution of all the parts of the body; but the anatomist is not, on this account, embarrassed in his operations; for the aberration never exceeds certain limits, and he acquires, by experience, the tact of allowing for it to this extent.

It has been objected, that the elevation or depression of this part of the brain depends upon the force with which the temporal muscles, which lie over it, have acted in the individual; and it is said that carnivorous animals which masticate bones, and in consequence possess those muscles in a very powerful degree, have narrow heads, and little brain in the region of this organ.

The answer to this is fourfold; 1*st*, Carnivorous animals do not build, and the organ in question is wanting in them. The organ being absent, their heads are narrow of course; but all this is in exact accordance with Phrenology. 2*dly*, In the

beaver, which cuts timber with its teeth, and in which the temporal muscles act with great energy, the organ is large, and the head is broad; which also harmonises with our doctrine, and contradicts that of the objectors. *3dly*, In the human race, the breadth of the head, at the region in question, which indicates the size of the organ, does not bear a proportion to the force with which mastication is performed; for some individuals, who live chiefly on slops, and chew little, have narrow heads, and weak constructive talents, while others, who eat hard viands, have broad heads, and manifest great mechanical skill; and, *4thly*, The actual breadth of the head in this quarter, from whatever cause it arises, bears a regular proportion to the actual endowment of constructive genius.

The temporal muscle differs in thickness in different persons, and the phrenologist ought to desire the individual observed to move the lower jaw, and, while he does so, to feel the muscle, and allow for its size. The uncertainty in regard to the dimensions of the temporal muscle, renders it unsafe to predicate the size of the organs of Constructiveness and Acquisitiveness from *casts* of the *head*, unless information as to the thickness of the fleshy fibres is communicated. These organs, therefore, are best established, by examining living heads, or skulls, or casts of skulls.

When Dr GALL first turned his attention to the talent for construction, manifested by some individuals, he had not discovered the fact, that every primitive faculty is connected with a particular part of the brain as its organ; and, on this account, he directed his observations towards the whole head of great mechanicians. He was frequently struck with the circumstance, that the head of these artists was as large in the temporal region as at the cheek bones. This, however, although occurring frequently, was not a certain and infallible characteristic; and hence he was led by degrees to believe, that the talent depended on a particular power. To discover a particular indication of it in the head, he sought acquaintance with men of distinguished mechanical genius, wherever he found them, studied the forms of their heads, and moulded them. He soon met some in whom the diameter

from temple to temple was greater than that from the one zygomatic bone to the other; and at last found two celebrated mechanicians, in whom there appeared two swellings, round and distinct at the temples. These heads convinced him, that it is not the circumstance of equality in the zygomatic and temporal diameters, which indicates a genius for mechanical construction, but a round protuberance in the temporal region, situated in some individuals a little behind, in others a little behind and above the eye. This development is always found in concomitance with great constructive talent, and when the zygomatic diameter is equal to it, then there is a parallelism of the face; but, as the zygomatic bone is not connected with the organ, and projects more or less in different individuals, this form of countenance is not an invariable concomitant of constructive talent, and ought not to be taken as the measure of the development of the organ.

Having thus obtained some idea of the seat and external appearance of the organ, Dr GALL assiduously multiplied observations. At Vienna, some gentlemen of distinction brought to him a person, concerning whose talents they solicited his opinion. He stated that he ought to have a great tendency towards mechanics. The gentlemen imagined that he was mistaken, but the subject of the experiment was greatly struck with this observation: He was the famous painter UNTERBERGER. To shew that Dr GALL had judged with perfect accuracy, he declared that he had always had a passion for the mechanical arts, and that he painted only for a livelihood. He carried the party to his house, where he shewed them a multitude of machines and instruments, some of which he had invented, and others improved. Besides, Dr GALL remarks, that the talent for design, so essential to a painter, is connected with the organ of Constructiveness, so that the art which he practised publicly was a manifestation of the faculty.

Dr SCHEEL of Copenhagen had attended a course of Dr GALL's lectures at Vienna, from which city he went to Rome. One day he entered abruptly, when Dr GALL was surrounded by his pupils, and presenting to him the cast of a skull, asked his opinion of it. Dr GALL instantly said, that he "had never

" seen the organ of Constructiveness so largely developed as " in the head in question." SCHEEL continued his interrogatories. Dr GALL then pointed out also a large development of the organs of Amativeness and Imitation. " How do you " find the organ of Colouring?"—" I had not previously ad- " verted to it," said GALL, " for it is only moderately de- " veloped." SCHEEL replied, with much satisfaction, " that it " was a cast of the skull of RAPHAEL." Every reader, acquainted with the history of this celebrated genius, will perceive that Dr GALL's indications were exceedingly characteristic. Casts of this skull may be seen in the Phrenological Society's collection, and also in DE VILLE's in London, and O'NEILL's in Edinburgh, and the organs mentioned as large will be found very conspicuously indicated. That of Constructiveness in particular presents the round elevated appearance above described, as the surest indication of its presence in a high degree. An admirable Essay by Mr SCOTT on the genius of RAPHAEL, compared with the cerebral development indicated by this skull, will be found in the Phrenological Journal, vol. ii. p. 327.

Several of Dr GALL's auditors spoke to him of a man who was gifted with an extraordinary talent for mechanics; he described to them beforehand what form of a head he ought to have, and they went to visit him: it was the ingenious mathematical instrument-maker, LINDNER, at Vienna; and his temples rose out in two little rounded irregular prominences. Dr GALL had previously found the same form of head in the celebrated mechanician and astronomer DAVID, Frere Augustin, and in the famous VOIGTLÆNDER, mathematical instrument maker. At Paris, Prince SCHWARTZENBERG, then Minister of Austria, wished to put Drs GALL and SPURZHEIM to the test. When they rose from table, he conducted Dr GALL into an adjoining apartment, and shewed him a young man: without speaking a word, he and the Prince rejoined the company, and he requested Dr SPURZHEIM to go and examine the young man's head. During his absence, Dr GALL told the company what he thought of the youth. Dr S. im-

mediately returned, and said, that he believed him to be a great mechanician, or an eminent artist in some constructive branch. The Prince, in fact, had brought him to Paris on account of his great mechanical talents, and supplied him with the means of following out his studies.

Dr GALL adds, that at Vienna, and in the whole course of his travels, he had found this organ developed in mechanicians, architects, designers, and sculptors, in proportion to their talent.

He mentions, that, at Mulhausen, the manufacturers do not receive into their employment any children, except those who, from an early age, have displayed a talent for the arts in drawing or clipping figures, because they know, from experience, that such subjects alone become expert and intelligent workmen.

Dr SPURZHEIM mentions the case of a milliner of Vienna, who was remarkable for constructive talent in her art, and in whom the organ is very large. A cast of her skull is in the Phrenological Society's collection, and it presents an appearance, in this particular part, resembling RAPHAEL'S.

When Dr SPURZHEIM was in Edinburgh, in 1817, he visited the work-shop of Mr JAMES MYLNE, brass-founder, a gentleman who himself displays no small inventive genius in his trade, and in whom Constructiveness is largely developed, and examined the heads of his apprentices. The following is Mr MYLNE'S account of what took place upon the occasion :

" On the first boy presented to Dr SPURZHEIM, on his entering the shop, he observed, that he would excel in any thing he was put to. In this he was perfectly correct, as he was one of the cleverest boys I ever had. On proceeding farther, Dr S. remarked of another boy, that he would make a good workman. In this instance, also, his observation was well founded. An elder brother of his was working next him, who, he said, would also turn out a good workman, but not equal to the other. I mentioned, that, in point of fact, the former was the best, although both were good. In the course

of farther observation, Dr S. remarked of others, that they ought to be ordinary tradesmen, and they were so. At last he pointed out one, who, he said, ought to be of a different cast, and of whom I would never be able to make any thing as a workman, and this turned out to be too correct; for the boy served an apprenticeship of seven years, and, when done, he was not able to do one-third of the work performed by other individuals, to whose instruction no greater attention had been paid. So much was I struck with Dr Spurzheim's observations, and so correct have I found the indications presented by the organization to be, that when workmen, or boys to serve as apprentices, apply to me, I at once give the preference to those possessing a large Constructiveness; and if the deficiency is very great, I would be disposed to decline receiving them, being convinced of their inability to succeed."

The organ of this faculty is very largely developed in Mr Brunel, the celebrated inventor of machinery for making blocks for the rigging of ships, by means of steam; and who has, besides, shewn a great talent for mechanics in numerous departments of art. It is large in Edwards, an eminent engraver; in Wilkie, Haydon, and J. F. Williams, celebrated painters; in Sir W. Herschell, whose great discoveries in astronomy arose from the excellence of his telescopes made by his own hands; and in Mr Samuel Joseph, an eminent sculptor. Masks of all these individuals are to be seen in the Phrenological Society's collection. In the late Sir Henry Raeburn, who was bred a goldsmith, but became a painter by the mere impulse of nature, without teaching, and without opportunities of study, I observed it large. It is large, also, in Mr Scoular, a very promising young sculptor, who displayed this talent at a very early age. I have noticed it large in all the eminent operative surgeons of Edinburgh, in distinguished engravers, and also in the most celebrated cabinet-makers, who have displayed invention in their art. It and Form are large in children who are fond of clipping and drawing figures. It is large in tailors who excel in their art.

On the other hand, I possess a cast of the head of a very ingenious friend, distinguished for his talents as an author, who has often complained of so great a want of constructive ability, that he found it difficult even to learn to write; and, in his head, although large in other dimensions, there is a conspicuous deficiency in the region of Constructiveness. Among the negative instances fall to be ranked the casts and skulls of the New Hollanders, in the Phrenological Society's collection. These are all remarkably narrow in the situation of this organ; and travellers have reported, that the constructive arts are in a lower condition with them than with almost any other variety of the human race. Contrasted with them, are the Italians and French. An accurate and intelligent phrenologist authorises me to state, that, during his travels in Italy, he observed a full development of Constructiveness to be a general feature in the Italian head; and the same holds, but in a less degree, in the French. Both of these nations possess this organ in a higher degree than the English in general. Individuals, among the latter, are greatly gifted with it, and the nation in general possesses high intellectual organs, so that great discoveries in art are made in this country by particular persons, and speedily adopted and carried forward by those whom they benefit; but the natural taste for works of art, and the enjoyment derived from them, are here less in degree, and less general, than in France, and especially than in Italy. The busts of eminent artists of former ages display also a great development of this organ; in particular, in the bust of Michael Angelo, in the church of Santa Croce at Florence, the breadth from temple to temple is enormous. The reflecting organs, also, situated in the forehead, and likewise Ideality, in him are very large; and these add understanding and taste to the instinctive talent for works of art, conferred by Constructiveness.

These are positive facts in regard to this organ. I shall now notice a few circumstances, illustrative of the existence of a talent for construction, as a distinct power of the mind apart from the general faculties of the understanding, from

which the reader may form an opinion of the extent to which the phrenological views agree or disagree with the common phenomena of human nature. This is the more necessary, as metaphysical philosophers in general do not admit a primitive faculty of Constructiveness, and hold mechanical arts to be the result entirely of reflection.

Among the lower animals, it is clear that the ability to construct is not in proportion to the endowment of understanding. The dog, horse, and elephant, which in sagacity approach very closely to the more imperfect specimens of the human race, never, in any circumstances, attempt a work of art. The bee, the beaver, the swallow, on the contrary, with far less general intellect, rival the productions of man. Turning our attention to man, we observe, that while, among the children of the same family, or the same school, some are fond of a variety of amusements unconnected with art, others constantly devote themselves, at their leisure hours, to designing with chalk various objects on the boards of books, walls, and paper, or occupy themselves with fashioning in wax or clay, or clipping in paper, the figures of animals, trees, or men. Children of a very tender age have sometimes made models of a ship of war, which the greatest philosopher would in vain strive to imitate. The young VAUCANSON had only seen a clock through the window of its case, when he constructed one in wood, with no other utensils than a bad knife. A gentleman with whom I was intimately acquainted, invented and constructed, at six years of age, a mill for making pot-barley, and actually set it in operation by a small jet from the main stream of the Water of Leith. LEBRUN drew designs with chalk at three years of age, and at twelve he made a portrait of his grandfather. Sir CHRISTOPHER WREN, at thirteen, constructed an ingenious machine for representing the course of the planets. MICHAEL ANGELO, at sixteen, executed works which were compared with those of antiquity.*

The greater number of eminent artists have received no education capable of accounting for their talents; but, on

* GALL sur les Fonctions du Cerveau, tome v.

the contrary, have frequently been compelled to struggle against the greatest obstacles, and to endure the most distressing privations, in following out their natural inclinations. Other individuals, again, educated for the arts, on whom every advantage has been lavished, when destitute of genius, have never surpassed mediocrity. Frequently, too, men, whom external circumstances have prevented from devoting themselves to occupations to which they were naturally inclined, have occupied themselves with mechanics as a pastime and amusement. An eminent advocate at the Scotish bar, in whom Constructiveness is very largely developed, informed me, that occasionally, in the very act of composing a written pleading on the most abstract questions of law, vivid conceptions of particular pieces of mechanism, or of new applications of some mechanical principle, dart into his mind, and keep their place so as to interrupt the current of his voluntary thoughts, until he has embodied them in a diagram or description, after which he is able to dismiss them and proceed with his professional duties. Leopold the Ist, Peter the Great, and Louis XVI. constructed locks. The organs of Constructiveness were largely developed in the late Lord President Blair of the Court of Session, as appears from a cast of his head, his statue, and also from his portraits; and it is said, that he had a private workshop at Avondale, in Linlithgowshire, in which he spent many hours during the vacations of the Court, constructing pieces of mechanism with his own hands. The predilection of such individuals for the practice of mechanical arts cannot reasonably be ascribed to want, or to their great intellectual faculties; for innumerable objects, more directly fitted to gratify or relieve the understanding, must have presented themselves to their notice, had they not been led by a special liking to the course they followed, and felt themselves inspired by a particular talent for such avocations. Not only so, but examples of an opposite description are met with; namely, of men of great depth and comprehensiveness of intellect, who are wholly destitute of manual dexterity. Lucien and Socrates renounced sculpture, because they felt that they possessed no genius for it.

M. SCHURER, formerly Professor of Natural Philosophy at Strasburg, broke every article he touched. There are persons who can never learn to make a pen or sharp a razor; and Dr GALL mentions, that two of his friends, the one an excellent teacher, the other "grand ministre," were passionately fond of gardening, but he could never teach them to engraft a tree. As a contrast to these, men of considerable mechanical dexterity, are frequently found to be remarkably destitute of talent for every other pursuit, and to possess very limited understandings.

Cases of disease also tend to prove that Constructiveness depends on a special faculty, and is not the result merely of general intellect. Dr RUSH mentions two cases in which a talent for design had unfolded itself during a fit of insanity; and he adds, that there is no insane hospital in which examples are not found of individuals, who, although they never shewed the least trace of mechanical talent previously to their loss of understanding, have constructed the most curious machines, and even ships completely equipped. These cases are at utter variance with the notion that the intellectual faculties produce this talent; for in them they were deranged, while they accord with the phrenological doctrine of this power depending on a separate faculty and organ, which, may remain sound when the others are diseased. FODERE, in his Traité du Goitre et de la Cretinisme, p. 133, remarks, "That, by an inexplicable singularity, some of these individuals (Cretins), endowed with so weak minds, are born with a particular talent for copying paintings, for rhyming, or for music. I have known several who taught themselves to play passably on the organ and harpsichord; others, who understood, without ever having had a master, the repairing of watches, and the construction of some pieces of mechanism." He adds, that these powers could not be attributed to the intellect, for these individuals not only could not read books, which treated of the principles of mechanics, "mais ils etaient deroutés lorsqu'on en parlait, *et ne se perfectionnaient jamais.*"

In the lower animals, nature has implanted a propensity to

construct, but in them it is always specific; while in man a similar tendency is found, but general in its direction. For example, nature inspires the beaver not only with a desire to build, but also with an instinctive and unerring impulse, independent of acquired knowledge and experience, to construct a dwelling of a particular form; and the power of the animal to build is confined entirely within the limited sphere of its intuitive inspiration. Man, on the other hand, has received also from nature a propensity to construct, but not a limited and intuitive instinct to build a house or a ship, or to weave a coat, or a vest, or, in short, to fashion any *particular* object. The beaver possesses no general reflecting powers to direct its propensity, and hence it was necessary to inspire it not only with a desire to build, but with a plan of architecture. To man, on the contrary, reflection is given; and the faculties of the understanding enable him to invent plans, and to employ his impulse to construct, in a great variety of ways.

Constructiveness, then, confers only the power of constructing in general, and the results which it is capable of producing are influenced by other faculties. For example, intellect alone, with extreme deficiency of Constructiveness, will never enable an individual to become an expert mechanician; but, if the development of Constructiveness be equal in two individuals, and the intellectual organs be large in the one and small in the other, the former will accomplish much higher designs than the latter: and the reason is obvious. The primitive talent for construction is the same in both; but the one, by means of reflection, is endowed with the perception of the relation of means to an end, and hence is able to select, from the wide circle of nature and of art, every object and appliance that may extend and elevate his conceptions and their execution, while the latter is limited to a mere mechanical talent, never stretching beyond imitation of objects previously existing.

Dr Gall mentions, that it is difficult to discover the position of this organ in some of the lower animals, on account of the different disposition of the convolutions, their small

size, and the total absence of several of those which are found in man. The organ of Music in the lower creatures is situated towards the middle of the arch of the eyebrow, and that of Constructiveness lies a little behind it. In the hamster, marmot, and castor, of which he gives plates, it is easily recognised; and at the part in question, the skulls of these animals bear a close resemblance to each other. In the "ron-"geurs," the organ will be found immediately above and before the base of the zygomatic arch, and the greater the talent for construction, the more this region of their head is projecting. The rabbit burrows under ground, and the hare lies upon the surface, and yet their external members are the same. On comparing their skulls, this region will be found more developed in the rabbit than in the hare. The same difference is perceptible between the crania of birds which build nests, and of those which do not build. Indeed the best way to become acquainted with the appearance of the organ in the lower animals, is to compare the heads of animals of the same species which build, with those which do not manifest this instinct; the hare, for example, with the rabbit, or birds which make nests with those which do not.

The organ is established.

8. ACQUISITIVENESS.

The organ of this faculty is situated at the anterior inferior angle of the parietal bone. By Dr Spurzheim it was called Covetiveness; Sir G. S. Mackenzie suggested the more appropriate name of Acquisitiveness, which Dr Spurzheim has since adopted.

The metaphysicians have not admitted a faculty in the mind, the function of which is to produce the propensity to acquire, and which is gratified by the mere act of acquisition, without any ulterior object. Dr Hutcheson says, "Thus, as soon as we come to apprehend the use of wealth or power to gratify any of our original desires, we must also desire them; and hence arises the universality of these desires of wealth

and power, *since they are the means of gratifying all other desires.*" In like manner, we are told by Mr STEWART, that, "Whatever conduces to the gratification of any natural appetite, or of any natural desire, *is itself desired, on account of the end to which it is subservient;* and by being thus habitually *associated* in our apprehension with agreeable objects, it frequently comes, in process of time, to be regarded as valuable in itself, independently of its utility. It is thus that wealth becomes with many an ultimate object of pursuit; though, at first, it is undoubtedly valued, merely on account of its subserviency to the attainment of other objects. *"

The same author says in another place, that "avarice is a particular modification of the desire of power; arising from the various functions of money in a commercial country. Its influence as an active principle is much strengthened by habit and association †."

Dr THOMAS BROWN ‡ admits the desire of wealth to be a modification of the desire of power, but he endeavours to shew, that Mr STEWART's theory is defective in accounting for avarice, and enters into a most ingenious speculation, to explain how that feeling arises from association. He takes *Time* into account, as an ingredient; and takes the example of a boy purchasing an apple. "Before the boy lays out his penny in the purchase of an apple or an orange," says he, "it appears to him valuable, chiefly as the mode of obtaining the apple or orange. But the fruit, agreeable as it may have been while it lasted, is *soon devoured*;—its value, with respect to him, has wholly ceased; and the penny, he knows, is still in existence, and would have been still *his own*, if the fruit had *not* been purchased. He thinks of the penny, therefore, as *existing now*, and existing without any thing which he can oppose to it as equivalent; and the feeling of *regret* arises,—the wish, that he had *not* made the purchase, and that the penny, as still existing, and equally capable as before of procuring some new enjoyment, had continued in his pocket." This produces "a slight terror of ex-

* Elements, p. 388, † Outlines, p. 92. ‡ Vol. iii. p. 474.

pence, which the habits of many years may strengthen into parsimony."

Nothing can be more ingenious than this speculation, and it is a beautiful instance of the nature of metaphysical science; but it is not sound. The question occurs, Why is this "slight terror of expence" experienced only by some boys and some men, since association and the love of enjoyment, are universal qualities of human nature?

It is proper to mention, however, that Lord KAMES (who has been censured by the regular metaphysicians for admitting too many faculties), recognises the existence of this feeling as a primitive propensity in man, and calls it the "hoarding appetite. Man," says his Lordship, "is by nature a *hoarding animal*, having an *appetite* for storing up things of use; and the sense of property is bestowed on men for securing what they thus store up *." He adds, that "the appetite for property, in its nature a great blessing, degenerates into a great curse, when it transgresses the bounds of moderation."

The observer of the passion of avarice in real life, is not satisfied with the theories of Mr STEWART and Dr BROWN. Dr KING, in the Political and Literary Anecdotes of his own time, remarks, that an avaricious man "is *born* and *framed* to a sordid love of money, which first appears when he is very young, grows up with him, and increases in middle age, and, when he is old, and all the rest of his passions have subsided, wholly engrosses him." He mentions Lord Chancellor HARDWICK, the Duke of MARLBOROUGH, Sir JAMES LOWTHER, Sir THOMAS COLBY, and Sir WILLIAM SMITH, as remarkable instances of it.

The metaphysical notions of Mr STEWART fail entirely to explain the phenomena of avarice, under which passion no enjoyment is sought, except that of accumulating wealth. The character of TRAPBOIS, as drawn in the "Fortunes of Nigel," and admirably represented on the Edinburgh stage by Mr MASON, is a personification of the faculty of Acqui-

* Sketches, B. i. sect. 2.

sitiveness, operating as a blind animal instinct, exalted to the highest degree of energy and activity, and extinguishing every feeling of the mind, except that of fear; which it had cultivated and encreased to minister to its protection. This character is recognised as natural; highly coloured, indeed, but true to life in its leading features. It appears absurd, therefore, to ascribe, as the metaphysicians do, so intense a passion to a mere law of association as its source, to an error of the understanding, in mistaking wealth for the objects which it is fitted to obtain. The very essence of the character is a desire for wealth, independent of every purpose of application. Phrenologists have observed, that the intensity of the desire to acquire, is in proportion to the size of a certain part of the brain, and they, therefore, regard it as an original propensity of the mind. The organ was discovered in the following manner:

When Dr GALL was employed in comparing mental manifestations with cerebral development, he was in the habit of collecting in his house numbers of the lower orders, with the view of more easily discovering the different primitive propensities, which he supposed would be found to operate in them with greater simplicity and vigour, than in persons of a higher rank. On many of these occasions, the individuals assembled, encouraged by him to familiarity, accused each other of petty larcenies, or of what they styled *chiperies*, and took great pleasure in pointing out those who excelled in such practices; and the *chipeurs* themselves advanced in front of their companions, proud of their superior *savoir-faire*. What particularly attracted his attention was, that some of these men shewed the utmost abhorrence of thieving, and preferred starving to accepting any part of the bread and fruit which their companions had stolen, while the *chipeurs* ridiculed such conduct, and thought it silly.

To discover whether this tendency to pilfer was connected with any particular cerebral organ, Dr GALL divided the persons whom he had assembled into three classes; the *first* Included the *chipeurs;* the *second*, Those who abhorred the very idea of stealing; and the *third*, Those who seemed to

regard it with indifference. On comparing the heads of those three classes, he was much surprised to find, that the most inveterate *chipeurs* had a *long prominence* extending from the organ of Secretiveness, almost as far as the external angle of the superciliary ridge, and that this region was *flat* in all those who shewed a horror of theft, while in those who were indifferent about it, the part was sometimes more and sometimes less developed, but never so much as in the professed thieves; and on repeating the experiment again and again with a new assemblage, he found the same results uniformly present themselves.

Having thus ascertained the constancy of the *facts*, the idea naturally occurred to the mind of Dr GALL, that the propensity to *appropriate* must be somehow connected with the peculiarity of cerebral configuration, which had so strongly attracted his notice. It could not be the effect of education, for most of the subjects of his observations had received none. They were the children of nature left to their own resources. Some who detested stealing happened to be precisely those whose education had been most completely neglected. The wants and circumstances of all of them were nearly the same,—the examples set before them were the same,—and to what cause, therefore, could the difference be ascribed, if not to an original difference of mental constitution?

At this time Dr GALL was physician to the Deaf and Dumb Institution, where pupils were received from six to fourteen years of age, without any preliminary education. M. MAY, a distinguished psychologist, then director of the establishment, M. VENUS, the teacher, and he, had it thus in their power to make the most accurate observations on the primitive moral condition of these children. Some of them were remarkable for a decided propensity for stealing, while others did not shew the least inclination to it,—some of them were easily reformed, but others were quite incorrigible. The severest punishments were inflicted upon one of them, but without any effect. As he felt himself incapable of resisting

temptation, he resolved to be a *tailor*, because, as he said, he could then indulge his inclination with impunity. On examining the heads of all these boys, the same region was found to be uniformly developed, in proportion to the endowment of the propensity. He made casts of those of them who were confirmed thieves, in order to compare them with such other heads of thieves or robbers as might afterwards fall in his way.

About this time, also, Dr GALL met with another very decisive proof of the connexion between this propensity and a particular development of brain. In the House of Correction he saw a boy of fifteen years of age, who had been a notorious thief from his earliest infancy. Punishment having had no effect upon him, he was at last condemned to confinement for life as absolutely incorrigible. In a portrait of him in the 26th plate of Dr GALL's work, a remarkable prominence in the lateral region of the head is conspicuous, corresponding to what is now ascertained to be the organ of Acquisitiveness. The forehead is low, narrow, and retreating, and his intellect is stated to be weak and defective to a great degree; and hence the ascendency and activity of the propensity in question are easily explained.

The instinctive appetite for accumulation, produced by this faculty, viewed only in itself, presents a mean and vulgar aspect, and we are apt to regard the individual, in whom it predominates, as a base and sordid being, cased in selfishness, and dead to every generous feeling. But when we view it in its results, it rises vastly in dignity and importance. The first demand of nature is to live and to enjoy; and without Acquisitiveness, the other feelings of the mind would prompt man to kill and eat, or to weave and wear, for the satisfaction of his present wants. But if he bounded his industry by his necessities, and lolled, in idleness while not employed in indispensable pursuits, although he might not starve while in possession of health and strength, he would never become rich. Wealth consists of the savings of industry, after supplying immediate demands: Now, according to the meta-

physicians, there is no instinctive propensity in man, prompting him, by a natural impulse, to save and to accumulate; they imagine that the calls of nature for immediate gratification, or the love of power, are the only motives to such exertions. In the faculty of Acquisitiveness, however, the Phrenologist perceives an instinct prompting the human being, after his appetites of hunger and thirst are appeased, and his person protected against the winds of heaven, to labour on from the mere delight of accumulating, of being surrounded with innumerable stores of commodities, on which the body may feed and repose, and the mind dilate and rejoice; and to the ceaseless industry which this instinct produces, is to be ascribed the wealth with which civilized man is every where surrounded. It prompts the husbandman, the artizan, the manufacturer, the merchant, to activity in their several vocations; and, instead of being necessarily the parent only of a miserable and degrading appetite, it is one of the sources, when properly directed, of the comforts and elegancies of life. Its regular activity distinguishes civilized man from the savage. The prodigal, who consumes the last shilling which he can command, dies and leaves not a trace of his existence behind him. The laborious artizan, on the other hand, who, under the impulse of this faculty, consumes only half the products of his labour, leaves the other half, as a contribution to the stock of national capital, to maintain and set in motion the industry of generations unborn. These, if animated by the same spirit, will leave it with new accessions to their posterity; and thus the stream of public prosperity will be swelled, in an increasing ratio, to the remotest periods of time.

The faculty produces a general tendency to acquire, which takes its particular direction from the other faculties with which it is combined. In a great collector of objects of natural history, this organ and Individuality are large: in a collector of pictures, this organ, Constructiveness, and Ideality, are full; in a collector of old coins, Acquisitiveness and Veneration are large. In short, in no instance where the desire to acquire and possess is strongly manifested, is this organ defi-

cient; while, on the other hand, in those in whom there is no appetite for accumulation, who allow their substance to slip through their hands, through incapacity to retain it, I have seen it small. It is a curious fact, that Mr Owen of New Lanark maintains, that the desire for wealth, or individual property, is not a natural instinct of the human mind; and in his own head, this organ, like that of Destructiveness, the feeling attached to which he also denies, is by no means largely developed. So differently do those feel in whom Acquisitiveness is large, that they desire to acquire for the mere sake of acquisition. If a person so endowed be owner of fifty acres, it will give him infinite delight to acquire fifty more; if of one thousand or one hundred thousand, he will still be gratified in adding to their number. His understanding may be perfectly convinced that he already possesses ample store for every enjoyment, and abundant provision against every want; but yet, if this faculty be active, he will feel his joys impaired, if he ceases to amass. This explains the insatiable nature of the passion to acquire, and the source also of the disappointment generally experienced by persons, whose lives have been devoted to commerce, when they retire from business with a view to enjoy the fruits of their industry. The gratification of Acquisitiveness in accumulating wealth, constituted the chief pleasure of their previous lives; and when this propensity ceases to be indulged, and no other faculty has been cultivated with equal ardour, ennui and disgust are the natural and unavoidable results of their new situation.

It has been stated, as an objection to this propensity, that property is an institution of society, and that an organ cannot exist in the brain for a factitious desire. The answer to this argument is, that the idea of property springs from the instinctive suggestions of the faculty in question; and that the laws of society are the consequences, and not the causes, of its existence. They are intended to regulate the desires of mankind for possessions; but this purpose clearly supposes such desires antecedently to exist.

Many persons, in whom Benevolence and Love of Approbation are large, as well as Acquisitiveness, can, with difficulty, believe that the latter influences their feelings. They are so ready to disburse and to bestow that they never accumulate, and hence persuade themselves that they have no tendency to acquire. But such persons are keen in their dealings, they cheapen in making purchases, know where bargains are to be obtained; and, on consulting their own minds, will find that schemes of acquiring property frequently haunt their fancies. They are also prone to admire the rich. Persons, on the contrary, in whom the organ is small, think of every thing with more interest, and pursue every object with more avidity, than wealth. They may be industrious to live, but there is no intense energy in their pursuit of gain; and their fancies, in building castles in the air, rarely erect palaces of gold, or place happiness in hordes of accumulated riches.

The effects of this faculty are greatly modified by the strength of Self-Esteem. The propensity in question desires to *acquire;* Self-Esteem produces the *love of self;* the two conjoined, give rise to the Love of Acquisition for self-gratification; and if both organs be large, the individual will have a strong tendency to sordid selfishness, unless the moral and reflecting powers be particularly active and energetic. The passion for *uniques* also seems to arise from this combination.

Dr GALL states this organ to be little developed in the skulls of the Caribs. In accordance with this, travellers say that they are little prone to theft; and, therefore, says ROCHESTER, in his History of the Antilles, when they are robbed, they always insist that it must have been by a Christian. The Negroes are also little prone to steal, and the organ is moderately developed in them. Dr GALL had an opportunity of observing among the Spanish troops, that both the Arragonese and Castilians have the anterior part of the temporal region a good deal flattened, denoting a small Acquisitiveness; and he was assured that they are the most faithful servants, and equally incapable of stealing as of lying. The Kalmucks again are the very opposite. *They* have been renown-

ed for thieving and bad faith; and in accordance with this, BLUMENBACH, an opponent of Phrenology, in describing the Kalmuck skull, observes, that it projects in the region of Acquisitiveness, "*capita ad latera extantia.*" Dr GALL possesses two Kalmuck skulls, and both correspond with BLUMENBACH's description. Dr SPURZHEIM also tells us, "that a young Kalmuck, brought to Vienna by Count STAHRENBERG, became melancholy, because his confessor, who instructed him in religion and morality, had forbidden him to steal. He got permission to steal, on condition that he should give back what he had stolen. The young man, profiting by this permission, stole his confessor's watch during high mass, but joyfully returned it after mass was over."

It is difficult to conceive a miser without a great endowment of this propensity, although an individual may be a thief with a moderate portion of it. Avarice arises from Acquisitiveness, raised to the height of a passion. Theft implies a want of regulating and directing influence from the moral faculties, as much as an excessive and intense desire to acquire property for the sake of possessing it. Strong sensual propensities, which cannot be gratified without money, may lead individuals to resort to theft as a means of supplying their wants, without the love of property itself being strong; but Conscientiousness must be weak, and Secretiveness powerful, before such an expedient can be resorted to.

The existence of this organ throws light on the tendency to steal, which some individuals, whose external circumstances place them far above temptation, manifest in a remarkable degree. In them, it seems to be in a state of diseased activity, and not to be controlled by the moral and reflecting faculties. Dr GALL mentions several cases of diseased affections of this propensity. M. KNEISLER, governor of the prison of Prague, spoke to him and Dr SPURZHEIM about the wife of a rich merchant, who stole continually from her husband in the most adroit manner, and who was at last shut up in a house of correction, which she had scarcely left, when she stole again, and was again confined. She was condemned to

a third and longer imprisonment, and again commenced her operations in the jail itself. With the utmost address, she made a hole in the stove, which heated the apartment in which the money was deposited, and committed repeated depredations, which were soon discovered. Every means were adopted to detect the offender, and bells were suspended at the doors and windows, but all in vain. At length a spring-gun was set, the wire of which was connected with the strong box. She was so dreadfully frightened by its explosion, that she had not time to escape through the stove. At Copenhagen, Drs GALL and SPURZHEIM saw an incorrigible thief, who sometimes distributed the produce of his larcenies to the poor; and, in another place, a robber, who was in confinement for the seventh time, assured them with sorrow, that he felt himself unable to act otherwise. He begged to be detained in prison, and to be provided with the means of supporting himself.

At Munster, a man was condemned to imprisonment for eight years, on account of some robberies:—He was no sooner liberated than he committed fresh depredations, and was thereupon imprisoned for life. Sixteen years thereafter he revealed a conspiracy which had been formed among the criminals, and it was proposed to reward him by setting him free. The judge objected to this, that it would be dangerous to do so, as the man himself had previously assured him that his thievish propensity was so rooted in his constitution that he could not by any possibility resist it. About a year after, he escaped from prison, betook himself to his old practices, and was again arrested; shortly after which he hanged himself. "During ten years that I have known this man in the prison," said WERNEKING, from whom Drs GALL and SPURZHEIM got these details, "he was remarkable for activity and devotion during divine service; but I learnt after his death, that he had constantly been committing theft, even in the prison itself."

Dr GALL mentions, that, among the young men confined in one of the prisons of Berlin (Stadtvogtey), one in particular

attracted the attention of Dr SPURZHEIM and himself. They strongly recommended never to set him at liberty, as they thought it impossible he could ever abstain from stealing. They explained their motives to the gentlemen who accompanied them, and, on examining the registers, the latter were much surprised to find that the man had from infancy manifested the strongest tendency for thieving. The organs of the higher sentiments were extremely deficient, while that of Acquisitiveness had acquired the highest degree of development and energy. Its activity was also greatly aided by his immense endowment of Secretiveness. The man himself was little and deformed; his forehead "villanously low," and depressed backwards immediately above the eyebrows, but the lateral regions, or temples, were broad and prominent. In such a case no Phrenologist would hesitate to give the same advice.

In the prison at Berne, Drs GALL and SPURZHEIM saw a rickety and badly organised boy of twelve years of age, who could not refrain from stealing; and who, with his pockets filled with his own bread, purloined that of others. At Haina, the officers spoke to them about an incorrigible robber, named FESSELMAYER, whom no punishment could amend. He stole in prison to such an extent, that a mark was put upon his arm, that all might be upon their guard against him. Before seeing him, Drs GALL and SPURZHEIM stated what his development ought to be, and their prediction was verified at the first glance. He had the appearance of being sixteen, although he was in reality twenty-six years of age. His head was round, and about the size of that of an infant of one year. He was, moreover, deaf and dumb.

Numerous examples of the diseased activity of this propensity occur in all lunatic asylums, and afford strong proof of the independent existence of the faculty and organ. PINEL tells us, that it is a matter of common observation, that men who, in their lucid intervals, are justly considered as models of probity, cannot refrain from stealing and cheating during the paroxysm; and Dr GALL gives four cases of women, who,

in their ordinary state, had no such tendency, but who, when pregnant, manifested it in a high degree.

Two citizens of Vienna attracted his notice, both of whom had led irreproachable lives previous to becoming insane. After that time both were distinguished for an extraordinary inclination to steal. They wandered over the hospital from morning to night, picking up whatever they could lay their hands upon,—straw, rags, clothes, wood, &c., which they carefully concealed in the apartment which they inhabited in common; and, although lodged in the same chamber, they stole from each other. In both the organ was very much developed.

M. Esquirol, physician to the Salpetrière of Paris, gave Dr Gall an account of a Knight of Malta, who had quitted the army at the beginning of the French revolution, and who, from excessive indulgence and disappointed love, had become weak in intellect, violent in temper, and at last a thief. On his way to M. Esquirol's asylum, he contrived to steal spoons, covers, &c. from the inns at which he dined. He then went about accompanied by a servant, and not unfrequently refreshed himself in a coffee-house, and, instead of paying, put the cup, saucer, and spoon in his pocket, and walked away. In other respects he was sufficiently reasonable. This inclination to theft was cured, although his intellect remained weak.

Acrel mentions a young man who was trepanned, in consequence of a severe wound on the temple, in the region of the organ of Acquisitiveness. After his dismissal from the hospital, he manifested an irresistible propensity to steal, and after committing several larcenies, he was imprisoned, and would have been condemned, had not Acrel declared him insane.

"There are persons," says that accurate and philosophical observer and physician, Dr Rush of Philadelphia,* "who are moral to the highest degree as to certain duties, but who, nevertheless, live under the influence of some one vice. In an

* Rush's Medical Inquiries.

instance of a woman who was exemplary in her obedience to every command of the moral law except one,—*she could not refrain from stealing*. What made this vice more remarkable was, *that she was in easy circumstances, and not addicted to extravagance in any thing*. Such was the propensity to this vice, that, when she could lay her hands upon nothing more valuable, she would often, at the table of a friend, fill her pockets secretly with bread. She both confessed and lamented her crime."

The *Journal de Paris* of 29th March 1816, states, that "An ex-commissary of police, BEAU-CONSEIL, has just been condemned to eight years' confinement and hard labour, and to the pillory, for having, when still in office, stolen some pieces of plate from an inn. The accused persisted to the last in an *odd* enough species of defence. He did not deny the crime, but he attributed it to mental alienation, occasioned by wounds which he had received at Marseilles in 1815." Dr GALL observes, that if the previous conduct of BEAU-CONSEIL was irreproachable, and if he did really receive a wound in the head, either his defender was inexcusable in not making the defence available, or the Court was blameable in not listening to it.

This propensity is found also in the lower animals. Lord KAMES observes, that "the beavers perceive the timber they store up to be their property; and the bees seem to have the same perception with regard to their winter provision of honey." Dr GALL also mentions a variety of the lower animals which manifest the sense of property. The same pair of storks, swallows, nightingales, and red-breasts return, in spring or in autumn, to the same country in which they had passed the season in the preceding year, and establish themselves, the storks on the same steeples, the swallows under the same roofs, and the nightingales in the same bushes. If another pair of birds attempt to seize the place already appropriated, war is immediately waged against them, and the intruders are forced to depart. Cows returning from the pasturage, occupy each its own stall in the byre, and defend it.

The cat and dog, in hiding food, to be used when hunger returns; and the squirrel, hamster, and jack-daw, which collect provisions for the winter,—undoubtedly have the notion of property in the stores they accumulate. These animals, however, do not enact laws; and the sense of property is in them an instinct of nature. In the human race, says Dr GALL, the process is the same; nature inspires the mind with the notion of property, and laws are made to protect it.

The organ is established.

9.—SECRETIVENESS.

THE organ is situated at the inferior edge of the parietal bones, immediately above Destructiveness, or in the middle of the lateral portion of the brain. When the organ of Destructiveness is much developed, it may be mistaken, by the inexperienced observer, for the organ of Secretiveness; so that it is necessary to remark, that the latter organ is placed higher, and rather farther forward, than the former; and that, instead of presenting the form of a segment of a circle, it is extended longitudinally. When both organs are highly developed, the lower and middle portion of the side of the head is characterised by a general fulness.

Dr GALL gives the following history of the discovery of this organ. In early youth, he was struck with the character and form of the head of one of his companions, who, with amiable dispositions and good abilities, was distinguished by cunning and finesse. His head was very large at the temples, and in his natural attitude it projected forward. Although a faithful friend, he experienced an extraordinary pleasure in employing every possible device to make game of his school-fellows, and to deceive them. His natural language was absolutely the expression of cunning, such as Dr GALL had often observed in cats and dogs, when, playing together, they wished to give each other the slip. At a subsequent period, he had another companion, who, at first, appeared

candour personified; no one had ever distrusted him; but his gait and manner were those of a cat watching a mouse; he proved false, perfidious, and deceived, in an unbecoming manner, his young school-fellows, his tutors, and his parents. He carried his head in the same attitude as before mentioned; his figure was handsome; and his head exceedingly large at the temples. One of Dr GALL's patients, who died of phthisis, generally passed for a very honest man: after his death, Dr GALL was struck with the largeness of his head in the temporal region; and shortly afterwards learned, that he had cheated his acquaintances, and even his mother, of considerable sums of money. At Vienna he was often in the company of a physician, possessed of much information, but who, on account of his character of a cheat, was generally despised. Under pretence of dealing in objects of art, and lending on pledges, he robbed all who put confidence in him. He carried his tricks and cheats to such a length, that the government warned the public to beware of him, through the medium of the public journals; for he had practised his arts with such dexterity, that he could never be legally condemned. He often told Dr GALL, that he knew no pleasure equal to that of deceiving, especially persons who distrusted him most. As the head of this individual also was very large at the temples, Dr GALL was impressed with the idea that there is a primitive tendency towards cunning in the mind, and that it is manifested by this particular cerebral organ. An immense number of observations have confirmed his conjecture.

The nature and object of this propensity appear to be the following: The various faculties of the human mind are liable to involuntary activity from internal causes, as well as from external excitement. Thus, Amativeness becoming active, gives feelings corresponding to its nature; Acquisitiveness inspires with strong desires for wealth; and Love of Approbation fills the mind with projects of ambition. Every one will be conscious that these, or similar feelings, at times rush into his mind involuntarily, and frequently refuse to de-

part at the command of the understanding. If outward expression were given to these impulses, in all their vivacity, as they arise, social intercourse would be disfigured by a rude assemblage of disgusting improprieties, and man would shun the society of his fellows as more loathsome than pestilence or famine. SHAKESPEARE, with that profundity of intellect which distinguishes him, has seized upon this feature of the human mind.

> Utter my thoughts? Why, say they are vile and false,—
> As where's that palace, whereinto foul things
> Sometimes intrude not? Who has a breast so pure
> But some uncleanly apprehensions
> Keep leets and law-days, and in Session sit
> With meditations lawful?—*Othello*, Act iii. Scene 3.

Some instinctive tendency, therefore, to restrain within the mind itself, to conceal, as it were, from the public ear, the various desires and emotions which involuntarily present themselves in the mind, was necessary to enable the understanding to regulate their outward expression; and nature appears to have provided this power in the faculty of Secretiveness. It is an instinctive tendency to conceal, and the legitimate object of it appears to be, to restrain the outward expression of our thoughts and emotions, till the understanding pronounce judgment on their propriety.

Besides, man and animals are occasionally liable to the assaults of enemies, which may be avoided by concealment, in cases where strength is wanting to repel them by force. Nature, therefore, by means of this propensity, enables them to add prudence, slyness, or cunning, according to the direction given to it by other faculties of the individual, to their means of defence.

A sufficient endowment of this organ is essential to the formation of a prudent character. It then imposes a salutary restraint on the manifestations of the other faculties, and serves as a defence against prying curiosity. Those in whom it is deficient, are too open for the intercourse of general so-

ciety; they are characterised by a headlong bluntness of manner, and deficiency of tact, arising from the instantaneous expression of every thought and emotion, as it flows on the mind, without regard to the delicacies required by time, place or circumstances.

Mr Scott, in an excellent essay on this propensity, published in the Phrenological Transactions, observes, that it communicates the desire to discover the secrets of others, as well as to conceal our own. The author of Waverly, in his novel of Quentin Durward *, draws the character of Louis XI. with exact fidelity to this principle of our nature. The King, says he, was "calm, crafty, and profoundly attentive to his own interest. He was careful in disguising his real sentiments and purposes from all who approached him, and frequently used the expressions,—that the King knew not how to reign, who knew not how to dissemble; and that, for himself, if he thought his very cap knew his secrets, he would throw it into the fire. Like all astutious persons, he was as desirous of looking into the secrets of others, as of concealing his own." This representation is historically correct. According to this view, even a large development of the organ, if combined with good sentiments, and an enlightened understanding, is a valuable endowment. Persons so constituted, possessing themselves the natural talent requisite for intrigue, if they choose to direct the faculty in that way, are naturally fitted to divine and discover intrigues and secret machinations in others, and to defeat them. From the same cause they read, with great acuteness, the natural language of concealment in other minds, and are able to discover, by the very air and manner of a man, that he is hiding some object or intention, when a person, in whom the organ is small, could not perceive such a purpose. In many of the affairs of life also, secresy is indispensable both to prudent conduct and success.

When too energetic, or not properly directed, Secretiveness is liable to great abuses. It then leads to a liking for

* Vol. i. p. 7.

concealment, intrigue, and crooked policy, for their own sakes; and to a feeling that it is wise and clever to wrap up the purposes of the mind in the profoundest mystery: cunning is mistaken for ability, and deceit for practical wisdom. It may prompt to the use of lies, hypocrisy, intrigue, or dissimulation, as means to gain an end. Persons in whom it predominates, judging of mankind in general by themselves, are never able to see the affairs of the world, or the conduct of others, in a plain and simple point of view, but conceive life to be a continual stratagem, in which every one is endeavouring to overreach his neighbour. Such persons conceive, that the eye of the world is always looking into their breasts, to read the purposes that are there hatched, but which discovery they are resolved to prevent. The propensity in some instances finds gratification in the most trifling mysteries; an individual under its predominating influence, will conceal his going out, his coming in, his engagements, and all his transactions; even although communication of these would greatly facilitate domestic arrangements.

Dr Johnson mentions of Pope, that he took so "great delight in artifice, that he endeavoured to attain all his purposes by indirect and unsuspected methods; he hardly drank tea without a stratagem. He practised his arts on such small occasions, that Lady Bolingbroke used to say in a French phrase, that he played the politician about *cabbages and turnips*."

Mercantile men, in whom this organ predominates, occasionally conceal their circumstances, so that wife and children proceed in the unsuspecting enjoyment of imagined prosperity, till bankruptcy, like the explosion of a mine, involves them in instantaneous ruin. These individuals generally plead in excuse, a pretended regard to the feelings of their relatives; but the distrust implied in such conduct, is a greater injury to sensitive minds, than the evils they attempt to hide. The real sources of their conduct are an overweening Self-esteem, which cannot stoop to acknowledge misconduct or misfortune, and an inordinate Secretiveness, inspiring them

with an instinctive aversion to candid and unreserved communication. A favourite maxim with such men, is, that secresy is the soul of trade. It is so, only in narrow minds misguided by this propensity.

Persons in whom this organ is large, and who believe that they really conceal their true character from the world, are much startled at the exposure which Phrenology is said to make of the dispositions of the mind, and they feel great difficulty in believing it practicable to compare genuine mental feelings with development of brain, because they imagine that real motives and dispositions are never exhibited in conduct. Such persons err, however, in their estimate even of their own powers of concealment; for, Secretiveness does not alter the aim, but affects only the means of obtaining gratification of our ordinary desires; and, besides, if disguise be really the forte of their character, Phrenology has the advantage of them still; for it exhibits the organ of Secretiveness large, and in their very concealment they will manifest most powerfully the faculty whose organ is most fully developed.

Innumerable abuses of this propensity occur in the ordinary intercourse of society. How polite, acquiescent, and deferential, are some persons in their manners to all who are present; and how severe in their vituperations, when the same individuals are gone! This conduct results from Secretiveness addressing itself to the Love of Approbation in others, and endeavouring to please them by professions of feigned respect. Many persons would not, for any consideration, mention a disagreeable truth to an acquaintance. This also arises from an abuse of the same faculty, combined with great Love of Approbation.

To Mr Scott is due the merit of throwing great light on the influence of Secretiveness in producing humour. The power of representing, with a face of perfect gravity, some ludicrous incident, is one species of humour. In this, the grave exterior,—the command over the outward expression of the face, while the most ludicrous ideas are internally perceived, is just a species of slyness, and is clearly attributable

to Secretiveness. This kind of humour also is absolutely addressed to Secretiveness in others. We, as spectators, see the internal absurdity through the external gravity, and this gratifies our Secretiveness, which likes to penetrate disguises assumed by others, as well as to disguise itself. Another species of humour consists in detecting and exposing little concealed purposes and intentions in our friends, and holding them up to view in all their nothingness, when they are mystifying or concealing them as matters of real importance. "The man of humour," says Mr Scott, "delights in detecting these little pieces of deception; and the *ludicrous* effect of this seems to arise from the incongruity which appears between the real and the assumed character, the contrast between what is intended to be apparent at the surface, and that which is seen to be at the bottom." It is proper to observe, however, that Secretiveness affords only the slyness, and the *savoir faire* implied in humour, together with the tact of detecting little concealed weaknesses; and that the faculty of Wit is necessary, in addition, more or less, to produce ludicrous effect in the representation. Thus, a person with much Wit, and little Secretiveness, will not excel in humour, although he may shine in pure wit. A person, on the other hand, with much Secretiveness, and moderate Wit, may excel in humour, although, in intellectual witty combinations, he may make but an indifferent figure. It is a curious fact, that the Italians and English, in whom Secretiveness is large, delight in humour, while the French, in whom the organ is moderate, can scarcely imagine what it is. In conformity with these differences in national development, the English and Italians practise a prudent reserve in their intercourse with strangers, while the French are open to excess, and communicate even their private affairs to casual acquaintances. The French also delight to live, and even to die, in public; while the Englishman shuts himself up in his house, which he denominates his castle, and debars all the world from observing his conduct. Other faculties contribute to these varieties of taste, but Secretiveness is an essential element in the relish for retirement.

I have uniformly found Secretiveness large in the heads of actors and artists, and, of these, I have been permitted to examine a considerable number. In the cast of Miss CLARA FISHER's head, it will be seen amply developed. The theory of its effects in aiding the former seems to be this: The actor must conceal or shade his real character, and put forth the natural language of an assumed one. Now, Secretiveness will enable him to suppress or withhold all the faculties which are not essential to the personage whom he, for the time, represents; while, by withdrawing its restraints from other faculties, it will allow them to manifest themselves with full energy. Thus, suppose an actor, in whom Benevolence and Conscientiousness are large, is called on to play IAGO, a character in which selfishness and villany predominate, then Secretiveness will enable him to suppress the natural language of his own superior faculties, while, by withdrawing its influence from Combativeness, Destructiveness, and Self-Esteem, it will permit the most forcible expression of these in looks, tones and gestures; and this will be IAGO to the life. It aids the artist in a similar way. It is known, that a painter or sculptor, in working at a figure, studies first the mental feelings which it is intended to pourtray, then goes to a mirror, and produces the expression of them in his own person, and copies it in his picture or block of marble. In this process, he resembles an actor, and Secretiveness assists him in the manner before explained. In this analysis, I differ in one point from Mr SCOTT. He thinks that Secretiveness confers not only the negative power of suppressing the real character, but also the positive power of calling up, at will, the natural language of such faculties as we wish to exhibit for the time. Thus, some persons are able to load others with expressions of great esteem, and attachment, and good will, when internally they hate them. Mr SCOTT conceives that Secretiveness enables such individuals not only to disguise their real enmity, but to call up for the occasion the natural language of Adhesiveness, Benevolence, Veneration, and Love of Approbation, and to use these as instruments of deception. This latter effect appears to me to depend on Imitation.

When Secretiveness and Cautiousness are both very large, there is a great tendency to extreme reserve, and even, when little knowledge of the world is possessed, to suspicion and terror of dark designs and sinister plots, hatching on every hand against the unhappy possessor of this combination. These have, in general, no existence beyond the internal feelings produced by those faculties.

Secretiveness, with small Conscientiousness, predisposes to lying, and, combined with Acquisitiveness, to theft. Indeed, Secretiveness is more invariably large in thieves than Acquisitiveness; and it prompts to this crime, probably by the feeling of secresy which it generates in the mind. It gives the idea that all is hidden, and that no eye sees, and no intellect will be able to trace the fraud. It produces also that capacity for sly cunning which is essential to a thief. The organ is large in David Haggart, and in a variety of executed thieves, whose casts have been obtained. It is large, also, in John Gibson, a boy who manifested very extraordinary powers of deception at eight years of age. His case is reported at full length, by Mr David Bridges *junior*, in the Phrenological Transactions, vol. i. p. 289. On 3d December 1823, I visited in Edinburgh jail, John Reid, a lad of sixteen, under sentence of death (but subsequently respited), for housebreaking and theft. His head was uncommonly large for his years, and the organ of Secretiveness, in particular, was enormously developed. The breadth across at this point was $6\frac{2}{8}$ inches; Acquisitiveness also was large, and Conscientiousness deficient. The Reverend Mr Porteous, chaplain to the jail, mentioned, that Reid's power of concealing his thoughts and feelings was most extraordinary, and that daring and secresy were manifested in his crime, in a degree that was almost inconceivable. He had mounted on the shoulders of an accomplice to the second storey of a dwelling house, entered by a window, and, although persons were in the bed-rooms of that floor, and the lamp in the lobby was burning, he proceeded down stairs, reached the dining-room, robbed the side-board of plate, and got clear off without being heard. An excellent elucidation,

by Dr Andrew Combe, of the effects of Secretiveness, as a constituent element in the character of a thief, will be found in the Phrenological Journal, vol. i. p. 611.

Another effect of great Secretiveness, especially when aided by much Firmness, is to produce the power of repressing, to an indefinite extent, all outward expression of pain, even when amounting to positive torture. Ann Ross (whose case is reported by Mr Richard Carmichael of Dublin *), with a view to excite the compassion of some pious and charitable ladies, thrust needles into her arm to produce disease, and carried the deception so far, as to allow her arm to be amputated without revealing the cause. The needles were found on dissection, and she was more mortified by the discovery of the trick, than afflicted by the loss of her arm. She manifested the same faculty in a variety of other deceptions. I examined her head, and Mr Carmichael also furnished the Phrenological Society with a cast of it, and in it the organs of Secretiveness and Firmness are decidedly large. The North American Indians also are celebrated for their power of enduring torture, and the same combination occurs in casts of two of their skulls in the Society's collection.

Dr Murray Patterson mentions, that the Hindoos manifest Secretiveness in a high degree, in the form of cunning and duplicity, and the organ is very large in their heads.

This propensity, when predominantly active, produces a close sly look; the eyes roll from side to side; the voice is low; the shoulders are drawn up towards the ears, and the footstep is soft and gliding. The movements of the body are towards the side. Sir Walter Scott accurately delineates the look produced by this faculty and Cautiousness in the following lines.

Speaking of Cormac Doil, he says,

> For *evil* seemed that old man's eye
> *Dark and designing, fierce yet shy,*
> *Still he avoided forward look,*
> *But slow and circumspectly took*

* Phren. Journ. No. v.

A circling, never ceasing glance,
By doubt and cunning mark'd at once;
Which shot a mischief-boding ray,
From under eye-brows shagged and grey.
Lord of the Isles, Canto iv. p. 24.

When this organ is very large in the head of an author, it produces a curious effect on his style. The different members of his sentences are involved, parenthetical, and often obscure, as if he were in doubt whether he selected the proper place for his expressions, and hesitated between what he ought to put down and what he might leave to be understood. He is also liable to quaintness. POPE's style occasionally indicates this quality, and the faculty is strongly manifested in his character. Dr THOMAS BROWN's style, also, is characterised by Secretiveness, and the organ was large in his head. CROLY's poetry presents the expression of it. GOLDSMITH's writings display a moderate endowment. This faculty, by enabling an author skilfully to work up his incidents and events, and to conceal the *denouement* of his plot or story, till the most appropriate time and place for the elucidation, greatly aids him in producing effect.

It prompts, says Dr GALL, the General of an army to the use of stratagems to deceive the enemy, while it leads him to conceal his own forces and enterprizes, to make false attacks and counterfeited marches.

This organ is possessed by the lower animals, and Dr GALL remarks, that it requires a particular study in each species. In the common species of ape, for example, it commences above the origin of the zygomatic arch, and extends forward to nearly the middle of this bone. Its situation is the same in the tiger, cat and fox. In graminivorous animals, and in birds distinguished for cunning, this region will also, in general, be found large.

Manifestations of this propensity, clearly attributable to disease of the organ, are described by authors on insanity. The cunning shewn by many of the insane, especially in concealing their true state, has often excited astonishment. Fo-

DERE' speaks of two patients who had been long confined in the asylum at Marseilles. After an apparent cure of considerable duration, their friends demanded their dismissal. He, however, suspected deception, and determined to hold a long conversation with them. For an hour and a half, during which he avoided the kind of ideas in regard to which he knew them to be insane, they spoke, reasoned, and acted like men of sound judgment. But when he introduced the subject which excited their diseased faculties, their eyes began to sparkle, the muscles of the face to contract, and an evident agitation took place, accompanied with an effort to preserve calmness. They were ordered to be detained. PINEL mentions the cunning and tricks of some lunatics as remarkable. Dr MARSHALL* notices the case of a man in Bethlem Hospital in 1789, who fancied he was a great man. "He was very crafty, and used much flattery to the keepers, calling them 'fine men, gentlemen,' especially when he wanted any indulgence; but when his complacent looks and genteel expressions did not avail him, he became revengeful, made up some plausible story against them, and slyly told it to the steward. When fresh patients came into the house, he always introduced himself to them; he was very civil to them, and, after gaining their confidence, he tried to get their money from them, which, if he could not do by other means, he had recourse to stratagem to get possession of it."

The regular metaphysicians have not admitted any faculty corresponding to this propensity, nor am I aware that they give *any* theory of cunning, although it is an obvious ingredient in human nature. The quality, however, is familiarly recognised by a variety of writers. Lord BACON, in his Essay on Cunning, graphically describes a number of the abuses of Secretiveness. "We take cunning," says he, "for a sinister or crooked wisdom, and certainly there is a great difference between a cunning man and a wise man, not only in point of honesty, but in point of ability. There be that can pack the

* Page 192.

cards, and yet cannot play well; so there are some that are good in canvasses and factions, that are otherwise weak men." COWPER thus describes a critical fribble.

> With that *low cunning*, which in fools supplies,
> And amply too, the *place of being wise*,
> Which nature, kind, indulgent parent, gave
> To qualify the blockhead for *a knave;*
> With that *smooth falsehood*, whose appearance charms,
> And reason of each wholesome doubt disarms,
> Which to the *lowest depths of guile descends*,
> *By vilest means pursues the vilest ends*,
> *Wears friendship's mask* for purposes of spite,
> Fawns in the day, and butchers in the night;
> A motely figure of the fribble tribe,
> Which heart can scarce conceive, or pen describe,
> Came simpering on, &c.

In Peveril of the Peak, we have the following dialogue. "Your Grace holds his wisdom very high," said the attendant. "*His cunning at least*, I do," replied BUCKINGHAM, "which, in Court affairs, often takes the weather-gage of wisdom."

The organ is established.

GENUS II.—SENTIMENTS.

THIS genus of faculties corresponds to the "emotions" of the metaphysicians. The feelings which they produce, are not the *immediate* consequences of the presence of external objects, but are excited, *only indirectly*, through the medium of intellectual perceptions or sensations. They differ from intellectual perceptions, in being accompanied with a peculiar vividness, which every one understands, but which it is impossible to express by any verbal definition.* They may

* Lectures by Dr T. BROWN. Lecture 52.

exist, also, with great intensity, by the internal activity of the organs. Dr Spurzheim has named these faculties Sentiments, because they produce a propensity to act, joined with an emotion or feeling of a certain kind. Several of them are common to man and the lower animals; others are peculiar to man. The former shall be first treated of, and they are styled the Inferior or Lower Sentiments.

1. *Sentiments common to Man and the lower Animals.*

10. SELF-ESTEEM.

This organ is situated at the vertex or top of the head, a little above the posterior or sagittal angle of the parietal bones. When large, the head rises far upward and backward from the ear, in the direction of it.

Dr Gall gives the following account of the discovery of the organ. A beggar attracted his attention by his extraordinary manners. He reflected on the causes which, independently of an absolutely vicious conformation, or of misfortunes, could reduce a man to mendicity, and believed that he had found one of the chief of them in levity and want of foresight. The form of the head of the beggar in question confirmed him in this opinion. He was young, and of an agreeable exterior, and the organ of Cautiousness was very little developed. Dr Gall moulded his head, and, on examining it with attention, remarked, in the upper and back part of the middle line, a prominence extending from above downwards, which could arise only from development of the cerebral parts there situated. He had not previously observed this prominence in other heads; and, on this account, he was very anxious to discover what it indicated. His head, moreover, was small, and announced neither strong feelings nor much intellect. After many questions addressed to the beggar, with a view to discover the remarkable traits of his character, he requested him to relate his history. The beggar said, that he was the son of a rich merchant, from whom he had inherited a

considerable fortune; that he had always been so proud as not to be able to condescend to labour, either for the preservation of his paternal fortune, or to acquire a new one; and that this unhappy pride was the only cause of his misery. This, says Dr GALL, "called to my recollection those persons who forbear to cut their nails, with the view of supporting the idea that they never require to work." He made several farther observations to the beggar, and shewed him that he doubted his veracity; but he always reverted to his pride, and seriously stated, that even now he could not resolve to follow any kind of labour. Although it was difficult to conceive how pride should cause a man to prefer begging to working, yet Dr GALL was led, by this person's reiterated assurances, to reflect upon the sentiment, and to observe the organ, and he found, at length, incontrovertible proofs of their connection.

He mentions a variety of cases in illustration, of which I select only the following:

A young man, endowed with faculties above mediocrity, had manifested, from his infancy, insupportable pride. He constantly maintained that he was of too good a family to work or apply himself to any thing. Nothing could free him from this absurdity; he was even put, for eighteen months, into a house of correction at Hainar. A physician of Vienna, an otherwise amiable man, carried the feeling of pride to such a point, that every time when called to a consultation, even with practitioners older than himself, or with public professors, he regularly took the precedence, both in entering and coming out of the apartment. When any document was to be subscribed, he insisted on adhibiting his signature first. He had connected himself with the director of the Great Hospital, but solely, as he himself told afterwards, for the purpose of supplanting him. At Heidelberg, Dr G. saw a girl of eighteen, of a remarkable character. Every word or gesture in the least free revolted her. She called on GOD on every occasion, as if he took a special interest in her affairs. When she spoke, assurance and presumption were painted in her features; she carried her head high and a little backwards,

and all the movements of her head expressed pride. She was not capable of submission; when in a passion, she was violent and disposed to proceed to all extremities. Although only the daughter of a quill-merchant, she spoke her native language with extraordinary purity, and communicated only with persons of a rank superior to her own. In all these individuals, the organ of Self-Esteem was very largely developed. Dr GALL mentions, that he had examined also the heads of a number of Chiefs of Brigands, remarkable for this quality of mind, and that he had found the organ largely developed in them all.

The faculty inspires with the sentiment of Self-Esteem or Self-Love, and a due endowment of it, like that of all other faculties, produces only excellent effects. It imparts that degree of satisfaction with self, which leaves the mind open to the enjoyment of the bounties of Providence and the amenities of life; and inspires it with that degree of confidence, which enables it to apply its powers to the best advantage in every situation in which it is placed. It aids also in giving dignity in the eyes of others; and we shall find in society, that that individual is uniformly treated with the most lasting and sincere respect, who esteems himself so highly as to contemn every action that is mean or unworthy of an exalted mind. By communicating this feeling of self-respect, it frequently and effectually aids the moral sentiments in resisting temptations to vice. Several individuals in whom the organ is large, have stated to me, that they have been restrained from forming improper connections, by the overwhelming sense of self-degradation excited in their minds by the mere prospect of such a circumstance; and that they believed their better principles might have yielded to temptation, had it not been for the support afforded to them by the instinctive impulses of Self-Esteem.

An individual is predisposed to humility, when the organ is too small. In such cases, a want of confidence, and of a due sense of one's own importance, is felt. He has no reliance upon himself; if the public or his superiors frown, he is unable to pursue even a virtuous course, through diffidence of

his own judgment. Inferior talents, joined with a strong endowment of Self-Esteem, are often crowned with far higher success, than more splendid abilities joined with this sentiment in a feebler degree. Dr Adam Smith, in his Theory of Moral Sentiments, remarks, that it is better, upon the whole, for an individual to have too much, than too little, of this feeling; because, if we pretend to more than we are entitled to, the world will give us credit at least for what we possess; whereas, if we pretend to less, we shall be taken at our word, and mankind will rarely have the justice to raise us to the true point in the scale at which we ought to be rated.

It is only when possessed in an inordinate degree, and indulged without restraint from higher faculties, that it produces abuses. In children, it then shews itself in pettishness, and a wilful temper. Those children in whom the organ is small, are generally obedient, and easily directed according to the will of others. In later life, a great development of the organ, with a deficiency of other powers, produces arrogance, superciliousness of deportment, and selfishness. I have seen individuals mistake the impulses of it for the inspiration of genius, and utter common-place observations with a solemnity and emphasis suitable only to concentrated wisdom. The musician, under its predominating influence, is sometimes led to embellish a tune with decorations of his own inventing, till its character is changed, and the melody destroyed. In short, when the organ is inordinately large, it communicates to the individual a high sentiment of his own importance, and leads him to believe, that whatever he does or says is admirable, just because it proceeds from him. It inspires him with magnificent notions of his own respectability, and prompts him, on comparing himself with others, to depreciate them, in order to raise himself in the scale of comparative excellence. It is a chief element in the disposition to censoriousness and envy. Persons who are fond of discussing the characters of others, and feel the tendency to vituperate rather than to praise them, will be found to have this organ large. It is the comparison with self, and a secret satisfaction at fancied superiority, that gives

the pleasure felt in this practice. Envy is the result of Self-Esteem and Love of Approbation, offended by the excellencies of others, and calling up Destructiveness to hate them. To make way for this effect, however, Benevolence and Conscientiousness must be deficient.

When Self-Esteem predominates, it gives an intense feeling of egotism; the individual then thinks of every person and occurrence with reference to himself; and, in his discourse, he is prone to use the emphatic *I*, "*I* did this, *I* said the other thing." The faculty then gives a solemn gravity to the manners, an authoritative commanding tone to the voice, and a kind of oracular turn to the mind, which frequently shews itself in the most ludicrous manner. COBBETT's whole life and writings indicate an excessively active Self-Esteem, aided by Combativeness; and he has maintained, at different times, every variety of opinion that could enter the human imagination, and upon every point of his changeful creed he has dogmatized with more than oracular infallibility. Madame de STAEL describes most graphically another illustrious example of the effects of an inordinate Self-Esteem, even on a powerful mind. Speaking of one of the heroes of the Revolution, she says that he possessed considerable talents, "mais au lieu de travailler *il s'etonnoit de lui même.*"

Another effect of a predominating self esteem, is to render the individual extremely well satisfied with whatever belongs to himself. An eminent phrenologist sailed as a passenger from the Clyde to a foreign port, in a vessel commanded by a person in whose head this organ was very largely developed, and saw many striking manifestations of it on the voyage. The captain said, that he thought nothing of the vessel when he first saw her, but after commanding her for a while, he thought her the first ship belonging to the Clyde. This was evidently because she had become his vessel. On his voyage, he assumed the most dictatorial airs; told the passengers he would send them before the mast, that he was sole commander here, and that all must obey; spoke continually of himself, and seemed to have an insatiable appetite for power. He possessed little reflection, and was deficient in Conscientiousness.

Under the influence of this faculty, some authors appear to fall instinctively and unconsciously into excessive use of pronouns of the first person, in their compositions. The following example is taken from the works of an esteemed philosopher: "When *I* first ventured to appear before the public as "an author, *I* resolved that nothing should ever induce *me* to "enter into any controversy in defence of *my* conclusions, "but to leave them to stand or to fall by their own evidence. "From the plan of inductive investigation which *I* was con- "scious of having steadily followed, as far as *I* was able, *I* "knew that whatever mistakes might be detected in the ex- "ecution of *my* design, no such fatal consequences were to be "dreaded to *my* general undertaking, as might have been "justly apprehended, had *I* presented to the world a con- "nected system, founded on gratuitous hypothesis, or on "arbitrary definitions. The detections, on the contrary, of "*my* occasional errors, would, *I* flattered *myself*, from the "invariable consistency and harmony of truth, throw new "lights on those inquiries which *I* had conducted with greater "success; as the correction of a trifling misstatement in an au- "thentic history is often found, by completing an imperfect "link, or reconciling a seeming contradiction, to dispel the "doubts which hung over the more faithful and accurate "details of the narrative.

"In this hope *I* was fortified by the following sentence of "Lord BACON, which *I* thought *I* might apply to *myself*, "without incurring the charge of presumption: 'Nos au- "tem, si qua in re vel male credidimus, vel obdormivimus "et minus attendimus vel defecimus in via et inquisitionem "abrupimus, nihilo minus IIS MODIS RES NUDAS ET APERTAS "EXHIBEMUS, ut errores nostri notari et separari possint; "atque etiam, ut facilis et expedita sit laborum nostrorum "continuatio.'

"As this indifference, however, about the fate of *my* par- "ticular doctrines, arose from a deep rooted conviction, both "of the *importance* of *my* subject, and of the *soundness* of "*my* plan, it was impossible for *me* to be insensible to such

" criticisms as were directed against either of these two funda-
" mental assumptions. Some criticisms of this description *I*
" had, from the first, anticipated; and *I* would not have failed
" to obviate them in the introduction to *my* former work, if *I*
" had not been afraid to expose *myself* to the imputation of
" prolixity, by conjuring up objections for the purpose of
" refuting them," &c.

Another amusing instance of a similar style of writing will be found in an account of himself by " FLECHIER EVEQUE de NISMES," prefixed to an edition of his " Oraisons Funebres," printed at Paris in 1802. I infer this to arise from a great endowment of Self-Esteem. A plate of the author last named is prefixed to his work, in which a powerful expression of Self-Esteem appears depicted on his countenance. The portraits of GIBBON also indicate this expression in a remarkable degree. By pointing out this tendency of the faculty, those in whom the organ is large will be put upon their guard to avoid this ludicrous form of its manifestation.

The feeling of individual personality has been supposed by some Phrenologists to arise from this faculty; and they have been led to this conjecture, by the undoubted fact, that the prominence which the first person assumes in the mind, bears a proportion to the size of the organ of Self-esteem.

This faculty is one element in the love of dominion and power. It is large in the busts of AUGUSTUS CÆSAR and of BUONAPARTE; and I have observed that those individuals who, in private life, aspire most eagerly to office, and who are most delighted with the possession of a little brief authority, generally have a large Self-Esteem. From the same cause, viz. that this faculty produces the love of power, it happens that those who are most violent in their opposition to persons in authority, generally possess the same organ also fully developed. In short, when two individuals equally thirst for dominion, and when the one can rule only by the other obeying, it is easy to perceive that the subject will, in such a case, manifest little satisfaction under the yoke, and that his very love of authority will make him the most determined opponent of it in others.

Nations differ with regard to the degree in which they possess this organ. It is large in the Hindoos, and the English have more of it than the French; hence the manner of a genuine Frenchman appears to an Englishman to be fawning and undignified; while the manner of an Englishman appears to the French cold, haughty, and supercilious. The great Self-Esteem of the English, and their consequent instinctive aversion to all stretches of power, are probably causes of their political liberty. Dr Adam Ferguson has recognised the operation of this sentiment in maintaining their freedom. Alluding to the *habeas corpus* act, he remarks, "that it requires a fabric no less than the whole political constitution of Great Britain, *a spirit no less than the refractory and turbulent zeal of this fortunate people*, to secure its effects *."

Self-Esteem, when eminently powerful, and not combined with the higher sentiments equally strong, causes the individual to carry his head high and reclining backwards. It gives a cold and repulsive expression to the manners, and it is in an especial degree offensive to other individuals largely endowed with the same faculty.

Dr Reid and Mr Stewart treat of this sentiment under the designation of the Desire of Power. Dr Thomas Brown calls it "pride," and defines it as "That feeling of vivid pleasure which attends the consciousness of our excellence †." Dr Brown views the desire of power as a separate principle; but the sentiment is the same as the one which we name Self-Esteem; and the latter appears to me to be the primitive emotion, which is felt and manifested as the fundamental function of the organ; whereas, the desire of power is a direction of the faculty in a particular way, resulting from a combination with Love of Approbation, and depending on external situation. It is quite conceivable, that a private individual, removed from all means of acquiring authority in public, may be very proud, and manifest little of the appetite for dominion, except over those of his household; but I do not conceive,

* History of Civil Society, part iii. sect. 6. † Vol. iii. p. 300.

that any one could be found fired with an insatiable ambition for situations of command, in whom Self-Esteem is defective, or even moderate in size; so that there appears no adequate ground for assuming pride as one primitive sentiment, and the love of power as another and distinct original desire.

In treating of Acquisitiveness, I mentioned, that the practical effects of that faculty were much modified by the endowment of Self-Esteem, with which it happened to be combined,—selfishness being greatly increased by the combination of both in a full degree of development. Mr Stewart approaches close to the same doctrine, when he observes, that "the idea of power is, partly at least, the foundation of our attachment to property *." A phrenologist, on analysing the combination, would infer, that Acquisitiveness desires to acquire wealth, and Self-Esteem to hold and apply it to selfish gratification.

This organ appears to be possessed by the lower animals. The turkey-cock, peacock, horse, &c. manifest feelings resembling pride or Self-Esteem.

Dr Gall, however, entertains views on this subject peculiar to himself. He mentions, that, after having studied the sentiment of pride as a primitive mental quality, and its organ in the human race, he wished to ascertain whether his observations would be confirmed by the lower animals. He, therefore, examined the heads of such of them as we are accustomed to call proud,—the race-horse, the cock and peacock. He did not find in any of these a remarkable development of the cerebral parts, corresponding to the organ of Self-Esteem in man; but he found a considerable development of these parts in animals in which he would never have thought of looking for it, that is to say, in those which voluntarily remain in the higher regions of the air, living on mountains, and other elevated situations; for example, in the roe-buck, the chamois, the wild goat, and certain species of eagles and falcons; and what struck him most was, that the

* Outlines, p. 92.

parts in question were the more developed, in proportion to the greater height of the dwelling-places of the animals. Dr GALL himself was astonished at this observation. That a predilection for physical heights, should, in animals, depend on the same organ as that to which the sentiment of Self-Esteem is referrible in man, appeared to him, at first, altogether improbable and inadmissible; yet, says he, "I have laid down the rule to communicate the progress of my observations, as well as the manner in which they have given rise to my opinions. Opinions which have not facts for their basis, if not erroneous, are at least very likely to be so; and a natural historian ought to be less ashamed of committing an error in his interpretation of facts, than of founding his opinions on reasoning alone." He accordingly enters into some interesting observations on the various dwelling-places of animals; directing the attention of his readers both to those which inhabit elevated regions, and to others which prefer the lowest situations; and states, that, in all animals which have their abodes in high places, there is a lengthened eminence in the middle line of the head, immediately above the organ of Philoprogenitiveness, and which entirely resembles the organ of Self-Esteem in man *.

Dr SPURZHEIM holds, that this prominence in the brains of the lower animals corresponds to the organ No. III. in man, (named by him Inhabitiveness, and, in this work, Concentrativeness); and, while he admits the accuracy of the facts stated by Dr GALL, he differs from his conclusions, and holds, that it is not the same organ which produces in man the sentiment of Self-Esteem, and, in the lower creatures, the love of physical heights; but that there are distinct organs in both man and the lower animals for those separate mental qualities. It appears to me, that Dr SPURZHEIM is correct in maintaining, that the organ No. III. is distinct from that of Self-Esteem, both in the lower animals and in man; and the real extent of the difference betwixt him and Dr GALL is this,—Dr

* Sur les Fonctions du Cerveau, tome iv. p. 279.

SPURZHEIM admits two organs lying betwixt Firmness and Philoprogenitiveness, but Dr GALL only one: Dr GALL considers the whole of the intermediate cerebral parts as the organ in man of Self-Esteem, and, in animals, of the love of physical height; while Dr SPURZHEIM regards the upper portion of these parts as the organ of Self-Esteem, and the lower portion as the organ of Inhabitiveness in both cases. I am satisfied that the organs are distinct in the human species, and that the upper serves to manifest Self-Esteem. Farther observations must determine the functions of the lower organ, or No. III.

When the organ becomes excited by disease, the individual imagines himself to be a king, an emperor, a transcendent genius, or even the Supreme Being. Dr GALL mentions the case of a Monsieur B., in whom the organ was naturally very large, and who was accidentally wounded by a nail in this part of the brain. While labouring under the influence of the wound, he felt himself as it were elevated above the clouds, and carried through the air, retaining, at the same time, and also manifesting, during his convalescence, the same proud and haughty manners which had distinguished him during health.

"The organ was equally conspicuous in an insane patient at Baden, near Rastadt. This man's insanity consisted in believing himself a Major. He had a small head, and the only organ which was developed in a high degree, was that of Self-Esteem; the whole other convolutions of the brain being very small. In the charity work-house of Fribourg, we saw an insane man who was extremely proud. He declares, in a vehement and pathetic tone, "qu'il est la souche" by the aid of which GOD created and preserves the world; that he has been crowned by JESUS CHRIST; that he is the young man whom the Queen of Heaven has selected for her spouse. His attitude is that of an arrogant despot. Deeply inspired with sentiments of his high importance, he crosses his arms, and to give an idea of the astonishing force which he possesses, he strikes his breast and sides with violence. In general, he

stands with one foot placed before the other, the body erect, and a little inclined backwards. When I requested him," says Dr GALL, " to allow me to touch his head, he replied with astonishing arrogance, ' Ich habe keinen *Kopf*, sondern ein *Haupt*,' I have no head such as common men possess, but a *Haupt* or head peculiar to Kings and Gods. He turned away, holding us to be totally unworthy of approaching him. We observed, however, very distinctly, that he had the organ of Self-Esteem very largely developed."

PINEL, FODERE', and other authors on Insanity, mention cases equally characteristic of disease of this organ. " A patient," says PINEL, " confined in a private asylum in Paris, during his fits, believed himself to be the Prophet MAHOMET, assumed an attitude of command, and the tone of the MOST HIGH ; ' ses traits étaient rayonnans, et sa démarche pleine de majesté.' One day when cannon were fired in Paris on account of some events of the Revolution, he persuaded himself that it was to render him homage ; he caused silence to be observed around him, and could not restrain his joy."

" A woman," continues the same author, " extremely imperious, and accustomed to make her husband obey with even more than docility, remained in bed part of the morning, and then insisted that he should come, and on his knees present her with drink. She ended by believing herself, in the ecstasies of her pride, to be the VIRGIN MARY."

This organ is generally larger in men than in women ; and more males are insane through pride than females.

The organ is large in HAGGART and DEMPSEY, and moderate in Dr HETTE. It is regarded as established.

11.—LOVE OF APPROBATION.

THIS organ is situated on each side of that of Self-Esteem, and commences about half an inch from the lambdoidal suture. When large it produces a remarkable fulness and breadth in the upper and back part of the head.

When Dr GALL was occupied in making observations on the organ of Self-Esteem, he met with a woman in a lunatic asylum who conceived herself to be the Queen of France. He expected to find the organ of that sentiment largely developed; but in place of this being the case, there was a very distinct hollow in the situation of it, and a round and considerable prominence presented itself on each side. This circumstance at first caused him considerable embarrassment. He soon perceived, however, that the character of this woman's insanity differed materially from that of men alienated through pride. The latter were serious, calm, imperious, elevated, arrogant, and affected a masculine majesty. Even in the fury of their fits, all their motions and expressions bore the impress of the sentiment of domination, which they imagined themselves to exercise over others. In those insane through vanity, on the other hand, the whole manner is different. There is then a restless frivolity, an inexhaustible talkativeness, the most affected forwardness; eagerness to announce high birth and inexhaustible riches, promises of favour and honour,—in a word, a mixture of affectation and absurdity. From that time Dr GALL perceived the difference between the sentiment of Self-Esteem and that of Love of Approbation.

He draws, with great accuracy, the distinction between pride, which is an abuse of Self-Esteem, and vanity, proceeding from abuse of Love of Approbation. The *proud* man, says he, is imbued with a sentiment of his own superior merit, and, from the summit of his grandeur, treats with contempt or indifference all other mortals. The *vain* man attaches the utmost importance to the opinions entertained of him by others, and seeks with eagerness to gain their approbation. The *proud* man expects that mankind will come to him and acknowledge his merit. The *vain* man knocks at every door to draw attention towards him, and supplicates for the smallest portion of honour. The *proud* man despises those marks of distinction, which on the *vain* confer the most perfect delight. The *proud* man is disgusted by indiscreet eulogiums. The

vain man inhales with ecstasy the incense of flattery, although profusely offered, and by no very skilful hand *.

Dr GALL treats of the abuses of this sentiment, under the names of Vanity, Ambition, and the Love of Glory, rather than of the primitive sentiment itself. To Dr SPURZHEIM is due the merit of elucidating the ultimate principle of many of the faculties, and in particular the one under consideration.

This faculty produces the desire to please, whence arises the love of praise and fame. It makes us attentive to the opinions which others entertain of us. The object of its desire is approbation in general, without determining the means or the manner of acquiring it.

There is a great difference in regard to the degree of endowment of this faculty, in different individuals. Some watch, with the most animated anxiety, every motion, and every look, and intuitively feel when we approve or disapprove. When we approve, the eye sparkles, the countenance opens, and the individual approaches us with a pleasing courtesy, expressive at once of the pleasure he has received from our approbation, and of his desire to retain it. He, on the other hand, in whom the faculty is naturally feeble, shews, by the undisturbed fixture of his countenance, that our censure and applause are alike unimportant to him. When we censure, he stares us in the face, with the most matchless indifference, or gapes in stupid wonder.

A due endowment of this faculty is indispensable to an amiable character. It gives the desire to be agreeable to others,—it is the drill-serjeant of society, and admonishes us when we deviate too widely from the line of march of our fellows,—it induces us to suppress numberless little manifestations of selfishness, and to restrain many peculiarities of temper and disposition, from the dread of giving offence, and thereby incurring disapprobation,—it is the butt upon which wit strikes, when, by means of ridicule, it drives us from our follies. To be laughed at is worse than death to a person in

* GALL sur les Fonctions du Cerveau, tome iv. p. 296.

whom this sentiment is strong. The direction in which gratification of it will be sought, depends on the other faculties with which it is combined in the individual. If the moral sentiments and intellect be vigorous, it will prompt to emulation, and the desire of honourable fame. It animates the poet, the painter, the orator, the warrior, and the statesman. In some individuals it attains the height of a passion, and then glory is pursued at the hazard of life, and of every enjoyment which it affords, and fame is sought for even in the cannon's mouth. "Themistoclem illum," says CICERO, "summum Athenis virum, dixisse aiunt, cum ex eo quæreretur, quod acroama, aut cujus vocem libentissime audiret? Ejus, à quo sua virtus optimè prædicaretur." CICERO himself seems to have possessed this sentiment in a very high degree: "Trahimur omnes laudis studio," says he, "et optimus quisque maxime gloriâ ducitur. Illi ipsi philosophi, etiam in illis libellis quos de contemnenda gloria scribunt, nomen suum inscribunt; in eo ipso, in quo prædicationem nobilitatemque despiciunt, prædicari se ac nominari volunt *." If the lower propensities predominate, the individual may be pleased by the reputation of being the best fighter, or the greatest drinker, of his circle.

The feeling which is most commonly experienced, when this organ is large, even when favourably combined with other organs, is anxiety about what the world will think of us. A youth in whom it is powerful cannot do this thing, because every body will look at him; or cannot do the other, because the people would wonder. In older persons, it produces a fidgety anxiety about the opinions of the public, or of the circle of acquaintances who compose the public to them. They imagine themselves continually before the public eye, and that the world is occupied with little else than weighing their motives, speculating on their conduct, and adjusting the precise point in the scale of importance and respectability at which they ought to be placed. A great portion of this feeling,

* Oratio pro Archia.

however, is the mere inspiration of a very active and powerful Love of Approbation in their own heads. The public are too much engrossed with themselves and their own affairs, to bestow so minute and permanent a degree of attention upon an individual. This anxiety about public opinion, when excessive, is subversive of happiness and independence. It renders the mere *dicta* of the society in which the individual moves his code of morality, religion, taste, and philosophy; and incapacitates him from upholding truth or virtue, if disowned by those whom he imagines influential or genteel.

The distinguishing characteristic betwixt the disposition to oblige, conferred by this sentiment, and the feeling of genuine kindness, which springs from Benevolence, is, that Love of Approbation prompts us to do most for those who least require our aid; whereas Benevolence takes exactly the opposite direction. Men, in general, care little for the approbation of their inferiors, their own household, or those of whom they are altogether independent; and he whose exertions are inspired chiefly by this faculty, will do extremely little to benefit them. To serve or please the great or the splendid, on the other hand, or strangers whose voice may raise or depress his fame, he will make the most animated exertions. Persons, accordingly, in whom Love of Approbation is very strong, and Benevolence and Conscientiousness deficient, are frequently the most agreeable acquaintances to those who are altogether independent of them; "they smile on all who care not for their frowns," while they neglect or torment their inferiors and equals.

The abuses of this faculty may be traced in all ages, and in every variety of form. Combined with Secretiveness large, it prompts its possessor to pay to other individuals those unmeaning compliments which pass current in society, and which most persons receive well, when addressed to themselves, but treat with ridicule when bestowed lavishly on others. It prompts to the equivocation of "not at home," when the person is otherwise engaged. The faculty of Conscientiousness would desire that the plain fact should be stated; but Love

of Approbation produces an instinctive feeling that the Self-Esteem of the person calling will be offended at the idea that any engagement could render it inconvenient to see *him*. To save this pang, Love of Approbation and Secretiveness prompt to the invention of the little *equivoque*. This deceit is seen through by all, and nevertheless the use of it is more pleasing to persons in whom Self-Esteem and Love of Approbation are very large, than the announcement of the simple truth. Some individuals state candidly that they are "engaged;" and I have asked persons in whom the above organs are large, whether they felt more annoyed by this reply, than by "not at home," even when they suspected that the latter meant really the former. They acknowledged, that, for the first time, they did feel slightly irritated by the idea that their friend was in the house and would not see them; but that a moment's reflection satisfied them, that forcible reasons must exist for the refusal, and that the very announcement of the truth was an appeal to their higher feelings, and a proof of unhesitating confidence in their attachment and good sense; and ever after they were not offended by the reply "engaged." It is the same combination of Love of Approbation with Secretiveness, which prompts some individuals to the practice of calling on those whom they are pleased to style their friends, when they are sure they are not at home, for the purpose of leaving their card. This proceeding is an offer of flattery to the Self-Esteem and Love of Approbation of the persons called upon; but as it argues an absence of real affection and esteem for them, it is, in truth, an insult; and, besides, it necessarily implies so great a deficiency of Conscientiousness in the individuals who practise it, that they are not to be relied on in circumstances in which real friendship is to be put to the test.

When the development of Love of Approbation is excessive, while the regulating organs are deficient, it is the cause of great unhappiness. It renders the little girl at school miserable, if her dress and the style of living of her parents be not equal to those of the parents of her associates. It then overwhelms the artist, author, or public speaker, with misery, if a rival is

praised in the journals in higher terms than himself. A lady is then tormented at perceiving, in the possession of her acquaintance, finer dresses or equipages than her own. It excites the individual to talk of himself, his affairs, and connections, so as to communicate to the auditor vast ideas of his greatness or goodness; in short, vanity is one form of its abuse. "Sir," says Dr JOHNSON, "GOLDSMITH is so much afraid of being unnoticed, that he often talks, merely lest you should forget that he is in the company." When not combined with Conscientiousness and Benevolence, it leads to feigned professions of respect and friendship; and many manifest it by promises and invitations, never intended to be fulfilled or accepted. It, as well as Self-Esteem, prompts to the use of the first person, but its tone is that of courteous solicitation, while the *I* of Self-Esteem is presumptuous, and and full of pretension.

When, on the other hand, the organ is deficient, and the sentiment, in consequence, is feeble, the individual cares little about the opinions entertained of him by others; and, provided they have not the power to punish his person, or abridge his possessions, he is capable of laughing at their censures, and contemning their applause. Persons of this sort, if endowed with the selfish propensities in a strong degree, constitute what are termed "impracticable" men; their whole feelings are concentrated in Self, and they are dead to the motive which might induce them to abate one iota of their own pretensions to oblige others. If actuated by any strong passion, and endowed with intellect, it is astonishing what they are sometimes able to accomplish, in attaining their objects. Strangers to ceremony, and indifferent to censure, they meet with a thousand rebuffs which they never feel, and are loaded with an hundred mortifications which never affect them; and, free from the restraints which delicacy imposes upon others, they practise upon the benevolence, the disposition to oblige, or the interest of mankind, and succeed in circumstances in which a sensitive mind would have found only obstacles unsurmountable.

Philosophers and acute observers of human nature, have long distinguished betwixt Pride and Vanity, but, nevertheless, no error is more frequently committed by ordinary minds than to confound them; and no mistake is more common than to imagine that beaux and belles, and all individuals very tasteful and particular about their personal appearance or equipages, are necessarily extremely conceited. A large Love of Approbation and much Ideality, joined with Individuality, which produces attention to details, and Order, will, in general, give rise to the passion for neatness, propriety, and ornament; but such a combination, in place of producing a proud or conceited character, inspires with the very opposite dispositions. I rarely see a *dandy* who is not at bottom a polite, obliging, good natured, but probably weak individual; and it is only when a large Self-Esteem is added to the combination, and which is not an indispensable ingredient in beauxism, that the common opinion would be justified by the result.

This faculty corresponds to the *Desire of Esteem* of Dr Reid and Mr Stewart, and to the Desire of Glory of Dr Thomas Brown. Their observations on its functions are generally correct; but here, as in the case of Self-Esteem, they treat only of its heroic manifestations, and present us with no views of its operations on the more interesting theatre of private life.

The faculty, when powerful, gives a soft soliciting tone to the voice, puts smiles into the countenance, and produces that elegant line of beauty in the lips which resembles Apollo's bow.

As formerly mentioned, the French are remarkable for a large development of the organ, while the English excel in Self-Esteem. The influence of the Love of Approbation shews itself in the manners, institutions, and daily literature of France, in an extraordinary degree. Compliments and praises are the current coin of conversation, and a late writer most justly observes, that, "in France, glory is the condiment to the whole feast of life; and the trumpet of fame is that which

makes the sweetest music to their ears."* In private life also, an individual, who has a great Love of Approbation in his own head, is extremely prone to pay compliments to others, from an instinctive feeling of the pleasure of being praised. The organ is very large in the American Indians; and the love of decorations and ornaments, whether these consist of stars, garters and medals, or of tatooed faces, bored noses and eagles feathers, spring from it.

The faculty is more active in women, in general, than in men; and it is observed, that a greater number of women than of men become insane from this feeling. Dr SPURZHEIM mentions, that he had met with only one man who had become deranged from this cause. Its effects, when diseased, have already been described in the history of the discovery of the organ.

The organ is possessed by the lower animals. The dog is extremely fond of Approbation, and the horse displays the sentiment, not only in his sensibility to marks of affection, but in his spirit of emulation in the race. Dr GALL mentions, that in the south of France the peasants attach a "bouquet" to the mules when they have acquitted themselves well, and that the animals understand it as a mark of approbation, and feel afflicted when it is taken away. He mentions also, that he had a female monkey, who, on receiving a handkerchief, put it on as a robe, and took extraordinary delight in seeing it trail behind her as a train. In all these creatures the organ is largely developed.

The organ is large in Dr HETTE, the Rev. Mr M. KING, ROBERT BRUCE, CLARA FISHER; and deficient in D. HAGGART and DEMPSEY.

It is established.

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* Edinburgh Review, Nov. 1820, p. 409.

12. CAUTIOUSNESS.

This organ is situated near the middle of each parietal bone, where the ossification of the bone generally commences.

Dr Gall was acquainted at Vienna with a prelate, a man of excellent sense and considerable intellect. Some persons had an aversion towards him, because, through fear of compromising himself, he infused into his discourses interminable reflections, and delivered them with an unsupportable slowness. When any one began a conversation with him, it was very difficult to bring it to a conclusion. He paused continually in the middle of his sentences, and repeated the beginning of them two or three times before proceeding farther. A thousand times he pushed the patience of Dr Gall to extremity. He never happened by any accident to give way to the natural flow of his ideas; but recurred a hundred times to what he had already said, consulting with himself whether he could not amend it in some point. His manner of acting was in conformity with his manner of speaking. He prepared with infinite precautions for the most insignificant undertakings. He subjected every connection to the most rigorous examination and calculation before forming it.

This case, however, was not by itself sufficient to arrest the attention of Dr Gall; but this prelate happened to be connected in public affairs with a Councillor of the Regency, whose eternal irresolution had procured for him the nickname of *Cacadubio*. At the examinations of the public schools, these two individuals were placed side by side, and Dr Gall sat on the seat immediately behind them. This arrangement afforded him an excellent opportunity of observing their heads. The circumstance which most forcibly arrested his attention was, that both their heads were very large in the upper, lateral, and hind parts, the situation of the organ in question. The dispositions and intellectual qualities of these two men were, in other respects, very different; indeed they resembled each other in circumspection, and in this particular development of

head alone. The coincidence between them in this point suggested the idea to Dr GALL, that irresolution, indecision, and circumspection, might be connected with certain parts of the brain. Subsequent reflection on this disposition, and observation of additional facts, converted this presumption into certainty.

It is a principle in Phrenology, that absence of one quality never confers another. Every feeling is something positive in itself, and is not a mere negation of a different emotion. Fear, then, is a positive sentiment, and not the mere want of courage; and it appears to me that the faculty now under discussion produces this feeling. The tendency of the sentiment is to make the individual apprehend danger; and this leads him to hesitate before he acts, and to trace consequences that he may be assured of his safety. Dr SPURZHEIM names it "Cautiousness,"—which appellation I retain as sufficiently expressive, although the primitive feeling appears, on a rigid analysis, to be simply fear. Dr GALL says, "It was requisite that man and animals should be endowed with a faculty to enable them to foresee certain events, to give them a presentiment of certain circumstances, and to prompt them to provide against danger. Without such a disposition, their attention would have been occupied only with the present; and they would have been incapable of taking any measure with reference to the future." Accordingly, he describes the faculty which prompts to these actions, as if it comprised something intellectual; and calls it "*Circumspection, Foresight.*" Dr SPURZHEIM "does not believe that it foresees; it is, in his opinion, blind, and without reflection, though it may excite the reflective faculties." This observation appears to me correct.

A full development of this organ is essential to a prudent character. It produces a cautious, circumspect, and considerate disposition of mind. Persons so organised, says Dr GALL, "are habitually on their guard; they know that it is more difficult to sustain than to acquire reputation, and, consequently, every new undertaking is prosecuted with equal care as the first. They look forward to all possible dangers, and are

anxious to anticipate every occurrence; they ask advice of every one, and often, after having received much counsel, they remain undecided. They put great faith in the observation, that, of a hundred misfortunes which befal us, ninety-nine arise from our own fault. Such persons never break any article; they may pass their lives in pruning trees, or in working with sharp tools, without cutting themselves. If they see a vessel placed near the edge of the table, their nerves shrink. If they give credit, or indulge in gaming, they never lose large sums of money. Finally," says he, "they form a standing subject of criticism to their less considerate neighbours, who look on their forebodings as extravagant, and their precautions as trifling and absurd *."

When the organ is too large, it produces doubts, irresolution, and wavering; and may lead to absolute incapacity for vigorous and decisive conduct. A great and involuntary activity of it produces a *panic*,—a state in which the mind is hurried away by an irresistible emotion of fear, for which no adequate external cause exists.

The organ is almost uniformly large in children, and appears, from this circumstance, to be developed at an earlier age than many of the other organs. This is a wise provision of nature, as caution is never more indispensable to the safety of the individual, than during the helpless years of infancy and childhood. Children possessing a large endowment may be safely trusted to take care of themselves; they will rarely be found in danger. When, on the other hand, the organs are small in a child, he will be a hapless infant; fifty keepers will not supply the place of the instinctive guardianship, performed by adequate Cautiousness. In a boy of six years of age it was very small, and he took off his clothes to leap into an old quarry full of water to recover his cap, which the wind had blown into it, totally insensible to the danger, which was imminent, of being drowned. In some very young children, the organs are so prominent as to alarm mothers with the fear of disease or deformity. Water in the head indeed frequently

* Sur les Fonctions du Cerveau, tome iv. p. 320.

shews itself by an enlargement of this part of the head, but it is not uncommon for unskilful persons to mistake a natural and healthy development of the organ in question, for an indication of this disease.

In mature age, when the organ is very deficient, the individual is rash and precipitate. He is never apprehensive about the results of his conduct, and often proceeds to act without due consideration. Persons of this description are frequently of a gay, careless disposition, and engrossed entirely with the present; they adopt rash resolutions, and enter upon hazardous enterprises, without deliberation or advice. In domestic life, misfortunes overtake them in consequence of their want of precaution. From constitutional recklessness they precipitate themselves against objects in the dark; they break frangible articles, owing to want of precaution in arranging them; and lose the money which they lend, by omitting to take proper security for repayment. Riding upon a slippery path, quite insensible to danger, their horse falls and deprives them of life. A cat, or other animal, overturns the candle which they have left burning, and sets their house on fire. In short, they are subject to interminable misfortunes, through want of caution in their conduct *.

This faculty produces a repressing influence, and, in estimating its effects, the faculties with which it is combined ought to be kept in view. An individual, with large Acquisitiveness and Self-Esteem, which produce instinctive selfishness, was pointed out to me as remarkably careful of his own interest, although the organ of Cautiousness was deficient in his head. It was admitted, however, that his prudence consisted chiefly in resisting solicitations to perform generous actions, and to enter into suretiship; but that, when a tempting prospect of gain was held out to him, although attended with great risk, he was liable to dash into the adventure, and in consequence frequently sustained severe losses. His natural dispositions rendered him little prone to excessive generosity,

* Gall Sur les Fonctions du Cerveau, p. 319.

and in that respect no danger awaited him; but if Cautiousness had been large, it would have rendered him alive to the perils of speculation, and prompted him to prefer small and certain profits, to the chances of greater but uncertain gain.

Extreme and involuntary activity of this faculty produces internal sensations of dread and apprehension, highly distressing to the individual, although often very ridiculous in the eyes of ignorant spectators. Many persons believe that the feelings of the mind depend upon the dictates of the understanding, and that individuals, if they would allow themselves to be convinced of the groundlessness of their apprehensions, might, by an act of volition, remove these terrors. Such notions argue great ignorance of human nature. As easily could we remove a pain from the leg, by resolving to be quit of it, as the unhappy sufferer, under diseased Cautiousness, could dispel the mental gloom by which he is afflicted.

A large development of this organ, combined with much Destructiveness, predisposes to self-destruction. Cautiousness does not produce suicide as a specific act, but the sentiment, when excited to excess by disease of the organs, give rise to intense melancholy, anguish, and anxiety, and, by rendering life extremely miserable, indirectly prompts to this result. Hence the fact, that the best of men, and those in whose external circumstances no adequate motive is to be found, are sometimes led to that fatal deed. Let no one suppose such an act done from mere error in judgment. It proceeds always from internal and involuntary feelings of a diseased nature, of the misery and torments of which, no man, who has never felt any thing similar, can form an adequate conception. The great ignorance of mankind in general, regarding the state of mind which predisposes to suicide, has arisen from the influence of the organs having been entirely overlooked, and the fact not being known, that disease in any of them deranges the character of the sane feeling which it serves to manifest, and often renders it independent of the will. Dr A. Combe examined a considerable number of suicides in the Morgue at Paris, and found in them Hope generally small, with Cautiousness and Destructiveness large.

Many examples of disease of this organ occur, not only in hospitals for the insane, but in private life. Dr GALL mentions, that at Vienna he attended two fathers of families in easy circumstances, who, nevertheless, were tormented, night and day, with the apprehension that their wives and children were exposed to die of hunger. The most earnest assurances of their friends were insufficient to make them comprehend that this fear was altogether chimerical. After their recovery, they could not bear to hear their condition mentioned, through terror of relapse. Before their malady, they were known to be men of gloomy dispositions.

PINEL, under the head of Melancholy, mentions a variety of cases referrible to diseased Cautiousness. "A distinguished military officer," says he, "after fifty years of active service in the cavalry, was attacked with disease. It commenced by his experiencing vivid emotions from the slightest causes; if, for example, he heard any disease spoken of, he immediately believed himself to be attacked by it; if any one was mentioned as deranged in intellect, he imagined himself insane, and retired into his chamber full of melancholy thoughts and inquietude. Every thing became for him a subject of fear and alarm. If he entered into a house, he was afraid that the floor would fall and precipitate him amidst its ruins. He could not pass a bridge without terror, unless impelled by the sentiment of honour for the purpose of fighting."

The forms, in which this affection shews itself, are numberless. It is in vain to address the understanding of the patient by argument, because the disease consists in a disordered state of a corporeal organ, and the only consequence of the most irresistible demonstration to the intellect, would be a change of the object of terror, but no alleviation of the feeling of painful apprehension itself.

Dr GALL mentions, that this organ is possessed in a high degree by those of the lower animals which venture out only during night, as owls and bats, and also by those animals which place sentinels to warn them of approaching danger, as the wild goose, chamois, cranes, starlings and buzzards.

Among the lower animals, it is generally larger in the females than in the males; and Dr Gall mentions some curious facts, illustrative of the greater manifestation of the faculty by the former than by the latter. He happened to kill, says he, as many as 20 squirrels, without finding a single female among them; although it was not the season in which they are confined by the care of their young. He caught, during three years, 44 cats in his garden, among which he found only 5 females. During one winter 500 bears were killed in the two provinces of Virginia, among which only 2 females were discovered. An account of the wolves destroyed in France, from 1st January 1816 to 1st January 1817, was published officially by Count Gerardin, Captain of the Royal Chace, and it shewed 1894 males, and only 522 females. Among the goats, the leader is always a female, and their safety, it will be recollected, arises from a high degree of circumspection. Among wild cattle, horses, and other animals who are defended by courage, the leader is uniformly a male, for in this sex, in general, Combativeness is larger. This fact, of females in general being more cautious than males, is corroborated by Captain Franklin, in his Journey to the Arctic Regions. "It is extraordinary," says he, "that although I made inquiries extensively among the Indians, I met with but one who said that he had killed a she bear with young in the womb."

It has been remarked, in the way of criticism on these statements, that more males are produced by nature than females; which is quite correct; but this difference does not extend to the twentieth part of the difference in the number of their deaths by violence.

The metaphysicians do not treat of "fear," or of the instinctive tendency to avoid danger, as an original principle of the mind; but Dr Thomas Brown ranks *melancholy* among the primitive emotions, which is one of the effects of this faculty in a state of constant but not violent activity.

The organ is larger in the Germans, English, and Scots, than in the French. It is large in Bruce, Raphael, Hette,

the Mummies and Hindoos; moderate in BELLINGHAM, MARY MACINNES and Negroes. The difference between a large and small development frequently exceeds an inch in extent; and as the organ is particularly easy of observation, it deserves the attention of beginners.

The organ is ascertained.

13. BENEVOLENCE.

THIS organ is situated at the upper part of the frontal bone, in the coronal aspect, and immediately before the fontanel.

One of Dr GALL's friends frequently said to him, that, as he sought for external indications of mental qualities, he ought to examine the head of his servant named JOSEPH. "It is impossible," said his friend, "to find a greater degree of goodness than that young man possesses. For more than ten years during which he has been in my service, I have seen him manifest, on all occasions, only benevolence, and sweetness of disposition. This is the more surprising, as he does not possess the advantages of education, and has grown up to manhood among servants of very inferior habits." Dr GALL adds, that, previous to that time, he had been far from supposing that what is called goodness of heart, could have any organ in the brain, and, consequently, had never looked for indications of it in the head. The repeated solicitations of his friend, however, at length awoke his curiosity.

He immediately recollected the habitual conduct of a young man, whom he had known from his most tender infancy, and who was distinguished from his numerous brothers and sisters by his goodness of heart. Although he was passionately fond of the games proper to his age, and delighted in scouring the forests in search of birds' nests; yet no sooner did any of his brothers or sisters become sick, than an inclination yet more irresistible kept him at home, and drew from him the most assiduous attentions towards the sufferer. When grapes, or

apples, or cherries, were distributed among the children, his share was always the least, and he rejoiced in seeing the others partake more largely than himself. He was never more pleased than when some good fortune happened to those whom he loved, on which occasions he often shed tears of joy. He was fond of taking charge of sheep, dogs, rabbits, pigeons and birds, and if one of these birds happened to die, he wept bitterly, which did not fail to draw upon him the ridicule of his companions. Up to the present time, continues Dr GALL, benevolence and goodness are the distinguishing characteristics of this individual. These dispositions certainly did not arise from education; on the contrary, he had been all along surrounded by those whose conduct was calculated to produce the very opposite results. Dr GALL then began to suspect, that what is called *goodness of heart*, is not an acquired, but an innate, quality of mind.

On another occasion, amidst a very large family, he spoke of the boasted *goodness of heart* of the servant JOSEPH. "Ah!" said the eldest daughter, "our brother CHARLES is exactly like him; you must positively examine his head, I cannot tell you how good a child he is."

"I had thus in my eye," says Dr GALL, "three cases, in which goodness of disposition was strongly marked. I took casts of their heads, placed them along side of each other, and continued to examine them, until I discovered a development common to the three. This, I at last found, although the heads were in other respects very differently formed. In the mean time, I tried to find similar cases in families, schools, &c. that I might be in a condition to multiply and correct my observations. I extended my investigation to animals also, and, in a short time, collected so great a number of facts, that there is no fundamental quality, or faculty, whose existence is better established than that of Benevolence, and the organ with which it is connected."

The faculty produces the desire of the happiness of others, and disposes to compassion and active benevolence. It is easy to distinguish kindness flowing from this sentiment,—

from acts of attention, arising from Love of Approbation, or more interested motives. A simplicity of manner, and directness of purpose, are communicated by this faculty, that touch the mind at once. We feel its character, and recognise it as genuine, and unalloyed goodness, aiming at no end but the benefit of its object. There is, on the other hand, an air of coldness and constraint attending deeds of kindness, proceeding from interested motives, betraying the source from which they flow. The secret spring, and ulterior object, are apparent, notwithstanding the efforts made to conceal them. St Paul gives a beautiful description of the genuine character of this sentiment, in his account of Christian charity, beginning, "Charity suffereth long and is kind; charity envieth not; charity vaunteth not itself; is not puffed up." The good Samaritan mentioned in Scripture, is a delightful instance of the disposition formed by Benevolence when eminently powerful.

This faculty is a great source of happiness to the possessor. It communicates a lively, amiable, delightful tinge to the impressions received by the mind from without. It produces liberality of sentiment towards all mankind, and a disposition to trust in them, and to dwell on their virtues rather than their vices. A person in whom this feeling is strong, rarely complains of the ingratitude or heartlessness of others. His goodness provides its own reward. Henri Quatre (in whose mask the organ appears very large), when some one spoke to him of an officer of the League, by whom he was not loved, replied, "*Je veux lui faire tant de bien, que je le forcerai de m'aimer malgré lui.*" A person thus endowed, is so conscious of wishing well to others, that he does not doubt of their goodwill towards himself. Adhesiveness attaches us to friends and to country; but Benevolence brings the whole human race within the circle of our affections. Fenelon exhibited a beautiful manifestation of it, when he said, "I am a true *Frenchman*, and love my *country;* but I love *mankind* better than my country." It inspired Henri Quatre also, when he replied to those who exhorted him to rigour to-

wards some places which had joined the League; "La satisfaction qu'on tire de la vengeance ne dure qu'un moment; mais celle qu'on tire de la clemence est eternelle." The organ is large, and very distinctly marked, in the mask of Jacob Jervis, presented by Dr Abell to the Phrenological Society. That individual possessed the sentiment in so high a degree, that he was obliged to hide himself when he saw persons coming to make improper solicitations, being conscious of his inability to resist them.

It is a vulgar idea that this faculty cannot be manifested, except in bestowing alms or giving away money. It may be exerted in the domestic circle, and in society, in a thousand ways, productive of delight, without any idea of donation. It is benevolence to those with whom we live, to order our arrangements with a due regard to their comfort and happiness; not to deny them legitimate and proper gratifications of their own dispositions; it is benevolence to suppress our own humours and tendencies, when these would give unnecessary pain to others; to restrain Self-Esteem and Destructiveness, for example, in our commands; to be mild and merciful in our censures; to exert our influence and authority to promote the welfare of others; and one of the most benevolent of all exercises, is to visit the poor and vicious, when suffering and wretched, even with the view of administering only the pecuniary bounty of others.

Deficiency of Benevolence does not produce cruelty or any positively bad sentiment; it leads only to regardlessness of the welfare of others. Those in whom this organ is less than Acquisitiveness and Self-Esteem, rarely feel themselves called on to join in works of charity, to contribute to subscriptions, or to bestow personal exertions for the benefit of others; they generally urge the apology, that they have enough to do with themselves, and that nobody manifests Benevolence to them. This last excuse may be just; for it is in the nature of all the higher sentiments to be doubly rewarded; *first*, in the enjoyment which attends the very exercise of them; and, *secondly*, in the good will and kindly feeling which the

manifestation of them generates in others. Closely connected as men are in society, and dependent, to a greater or less degree, on each other for prosperity and happiness, no individual can enjoy, or leave to his children, a richer and more valuable treasure, than the esteem and affection of his fellows, founded on respect and gratitude for his own virtues and generosity. Such advantages, indeed, the selfish man cannot enjoy; for his conduct excites no benevolence in others towards him, and his selfishness becomes the more necessary, as he has chosen it as his stay.

When the organ is small, a powerful restraint is withdrawn from the lower propensities. In Bellingham, Gordon, Griffiths, and other cold-blooded and deliberate murderers, the organ is decidedly deficient. If large Acquisitiveness and Self-Esteem are combined with this organ small, the individual will be an utter disbeliever in disinterested goodness, and will regard generosity, which has no selfish end, as imbecility. Such a combination, also, if joined with much Destructiveness, probably leads its possessors to doubt of the benevolence of the Supreme Being. Deficiency of the organ, in short, exposes the mind to the predominance of the lower feelings, and the temper is then apt to become cold, harsh, sour and unhappy. There is little sympathy with enjoyment; the face of creation does not appear to smile; moral and physical objects are viewed on their darkest sides; and if Destructiveness be large, the mind steels itself, with malignity, as a defence against their imagined evil qualities; misanthropy, in short, is the result. The character of Lucifer, as drawn by Milton, and by Byron in his drama of Cain, is a personification of great Destructiveness and Intellect, with an utter destitution of Benevolence.

The organ is small in tribes of men remarkable for cruelty, for example, in the Charibs. In the representations of Tiberius, Caligula, Caracalla, Nero, Catherine of Medicis, Christian the Cruel, Danton and Robespiere, says Dr Gall, the organ is deficient; while it is large in Trajan, Marcus Aurelius, Henri Quatre, and other individuals distinguished for benevolent feeling.

Benevolence, admirable as it is in its own nature, requires to be directed by Conscientiousness and Intellect, otherwise it produces abuses. When too powerful, and not so guided, it leads to profusion. This kind of facility is not the effect of mere weakness of reasoning power; it arises from an over ready disposition to give, without an adequate motive or consideration, except the pleasure of bestowing.

Benevolence very powerful, with deficient Firmness, may lead also to the sacrifice of the just interests of the individual, to the necessities or cupidity of others. In short, this sentiment, indulged without consideration, produces the worst consequences; for example, indiscriminate donations to beggars in the street encourage profligacy; and compulsory assessments for support of the poor, have often proved the parents of idleness and careless conduct. It can never be sufficiently inculcated, that the functions of the different faculties of the mind are distinct, and that the faculties which feel give merely an impulse in general, and that Nature has intended the direction of them to be placed under the faculties which reason. Hence, the individual who instinctively feels a vivid compassion for every object in distress, ought to be aware, that this impulse is not the voice of inspiration directing him *to the mode* in which it ought to be indulged. On the contrary, the stronger the emotion is, the power of direction is not unfrequently the weaker; because the feeling is in itself of so excellent a character, and so delightful, that the man who is inspired by it is the last to suspect the necessity of much consideration in regard to its objects. On the other hand, however, it must also be remembered, that the faculties which reason do not feel benevolence, and that, hence, that individual is most fitted to mature wise plans of charity, to whom Nature has given most of the faculty which feels this emotion, with most of the faculties which trace consequences, and direct it.

It has been objected, that Nature cannot have placed a faculty of Benevolence, and another of Destructiveness, in the same mind; but *Man* is confessedly an assemblage of con-

tradictions. The great unknown Novelist speaks of "the well known cases of those men of *undoubted benevolence* of character and disposition, whose *principal delight is to see a miserable criminal*, degraded alike by his previous crimes, and the sentence which he has incurred, *conclude a vicious and a wretched life, by an ignominious and cruel death**." This indicates Benevolence coexisting in the same individual with Destructiveness. The greatest of Poets has said,—

> "O thou goddess,
> Thou divine Nature, how thyself thou blazon'st
> In these two princely boys! They are as *gentle*
> As zephyrs, blowing below the violet,
> Not wagging his sweet head; and yet as *rough*,
> Their royal blood enchaf'd, as the rud'st wind,
> That by the top doth take the mountain-pine,
> And make him stoop to the vale."

Here SHAKESPEARE informs us, that these boys manifested much Combativeness and Destructiveness, combined with great Benevolence. The sword is one of the emblems of State, and what is it but the symbol of destruction ready to fall on the heads of those who offend against the laws?—ministering thus, in its very severity, to purposes of Benevolence and Justice. What are the implements of war but instruments of destruction; and for what end do soldiers take the field, but to destroy their enemies? And yet, surgeons and numerous assistants attend on armies, to succour those on whom the calamities of war have fallen; the two faculties, which are deemed incompatible, being thus manifested together, with deliberate design. Without Combativeness and Destructiveness there would be no war; and without Benevolence, if these existed, there would be neither mercy nor compassion. Instead, therefore, of the coexistence of these faculties forming an objection to the Phrenological system, it proves its harmony with nature.

Dr GALL refers, not only the feeling of benevolence, but

* St Ronan's Well.

the sentiment of justice, to the faculty now under consideration. "The reader will remember," says he, "that I could not discover the functions of the different organs, except when I met with them in a state of extreme development, and when, consequently, the faculties were manifested with excessive energy. A mental power, in a state of high excitement, sometimes exhibits a character quite different in appearance from its ordinary form of manifestation. Libertinism is the consequence of over activity of Amativeness, and theft, of Acquisitiveness. It is the same with Benevolence. The individuals who had become remarkable on account of uncommon goodness of heart, presented an extreme development of the organ in question. Consequently, Goodness, Benevolence, Sensibility to Distress, are not the primitive destination, or ordinary function of this organ; but the manifestation of its exalted condition. Benevolence, therefore, is something more than the primitive function of the organ from which it proceeds. What is the original sentiment? It being extremely difficult to make positive observations on the fundamental destination of an organ, I am obliged," continues Dr GALL, "to resort to reasoning; and I think there are plausible grounds for holding, that the primitive tendency connected with this organ is that which disposes man to conduct suitable to the maintenance of social order: I call it *the Moral Sense, the sentiment of Justice and Injustice.*" He proceeds with a variety of arguments, and arrives at the conclusion, that Benevolence "n'est qu' un degré d'action plus élevé du sens moral*."

Dr SPURZHEIM dissents from this view, and holds Conscientiousness to be a distinct sentiment, of which he has discovered and established the organ; although it is not yet admitted by Dr GALL. There are only two ways of settling this dispute; the one by metaphysical analysis of the feeling, and the other by observation of the organ. The result of both appears to me to be in favour of Dr SPURZHEIM.—I shall revert to the subject when treating of the organ of Conscientiousness.

* Sur les Fonctions du Cerveau, tome v. p. 273. et sequen.

In another point, also, in regard to this organ, Dr SPURZHEIM differs from Dr GALL, and apparently on good grounds. "An opinion of Dr GALL's," say he, "of which I cannot approve, is, that Benevolence may degenerate into bad temper, and into the propensity to rejoice in the evil that happens to others, in the same way as the sense of taste may degenerate into disgust at food, physical love into aversion to the other sex, and the sense of melody to aversion to music. The inactivity of Benevolence, or its exhausted state, may produce indifference to its functions, and make us avoid any opportunity of doing beneficent actions; but active wickedness, and pleasure in the pains of others, like cruelty, depend on inferior feelings, unaccompanied by superior sentiments *."

This organ is found in the lower animals, and when it is largely developed, they are mild and docile; whereas, when it is deficient, they are vicious, ill-natured, and intractable. Dr GALL gives some interesting illustrations of this fact. The head of the tiger, says he, is more flat at this part than that of the lion; and the heads of the hyæna and wolf are more depressed than that of the dog. The organ is greatly depressed, immediately above the level of the eyes, in the baboon; while, on the contrary, it is elevated in the ouran-outang; and the dispositions of all these animals are in accordance with their development. In the horse, the organ is placed in the middle of the forehead, a little above the eyes. When this region is hollow and narrow, a horse is invariably vicious, and disposed to bite and to kick. In mild and good-natured horses, on the contrary, this part stands as far out as the eyes, or even farther. The driver of a cabriolet of Neuilly, says Dr GALL, bought, at a low price, a horse which nobody could use, on account of its extreme bad temper; but it was an excellent runner. In the first week it bit off two of the driver's fingers, and one of his ears. He attempted to correct it by redoubled blows, but these rendered it only more vicious. He then resolved to try the effect of gentle treatment,

* Phrenology, p. 190.

and this succeeded to a certain degree. The organ in question is very small in this animal; and the same conformation will be found in all horses which require to be muzzled, to prevent them from biting. On one occasion, a gentleman in the country mentioned at his dinner-table that he had two horses, one extremely mild, and the other very vicious, in temper. They were brought out into the stable-yard, and by examining their heads, according to Dr GALL's directions, I pointed out each, without having previously seen them. The difference was so great that several persons who were present recognised it, the moment they were told where to look for it.

The same rule holds in regard to dogs. Dr GALL saved two puppies of a litter of five, and watched their dispositions with the closest attention. Even before their eyes were opened, he remarked a great difference between them; one of them, when taken into the hand, testified, by its gestures, that it was pleased; the other growled, whined, and struggled, till it was put down. Scarcely were they fifteen days old, when one indicated, by the motions of its tail, contentment and gentleness, not only towards other little dogs, but to persons who approached it; the other, on the contrary, never ceased to grumble, and to bite every one within its reach. Aware how much was attributed to education, Dr GALL charged those who habitually approached these animals, to bestow equal caresses on each. He himself took the greatest pains to soften the disposition of the ill-natured one, but nothing could change its character. It bit even its mother, if she chanced to incommode it. In the sixth month, the dogs were seized with distemper, and with whatever degree of gentleness they were treated, the one never ceased to growl and bite, till death put an end to its efforts; while the other, on the contrary, till its last moment, gave the most striking marks of attachment and gratitude to those who took charge of it. Even the servants were forcibly struck with the difference in the dispositions of these animals. Dr GALL states, that the difference in their heads was equally conspicuous.

In observing this organ in the lower animals, it is neces-

sary to be acquainted with the osteology of their skulls, to be able correctly to distinguish its place. In some of them, the elephant, the sow, &c. the two tables of the skull are not parallel at this part, and hence the size of the organ in them cannot be ascertained, except by dissection. In the bull and cow, the inner table is separated to some distance from the external table, but the two tables are parallel in the region of this organ, and on this account its size may be judged of during life. The same is the case, says Dr GALL, with the cat *.

" There are examples," says Dr SPURZHEIM, " on record, where animals have shewn high degrees of benevolence to others, and even to man. A respectable family of Paris told me, that they had a horse and a cow living together in the same stable; that the horse several times got untied, went to the corner where the sack of oats stood, and drew it in his teeth near the cow; probably to make her partake of the good cheer. Many dogs also exhibit the same feeling. DUPONT DE NEMOURS saw a swallow caught by one foot in the noose of a pack-thread, attached to the roof of the French Institute at Paris. The prisoner screamed, and attracted all the swallows of the neighbourhood. After a long and tumultuous consultation, a great number formed a line, one after another, darted at the pack-thread with their bills, and in half an hour delivered the captive †."

Some incidents of a similar nature have happened in this country. Dr MILLAR has favoured me with the following statement:—" The Reverend Dr WODROW, late of Stevenston in Ayrshire, when clergyman of Dunlop, a parish in the same county, narrates a curious fact, concerning swallows, in a letter to his relative, Mrs THOMSON of Edinburgh."—" At Dunlop manse, says he, in a very dry summer, one of their nests, attached to the corner of the parlour window, fell down, and lay on the window-sill, without any damage done either to the nest or its helpless inhabitants, four or five young ones.

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* Sur les Fonctions du Cerveau, tome v. p. 327. † Phrenology, p. 118.

It was a few minutes before breakfast, when I observed the accident; and soon after it happened, I went out and carefully placed it on the top of a cut hedge, and I waited to see the event. It was pleasant to see the young ones fed at proper intervals, and, at the same time, a great number of other swallows jointly and busily employed, in a warm summer morning, in building a new nest in the same place with the former; some of them bringing clay, straws, &c.; others making use of these materials; others dipping themselves into an open well, and plashing the walls of the nest, and all of them cheering one another to the useful work. In two hours the new nest was completely finished, and then the young ones were carried through the air under the wings of one, sometimes two, old swallows, and safely placed in their lodging; after which the noise and cheering of the troop ceased." Dr POOLE also stated to me, that a cat having seized a young sparrow, a flock of these birds perceiving it, attacked the cat, fastened on its back, pecked and flapped till they made it let go its hold, and rescued the intended victim. This happened in a garden behind St John Street, Edinburgh, and was witnessed by a neighbour of Dr POOLE's, who communicated the circumstance to him. Dogs also are known to precipitate themselves into the water, to save persons in danger of being drowned; and they attack with fury assassins who assail their masters.

I have mentioned before, that stimulating liquors, by exciting the organs, give energy to the feelings or propensities which depend on them for the means of manifestation. Some individuals become excessively profuse when intoxicated. They would then give the world away; or, if they had the power, they would create a new one, in which every individual should have infinite happiness to himself. On the principle, that intoxication can never create any feeling, I am inclined to think that such persons have naturally a large endowment of benevolence, the organ of which is stimulated to this great activity by strong potations. This, however, is only a conjecture.

This organ is liable to excessive excitement by disease. Dr GALL mentions the case of a hussar, who had always manifested great benevolence of disposition, and subsequently became insane. He gave away all his clothes, and left himself absolutely naked; he never ceased repeating that he wished to make every one happy, and he introduced into all his projects of beneficence, the Holy Trinity. In his head the organs of Benevolence and Veneration were extremely developed. Idiots in whom this organ is largely developed are good-natured and harmless; while those in whom it is small, if Destructiveness be large, are mischievous and wicked.

The Scotch metaphysicians in general admit the existence of this sentiment, but HOBBES, and many other metaphysical writers, who resolve all our actions into Selfishness, deny it. Dr THOMAS BROWN successfully and beautifully answers the objection, that we are selfish even in our feelings of good-will. "The analysis of Love," says he, "as a complex feeling, presents to us always two elements; a vivid delight in the contemplation of the object, and a desire of good to that object. Though we cannot, then, when there is no interfering passion, think of the virtues of others *without pleasure*, and must therefore, in loving virtue, *love what is by its own nature* pleasing, the love of *the virtue which cannot exist without the pleasure*, is surely an affection very different from the love of the mere pleasure existing, if it had been possible for it to exist, *without the virtue*,—a pleasure that accompanies the virtue only, as the soft or brilliant colouring of nature flows from the great orb above,—a gentle radiance that is delightful to our eyes, indeed, and to our heart, but which leads our eye upward to the splendid source from which it flows, and our heart still higher, to that being by whom the sun was made *."

* Lecture 59.

II. *Sentiments proper to Man.*

Hitherto we have considered Man so far as he is animal. But, besides the organs and faculties already spoken of, common to him with the brutes, he is endowed with a variety of sentiments, which constitute the human character, and of which the lower creatures are entirely destitute: the parts which constitute the organs of these faculties are entirely wanting in the brains of the latter. The faculties now to be treated of produce emotions or feelings, but do not form ideas.

14.—VENERATION.

This organ is situated at the middle of the coronal aspect of the brain, at the bregma or fontanel of anatomists.

Dr Gall gives the following account of the discovery of this organ. His father's family consisted of ten children, who all received the same education, but their talents and dispositions were very dissimilar. One of his brothers manifested from infancy a strong tendency towards religion. "Ses jouets étaient des vases d'église qu'il sculptoit lui-meme, des chasubles et des surplis qu'il faisait avec du papier." He was constantly engaged in prayer, and in saying mass, and when obliged to be absent from church, he spent his time in ornamenting and gilding a crucifix of wood. His father had intended him for a merchant, but he himself disliked that occupation, because, said he, it exposed him to the necessity of lying. At the age of twenty-three years he abandoned merchandise; and having lost all hope of being then able to pursue the studies requisite for the Church, he fled from his father's house and became a hermit. His father then allowed him to study; at the end of five years he took orders, and continued, till the period of his death, to live in the exercise of devotion and the practice of penance.

Dr Gall farther remarked, that, in schools, some of the children took no interest in religious instruction, whilst others received it with avidity; also, that those individuals in the classes, who voluntarily devoted themselves to the Church, were either studious, pious, virtuous, and honourable young men, or idlers of the worst description, indolent, and totally destitute of talent. The latter, he observes, obviously had no other aim than that of living at the expence of their fellow citizens; while the former felt a lively interest in the vocation to which they aspired. This commendable feeling sprung up in them, says he, nobody knew how, and it certainly was not attributable to example or education, or the circumstances in which they had been placed; for many of them had embraced the profession of the Church, even contrary to the intention of their parents and guardians. These facts convinced him that the disposition to religion is innate.

At a later period, no sooner had he fixed his attention on some of the primitive qualities of mind, than he recollected those observations made in his youth, and immediately examined the heads of persons eminent for devotion. He visited the churches of every sect, and particularly observed the heads of those individuals who prayed with the greatest fervour, or who were the most completely absorbed in their religious contemplations. The result was the establishment of the part of the brain in question as the organ of Veneration.

Catholic countries afford particularly favourable opportunities for such observations. Dr Bright, a traveller in Lower Hungary, informs us. that, in Vienna, "The churches are almost constantly open, and enter them when you will, servants, who have been sent on errands, are seen kneeling before the altars or the images, with their baskets or parcels by their sides. Thus prayer, by its frequency, becomes a habit and recreation, rather than the performance of a duty; and I have often been truly astonished," continues the author, "to observe, in the coldest weather, little children, when far from the restraints of their parents, fall down upon their knees before the images which adorn many of the corners of the

streets and passages in Vienna, and there remain fixed for several minutes, as in serious devotion *." I have myself observed similar facts in Catholic cities on the Continent.

The function of the faculty is to produce the sentiment of Veneration in general; or an emotion of profound and reverential respect, on perceiving an object at once great and good. It is the source of natural religion, and of that tendency to worship a superior power, which manifests itself in every nation yet discovered. The faculty, however, produces mere emotion, and does not form ideas of the object to which it ought to be directed; and hence, if no revelation has reached the individual, and if the understanding is extremely limited, the unfortunate being may worship the genius of the storm, the sun, as the source of light, heat, and vegetable life; or, if more debased in intellect, he may worship brutes, and stocks, and stones;

> "Lo! the poor Indian, whose untutored mind,
> "Sees God in clouds, or hears him in the wind."

The organ is in fact large in the Negroes, and also in Mary Macinnes, who was extremely prone to superstition.

It has been objected, that, if an organ and faculty of Veneration exist, revelation was unnecessary. But Dr Gall has well answered, that the proposition ought to be exactly reversed, for, unless a natural capacity of feeling religious emotion had been previously bestowed, revelation would have been as unavailable to man as it would be to the lower animals; while, if a mere general feeling of devotion, or an instinctive but blind tendency to worship, which Veneration truly is, was given, nothing was more reasonable than to add instruction how it ought to be directed. Dr Gall observes, farther, that the existence of the organ is an indirect proof of the existence of God. Destructiveness is implanted in the mind, and animals exist around us to be killed for our nourishment: Adhesiveness and Philoprogenitiveness are given, and friends and children are provided as objects on whom they

* Pages 43, 44.

may be exercised: Benevolence is conferred on us, and the poor and unhappy, on whom it may shed its soft influence, are every where present with us; in like manner, the instinctive tendency to worship is implanted in the mind, and, conformably to these analogies of nature, we are entitled to infer that a GOD exists whom we may adore.

The organ is possessed by all, but in different degrees by different persons: and, on the principle, that the natural power of experiencing an emotion bears a proportion to the size of its organ, every sane individual will be naturally capable of joining in religious worship; the glow of devotional feeling, however, experienced by each, will be greater or less in intensity, according to the development of this part of the brain. The difference in the feeling is a certain fact independently of Phrenology, so that this science only reveals the relation between its intensity and the size of the organ.

The organ is large in King ROBERT BRUCE, who, it is mentioned in History, was strongly alive to religious feelings, and ordered his heart to be carried to the Holy Land, because he had not been able to fulfil a vow to visit it in person. It is large also in RAPHAEL, and the subjects which chiefly occupied his pencil were connected with devotion and the Church.

Dr GALL mentions, that, in the portraits of Saints remarkable for devotional feeling, this organ is represented as large, and that the same configuration of head has been given by the ancient artists to their High Priests. It is large in the portraits of CONSTANTINE, MARCUS AURELIUS, St AMBROSE, CHARLES I. of England, and MALEBRANCHE. It is also greatly developed in philosophers and poets who are distinguished for piety, as in NEWTON, MILTON, and KLOPSTOCK, while it is flat in the head of SPINOSA, who professed atheism. The same configuration is found in the heads of CHRIST, represented by RAPHAEL. In these, the parts behind the ear, or the organs common to man and the lower animals, are small; whereas the organs, situated in the forehead and in the coronal surface, connected with intellect and

the moral sentiments, are very large. This organization indicates great intellectual penetration, with exalted Benevolence and Veneration. Dr GALL puts the question, Has this divine form of a head been invented, or may we presume that it is a faithful copy of the original? It is possible, says he, that the artists may have imitated the heads of the most virtuous, just, and benevolent men whom they could find, and thence drawn the character of the head of CHRIST. In this case, the observation of the artists coincides with that of Dr GALL,—a circumstance which either supposes a kind of presentiment of Organology on their part, or an accuracy of observation scarcely admissible. He considers it more probable, that the general type, at least, of the head of CHRIST has been transmitted to us. St LUKE was a painter, and how should he fail to preserve the features of his Master? It is certain that this form of the head of CHRIST is of a very high antiquity. It is found in the most ancient pictures and specimens of mosaic work. The Gnostics of the second century possessed images of CHRIST and of St PAUL; hence Dr GALL concludes, that neither RAPHAEL nor any other artist has invented this admirable configuration *.

The metaphysicians in general do not admit Veneration as an original emotion; they trace the belief in a GOD to the perceptions of the understanding. We perceive order, beauty, power, wisdom, harmony, in the works of Creation, and infer from them that a supreme creating and directing mind exists. In this view the phrenologists concur: the understanding, however, only perceives facts and draws inferences, but does not feel emotions; and, therefore, after this deduction was completed, it would experience no tendency to adore the GOD whom it had discovered. Now, in point of fact, the tendency to worship is a stronger principle than the understanding itself; for the most ignorant and stupid are prone to venerate, while their intellects are incapable of directing them to an object worthy of their homage. Under the influence of a blind Veneration,

* Sur les Fonctions du Cerveau, tome v. p. 389.

men cut branches from trees, and fall down and worship them; or they adore monsters and reptiles as deities,—facts which were utterly inexplicable, till Phrenology pointed out an instinctive tendency to venerate, altogether apart from understanding. This tendency is produced by the faculty in question, and it is a great omission that no such power is to be found in the systems of the old philosophers.

Hitherto we have considered Veneration only when directed to religion, which is undoubtedly its noblest end; but it has also many other objects, and a wide sphere of activity, in the present world. It produces the feeling of deference and respect in general; and hence may be directed to every object that seems worthy of such regard. In children, it is a chief ingredient in filial affection, and produces that soft and almost holy reverence with which a child looks up to his parent as the author of his days, the protector of his infancy, and the guide of his youth. A child in whom this organ is small, may, if Benevolence and Adhesiveness be large, entertain great affection for his parent as a friend; but, in his habitual intercourse, there will be little of that deferential respect which is the grand feature of the mind, when the organ is large. Children who are prone to rebellion, little attentive to command, and regardless of authority, will generally be found to have Self-Esteem large, and this organ proportionally deficient.

Veneration leads to deference for superiors in rank as well as in years; and prompts to the reverence of authority. This organ is generally largely developed in the Asiatic head, and the tendency to obedience is strong in the people of that quarter of the globe. Indeed, the hereditary slavery which has descended among them through so many generations, may be connected with the prevalence of this disposition. A curious anecdote is mentioned in MURRAY's Historical Account of Discoveries and Travels in Asia. "During FORSTER's stay at Cachimire," says he, "a Georgian merchant communicated to him as his own firm belief, that, instead of being a Turk, as pretended, he was really a Christian. The grounds were, that his head was broad behind, and flat at the crown; where-

as the Mahomedan head was conical like that of a monkey *." This description of the Christian head indicates great Cautiousness and Love of Approbation, with moderate Veneration; while that of the Mahomedan bespeaks a large development of Veneration, with small Cautiousness.

A lady who is in the habit of examining the heads of servants before hiring them, told me, that she has found, by experience, that those in whom Veneration was large, were the most deferential and obedient; and that one with a large Combativeness and Destructiveness, and small Veneration, became angry and abusive, when her conduct was censured. This occurred, even although Love of Approbation and Conscientiousness were both large; but the passion speedily subsided, and was followed by self-reproach and repentance. If Veneration also had been large, it would have produced that instinctive feeling of respect, which would have operated as instantaneously as Combativeness and Destructiveness, and restrained their ebullitions.

Veneration may also produce respect for titles, rank and power; for a long line of ancestry, or mere wealth; and it frequently manifests itself in one or other of these forms, when it does not appear in religious fervour. Individuals in whom Love of Approbation and Veneration are very large, and Conscientiousness and intellect not in proportion, venerate persons of higher rank than their own, and are fond of their society. Persons of rank, who do not possess high virtues or talents, are fondest of the society of those in whom this combination occurs. It inspires its possessor with an habitual deference towards them, which is felt as a constant homage. On occasion of the King's visit to Scotland in 1822, some individuals experienced the profoundest emotion of awe and respect on beholding him; while others were not conscious of any similar excitement, but were surprised at what appeared to them to be exaggerated enthusiasm of the first. I examined the heads

* Vol. ii. p. 484.

of several of both classes, and, in the former, found the organ of Veneration uniformly larger, in proportion to the other organs, than in the latter.

This faculty is likewise the source of the profound awe which some persons feel in visiting ancient temples, gothic cathedrals, and places of sepulture for the illustrious dead. It gives reverence for church-yards, and other burial places of our ancestors. A person in whom it is small experiences a feeble influence, even from Westminster Abbey, and the monuments of departed genius there preserved. This sentiment is one ingredient in the tendency to antiquarianism, and the love of old coins.

Veneration, like other powers, is liable to abuse. When not subjected to the guidance of Reflection and Conscientiousness, it produces a bigotted respect for old customs and absurd institutions, if only sanctified by time; and a blind tendency to admire the wisdom of our ancestors, beyond the extent of their deserts. It gives reverence for great names and authorities in religion and philosophy, and thus often presents a strong obstacle to the progress of truth. This kind of Veneration preserves the Catholic in a bigotted subjection to the Pope and the Priests: an emotion of profound and sanctified respect springs up in his mind on contemplating them, and every suggestion of the understanding, in opposition to this feeling, is expelled as profane. In short, Veneration, when vigorous and blind, produces complete prostration of the will and the understanding to the object to whom it is directed; and, even in our own country, it frequently holds back the march of improvement in many important particulars. The Holy Allies are bent upon cultivating this sentiment to the highest possible degree in their subjects, and prostrating their intellect; they encourage monks, processions, and superstitious observances, while they banish philosophers and exclude works of science. If it were possible to succeed, these Sovereigns would render their people blind worshippers of their own power, and bend them in low subserviency to their will. The Spaniards are a noble people, but, while their intellects have

been shackled for many centuries, Veneration has been cultivated to an extravagant height, and misdirected, in consequence of which, they have fallen into a state of great degradation.

This faculty, when unenlightened, produces every kind of superstition, as worshipping beasts, and stocks, and stones. The Negroes, Indians, and even the Hindoos, have a poor intellectual development, compared with that of Europeans, and their superstitions are more gross. SOCRATES did not participate in the absurd superstitions of Greece, and in the ancient busts of him, he is represented with a splendid forehead *. Defect of Veneration does not produce profanity, but only indifference to religious sentiments, and little reverence for power and ancestry. I have found Veneration large in the head of the genuine Tory,—in him who really delights in contemplating kings and nobles, and regards them as invested with a degree of sanctity by a long line of descent, and the possession of hereditary authority. In the genuine Whig or republican, who sees in kings and nobles only men liable to all the frailties of human nature, and requiring checks to prevent them from abusing power, Veneration is generally smaller, in proportion to their intellectual endowment. When Veneration, Self-Esteem, Conscientiousness, and Intellect, are all well developed, the individuals are moderate whigs or moderate tories; and readily approximate in their sentiments. They ought to exercise mutual forbearance; their different feelings being the result of different natural constitutions. These observations are limited to genuine tories and genuine whigs, for a man may profess toryism through love of place, and whiggery through mere factiousness, and in such cases other organs will predominate.

As Nature has implanted this organ in the brain, and the corresponding sentiment in the mind, it is a groundless terror to apprehend that religion can ever be extinguished, or even endangered, by the arguments or ridicule of the profane.

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* A copy of his bust will be found in the Phrenological Hall.

Forms of worship may change, and particular religious tenets may now be fashionable, and subsequently fall into decay; but while the human heart continues to beat, awe and veneration for the Divine Being will ever animate the soul; and the worshipper will cease to kneel, and the hymn of adoration will cease to rise, only when the race of man becomes extinct.

The natural language of this faculty carries the head upwards in the direction of the organ. The voice is soft, subdued, reposing, and adoring. The greatest difference is perceptible in the tones and manner of prayer of clergymen in whom the organ is large, compared with those in whom it is small. There is a soft breathing fervour of devotion in the former, and a cold reasoning formality in the latter. I have found the organ uniformly large in clergymen who selected the Church from natural liking, and not merely as a means of living.

The organ is generally larger in the female head than in the male.

Dr Gall treats of this sentiment as producing religious feeling alone; and to Dr Spurzheim is due the merit of analyzing it, and treating it as the source of the emotion of reverence and respect in general.

Nothing is more common in the hospitals for the insane, says Pinel, than cases of alienation, produced by devotional feelings excessively exalted; by conscientious scruples carried to prejudicial excess, or by religious terror. As this kind of insanity, says Dr Gall, is often present without derangement of the other faculties, physicians ought to have inferred that it is connected with disease of a particular part of the brain. He and Dr Spurzheim saw, in the hospital of Amsterdam, a patient who was tormented with the idea that he was compelled to sin, and that he could not possibly be saved. In him the organ of Veneration was very largely developed. In a priest who despaired of salvation, and in another patient, who had the confirmed idea that he was condemned to eternal punishment, the organ was also very large. A woman, named

Elizabeth Lindemann, was brought to Dr Gall. At the first glance he perceived that she possessed this organ in an extraordinary degree; she continued standing before him, lifting her eyes from time to time to Heaven, and indicating, by all her gestures, sadness and anguish. From her youth, she had been excessively addicted to prayer. For some time previous to the interview with Dr Gall, she "had been subject to convulsions, and maintained that she was possessed; the devil, she said, entered into her heart by her mouth, and made efforts to carry her to hell." Dr Gall mentions also, that he had seen, in the collection of M. Esquirol, casts of the heads of three persons subject to religious insanity. In all the three the organ of Veneration was largely developed. If, says Dr Gall, M. Esquirol continues for some time to mould the heads of the insane, and to preserve their skulls, he will not fail to become one of the most zealous and enlightened disciples of Organology. Esquirol very justly remarks on this subject, that although a particular sermon has often been blamed for producing this species of insanity, yet it would not have had that effect, unless there had been a predisposition to the disease, probably a pre-existence of it, in the individual.

The organ is established.

15. HOPE.

This organ is situated on each side of that of Veneration, and extends under part of the frontal and part of the parietal bones.

Dr Gall considers Hope as belonging to every faculty; but Dr Spurzheim very properly observes, that although every faculty being active produces *desire*, as Acquisitiveness the desire for property, and Love of Approbation the desire of praise; yet this is very different from Hope, which is a simple emotion, *sui generis*, susceptible of being directed in a great variety of ways, but not desiring any one class of things

as its peculiar objects. Nay, desire is sometimes strong, when Hope is feeble or extinct; a criminal on the scaffold may ardently desire to live, when he has no hope of escaping death. Dr SPURZHEIM was convinced, by analysis, that Hope is a distinct primitive sentiment; and was led to expect that an organ for it would exist. Numerous observations have since determined the situation of the organ, on the sides of Vetion; and it is now admitted by Phrenologists in general as established. Dr GALL, however, continues to mark the functions of this part of the brain as unascertained.

The faculty produces the sentiment of Hope in general, or the tendency to believe in the possibility of what the other faculties desire, but without giving the conviction of it, which depends on Reflection. Thus, a person with much Hope and much Acquisitiveness, will hope to become rich; another, with much Hope and great Love of Approbation, will hope to rise to eminence; and a third, with much Hope and great Veneration, will hope to be saved, and to enjoy eternal felicity in Heaven. It inspires with gay, fascinating, and delightful emotions; painting futurity fair and smiling as the regions of primitive bliss. It gilds and adorns every prospect with shades of enchanting excellence, while Cautiousness hangs clouds and mists over distant objects seen by the mind's eye. Hence, he who has Hope more powerful than Cautiousness, lives in the enjoyment of brilliant anticipations, which are never realized; while he who has Cautiousness more powerful than Hope, lives under the painful apprehension of evils which rarely exist but in his own internal feelings. The former also enjoys the present, without being disturbed by fears about the future, for Hope supplies his futurity with every object which his mind desires, however distant the prospect of attainment may be; the latter, on the other hand, cannot enjoy the pleasures which are within his reach, through fear that, in futurity, they may be lost. The life of such an individual is spent in painful apprehension of evils, to which he is in fact very little exposed; for the dread of their happening excites

him to ward them off by so many precautions that it is scarcely possible they can overtake him.

When too energetic and predominant, the faculty disposes to credulity, and, in mercantile men, produces rash and inconsiderate speculations. Persons so endowed never see their own situation in its true light, but are led by their extravagant Hope to magnify tenfold every advantage, while they are blind to every obstacle and abatement. They promise largely, but rarely perform. Intentional guile, however, is frequently not their object; they are deceived themselves, by their constitutional tendency to believe every thing possible that is future, and promise in the spirit of this credulity. Those who perceive the disposition in them, ought to exercise their own judgment on the possibility of performance, and make the necessary abatement in their expectations. Experience accomplishes little in correcting those who possess too large an organ of Hope; the tendency to expect immoderately being constitutional, they have it not in their power to see both sides of the prospect, and, beholding only that which is fair, they are necessarily led to conclude that all is well. When the organ is very deficient, and that of Cautiousness large, a gloomy despondency is apt to invade the mind.

The faculty, if not combined with much Acquisitiveness or Love of Approbation, disposes to indolence, from the very promise which it holds out of the future providing for itself. If, on the other hand, it be combined with these organs in a full degree, it acts as a spur to the mind, by uniformly representing the object desired as attainable. An individual with much Acquisitiveness, great Cautiousness, and *little Hope*, will *save* to become rich; another with the same Acquisitiveness, little Cautiousness, and *much Hope*, will *speculate* to procure wealth. I have found Hope and Acquisitiveness large in persons addicted to gaming.

Hope has a great effect in assuaging the fear of death. I have seen persons in whom it was very large die by inches, and linger for months on the brink of the grave, without suspicion of the fate impending over them. They *hoped* to be

well, till death extinguished the last ember of the feeling. On the other hand, when Hope, and Combativeness, which gives courage, are small, and Cautiousness and Conscientiousness large, the strongest assurances of the Gospel are not always sufficient to enable the individual to look with composure or confidence on the prospect of a judgment to come. Several persons in whom this combination occurs, have told me that they lived in a state of habitual uneasiness in looking forward to the hour of death; while others, with a large Hope and small Cautiousness, have said that such a ground of alarm never once entered their imaginations. Our hopes or fears on a point of such importance as our condition in a future state, ought to be founded on grounds more stable than mere constitutional feeling; but I mention these cases to draw attention to the fact, that this cause sometimes tinges the whole conclusions of the judgment; and the existence of such a source of delusion being known, its effects may more easily be resisted.

In religion, this faculty favours the exercise of faith; and by producing the natural tendency to look forward to futurity with expectation, disposes to belief in a life to come.

The metaphysicians admit this faculty, so that Phrenology only reveals its organ, and the effects of its endowment, in different degrees. I have already stated an argument in favour of the Being of a God, founded on the existence of a faculty of Veneration conferring the tendency to worship, of which God is the proper and ultimate object. May not the probability of a future state be supported by a similar deduction from the possession of a faculty of Hope? It appears to me that this is the faculty from which originates the notion of futurity, and which carries the mind forward in endless progression into periods of never-ending time. May it not be inferred, that this instinctive tendency to leave the present scene, and all its enjoyments, to spring forward into the regions of a far distant futurity, and to expatiate, even in imagination, in the fields of an eternity to come, denotes that man is formed for a more glorious destiny than to perish for ever in the grave? Addison beautifully enforces this argument in

the Spectator, and in the soliloquy of CATO; and Phrenology gives weight to his reasoning, by shewing that this ardent Hope, "this longing after immortality," is not a factitious sentiment, or a mere exuberance of an idle and wandering imagination, but that it is the result of a primitive faculty of the mind, which owes at once its existence and its functions to the Creator.

POPE beautifully describes the influence of the sentiment last treated of, "Veneration," in prompting us to worship, blindly indeed, when undirected by information superior to its own. He falls also into the idea now started in regard to Hope, and represents it as the source of that expectation of a future state of existence, which seems to be the joy and delight of human nature, in whatever stage of improvement it has been found.

> "Lo! the poor Indian, whose untutored mind
> Sees GOD in clouds, or hears him in the wind;
> His soul proud science never taught to stray
> Far as the solar walk, or milky way;
> Yet simple nature to his *hope* has given,
> Behind the cloud-topt hill, an humbler heaven;
> Some safer world, in depth of woods embraced,
> Some happier island in the watery waste;
> Where slaves once more their native land behold,
> No fiends torment, no Christians thirst for gold."

The organ is established.

16. IDEALITY.

THIS organ is situated nearly along the lower edge of the temporal ridge of the frontal bone. Dr GALL gives the following acccount of its discovery.

The first poet whose head arrested his attention, on account of its form, was one of his friends, who frequently composed *extempore* verses when least expected to do so; and who had thereby acquired a sort of reputation, although in other respects a very ordinary person. His forehead, immediately

above the nose, rose perpendicularly, then retreated, and extended itself a good deal laterally, as if a part had been added on each side. He recollected having seen the same form in the bust of Ovid. In other poets, he did not find, as a constant occurrence, the forehead first perpendicular and then retreating, so that he regarded this shape as accidental; but in all of them he observed the prominences in the anterior lateral parts of the head, above the temples. He began then to look upon these prominences as the distinctive marks of a natural talent for poetry; but still he spoke to his hearers on the subject with a degree of doubt, especially as, at this period, he was not convinced that a talent for poetry depended on a primitive mental faculty. He waited, therefore, before deciding definitively, till he had made a greater number of observations.

A short time afterwards, he got the head of the poet Alxinger, in which, this part of the brain, and also the organ of Adhesiveness, are very much developed, while the other portions are only in a small degree. A little after this, the poet Jünger died, and Gall found the same prominences also in his head. He found the same parts still larger in the poet Blumauer, with a large organ of Wit. At this time, Wilhelmine Maisch acquired reputation at Vienna by his poetry; and the same enlargement was found in his head, above the temples. Dr Gall observed the same organization in Madame Laroche, at Offenbach, near Francfort; in Angelique Kaufmann; in Sophia Clementina of Merklen; in Klopstock; in Schiller, of whom he has a mask; and also in Gesner of Zurich. In Berlin he continued to speak of this organ still with considerable reserve, when M. Nicolai invited him and Dr Spurzheim to see a collection of about thirty busts of poets in his possession. They found, in every one of them, the part in question projecting more or less considerably, according as the talent was manifested in a higher or lower degree in each poet. From that moment he taught boldly, that the talent for poetry depends on a primitive fa-

culty, and that it is connected with this part of the brain as its special organ.

In Paris, Dr GALL moulded the head of LEGOUVE' after his death, and found this organ large. He and Dr SPURZHEIM opened the head of the late DELILLE, and pointed out to several physicians who were present, the full development of the convolutions placed under the external prominences at this part; these convolutions projected beyond all the others. Dr GALL preserves the cast of one of the hemispheres of the brain; so that this statement may still be verified. In a rather numerous assemblage, Dr GALL was asked what he thought of a little man, who sat at a considerable distance from him? As it was rather dark, he said, that, in truth, he could not see him very distinctly, but that he observed, nevertheless, the organ of poetry extremely developed. He was then informed that this was the famous poet FRANÇOIS, generally named *Cordonnier*, from his having been bred a shoemaker*. "If we pass in review," says Dr GALL, "the portraits and busts of the poets of all ages, we shall find this configuration of head common to them all; as in PINDAR, EURIPIDES, SOPHOCLES, HERACLIDES, PLAUTUS, TERENCE, VIRGIL, TIBULLUS, OVID, HORACE, JUVENAL, BOCCACIO, ARIOSTO, ARETIN, TASSO, MILTON, BOILEAU, J. B. ROUSSEAU, POPE, YOUNG, GROSSET, VOLTAIRE, GESNER, KLOPSTOCK, WIELAND", &c. Dr BAILLY, in a letter, dated Rome, 30th May 1822, addressed to Dr BRAYER, says: "You may tell Dr GALL that I have a mask of TASSO, taken from nature, and that, although part of the organ of poetry be cut off, nevertheless the lateral breadth of the cranium in this direction is enormous."

The bust of HOMER presents an extraordinary development at this part of the head. It is doubted whether it is authentic; but, be it real or ideal, the existence of the prominence is remarkable. If it be ideal, why was the artist led to give this

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* A cast of the head of this individual is in the Phrenological Society's collection, Edinburgh, and in DE VILLE's, London. The organ in question is uncommonly large.

particular form, which is the only one in accordance with nature? If he modelled the head of the most distinguished poet of his day, as the best representative of HOMER, the existence of this development is still a fact in favour of the organ.

We owe to Dr SPURZHEIM the correct analysis of this faculty, and the very elegant and appropriate name by which it is designated. "It is impossible," says he, "that poetry in general should be confined to one single organ; and I therefore think that the name 'Organ of Poetry,' (used by Dr GALL), does not indicate the essential faculty."—"In every kind of poetry, the sentiments are exalted, the expressions warm; and there must be rapture, inspiration, what is commonly called Imagination or Fancy."

This faculty produces the feeling of exquisiteness or perfectibility, and is delighted with what the French call "Le beau idéal." It is this faculty which gives *inspiration* to the poet. The knowing and reflecting faculties perceive qualities as they exist in nature; but this faculty desires, for its gratification, something more exquisitely perfect than the scenes of reality. It desires to elevate and to endow with a splendid excellence every object presented to the mind. It stimulates the faculties which form ideas to create scenes, in which every object is invested with the qualities which it delights to contemplate, rather than with the degree of excellence which nature usually bestows. It is this faculty which inspires with exaggeration and enthusiasm, which prompts to embellishment and splendid conceptions. It gives a manner of feeling and of thinking, befitting the regions of fancy, rather than the abodes of men. Hence, those only on whom it is powerfully bestowed can possibly be poets, and hence the proverb, "*Poëta nascitur, non fit.*"

Those who experience a difficulty in conceiving what the faculty is, may compare the character of BLOUNT with that of RALEIGH in Kenilworth; "But what manner of animal art thou thyself, RALEIGH," said TRESSILIAN, "that thou holdest us all so lightly?"—"Who, I?" replied RALEIGH, "An eagle am I, that never will think of dull earth, while there is

a heaven to soar in, and a sun to gaze upon;"—Or they may compare the poetry of SWIFT with that of MILTON; the metaphysical writings of Dr REID with those of Dr THOMAS BROWN; the poetry of CRABBE with that of BYRON; or Dean SWIFT's prose with that of Dr CHALMERS.

It was this faculty, "by whose aid" SHAKESPEARE imagined the characters of *Ariel* and *Prospero*. *Prospero's* concluding speech in the Tempest, is a beautiful specimen of the style of writing which it produces.

> "I have bedimmed
> The noon-tide sun, call'd forth the mutinous winds,
> And 'twixt the green sea and the azur'd vault
> Set roaring war; to the dread rattling thunder
> Have I giv'n fire, and rifted Jove's stout oak
> With his own bolt; the strong bas'd promontory
> Have I made shake, and by the spurs pluckt up
> The pine and cedar; graves at my command
> Have waked their sleepers; open'd and let them forth
> By my so potent art. But this rough magic
> I here abjure; and when I have required
> Some heavenly music, which even now I do,
> To work mine end upon their senses, that
> This airy charm is for; I'll break my staff;
> Bury it certain fathoms in the earth;
> And, deeper than did ever plummet sound
> I'll drown my book."

Individuals differ exceedingly in regard to the endowment of this faculty which they possess. According to the energy and activity of it, poetry is prized or relished. I have met individuals who declared that they could perceive no excellence in poetical compositions, and could derive no gratification from them; and yet such individuals were endowed with every degree of understanding and penetration, according as they possessed the other faculties strongly or weakly, and were not uniformly deficient, either in moral sentiments or judgment, in proportion to their want of poetic fire.

This faculty gives a peculiar tinge to all the other faculties. It makes them, in every thing, aspire to Ideality. A cast of the human head is a plain transcript of nature; a bust is na-

ture, elevated and adorned by the ideality of a CHANTRY or a JOSEPH. Add a large development of this organ to the other propensities, sentiments and reflecting powers, and it expands the field of their interest; carries them outwards, and forwards, and upwards; and causes them to delight in schemes of improvement. In common life, we may easily distinguish those who have, from those who have not, a considerable endowment of it. The former speak, in general, in an elevated strain of language, and, when animated, show a splendour of eloquence and of poetical feeling, which the latter are never able to command. It gives to conversation a fascinating sprightliness and buoyancy, the very opposite of the qualities expressed by the epithets, dryness and dulness.

Some sects in religion, and, among others, that most respectable body, The Society of Friends, declaim against ornament in dress, furniture, and other modes of life; they renounce these as vanity, while they hold up the solid and the useful as alone worthy of rational and immortal beings. Now, this is the natural feeling of persons in whom Benevolence, Conscientiousness, and Veneration are large, and Ideality very deficient,—and I have no doubt that the original propounders of these notions possessed this combination; but this is not the language of universal human nature, nor of physical nature either. Where Ideality exists to a considerable extent, there is an innate desire for the beautiful, and an instinctive love and admiration of it; and so far from the arrangements of the Creator in the material world being in opposition to it, he has scattered, in the most profuse abundance, objects calculated, in the highest degree, to excite and gratify the feeling. What are the flowers that deck the fields, combining perfect elegance of form with the most exquisite loveliness, delicacy, and harmony of tint, but objects addressed purely to Ideality, and the subordinate faculties of Colouring and Form. They enjoy not their beauty themselves, and afford neither food, raiment, nor protection to the corporeal frame of man: on this account, some persons have been led to view them as merely nature's vanities and shows, possessed neither of dignity nor utility.

But the individual in whom Ideality is large, will in rapture say, that they, and the lofty mountain, the deep glen, the roaring cataract, and all the varied loveliness of hill and dale, fountain and fresh shade, afford to him the banquet of the mind; that they pour into his soul a stream of pleasure so intense, and yet so pure and elevated, that, in comparison with it, all the gratifications of Acquisitiveness, and Self-Esteem, and Love of Approbation, in the pursuits of wealth, and power, and consequence, sink into insipidity and insignificance. In short, to the phrenologist, the existence of this faculty in the mind, and of external objects fitted to gratify it, is one, among numberless instances, of the boundless beneficence of the Creator towards man; for it is a faculty purely of enjoyment, one whose sole use is to refine, and exalt, and extend, the range of our other powers, to confer on us higher susceptibilities of improvement, and a keener relish for all that is great and glorious in the universe.

In conformity with this view, the organ is found to be deficient in all barbarous and rude tribes of mankind, and large in the nations who have made the highest advances in civilization. It is small in atrocious criminals; and I have observed, that persons who are born in the lower walks of life, but whose talents and industry have raised them to wealth, are susceptible of refinement in their manners, and habits, and sentiments, in proportion to the development of this organ, and that of Love of Approbation. When it is small, their primitive condition is apt to stick to them through life; when large, they make rapid advances, and improve by every opportunity of intercourse with their superiors.

This faculty, then, joined with Love of Approbation, and using Constructiveness, Form, Colouring, and other knowing faculties as their instruments, produce all the ornaments of dress, architecture, and lead to the production of poetry, painting, sculpture, and the fine and ornamental arts. The Society of Friends, therefore, and the followers of Mr Owen, who declaim against ornament, ask us to shut up one of the greatest sources of enjoyment bestowed upon us. An elegant

vase, a couch, or chair, fashioned in all the delicacy of form and proportion that Ideality, aided by the other powers, can attain, or the human form attired in dress, in which grace, utility, and beauty, are combined, are objects which our faculties *feel* to be agreeable: the pleasure arising from them is natural, and of so excellent a quality, that it is at once acknowledged and approved of by intellect, and every other faculty of the mind.

In private life, Ideality generally displays itself as one element in producing correctness of taste. Great love of approbation may give a passion for finery, but we sometimes see intended ornaments turn out deformities, through a want of taste in their arrangement, and this, I conceive, to arise from a defective endowment of the faculty in question. If, on the other hand, we enter a house, in which exquisite taste reigns in every object, in which each particular ornament is made subservient to the general effect, and the impression from the whole is that of a refined and pleasing elegance; we may be almost certain of finding Love of Approbation joined with a large Ideality in one or both of the possessors. Indeed, where the degree of wealth is equal in different persons, we might almost guess at the extent of these two faculties, by the different degrees of splendour of their domestic establishment; and in cases where homeliness is the prevailing feature, while affluence is enjoyed, we may predicate a very moderate Ideality in the one or other of the heads of the family. I have frequently observed in persons who, from a humble origin, have become rich by commerce, an intense passion for this species of domestic splendour, and, without a single exception, I have remarked Love of Approbation and Ideality largely developed in their heads.

The following measurements of the breadth across the head, from Ideality to Ideality, will give an idea of the comparative size of the organ in several individuals, some of whom eminently display the faculty. The measurements do not denote the *absolute* size of Ideality in each, and are not given as such; for the absolute size of an organ is ascertained by mea-

surement from the medulla oblongata, to obtain the length, and the breadth is judged of by the expansion at the peripheral surface.

MASKS OR BUSTS FROM NATURE *.

From Ideality to Ideality.

	Inches.
In Mr Joseph Hume,	$5\frac{6}{8}$
Rev. Dr Chalmers,	$6\frac{3}{8}$
François, *Cordonnier*, Poet,	$6\frac{2}{8}$
Mr Haydon, Historical Painter,	$5\frac{7}{8}$
Mr Joseph, Sculptor,	$6\frac{1}{8}$
Mr Wordsworth, Poet,	6
Mr David Wilkie, R. A.	$5\frac{5}{8}$
Henri Quatre of France,	$5\frac{5}{8}$
David Haggart, Murderer,	$4\frac{6}{8}$
Mary Macinnes, Murderer,	4
Scott, executed at Jedburgh for Murder,	$4\frac{5}{8}$

SKULLS.

		Inches.
Bellingham, Murderer,		$4\frac{2}{8}$
Gordon, Murderer,		$4\frac{2}{8}$
New-Hollander,	No. 17,	$3\frac{5}{8}$
Ditto,	No. 18,	3
Ditto,	No.	$3\frac{4}{8}$
Hindoo,	No. 62,	$4\frac{1}{8}$
Ditto,	No. 63,	$4\frac{3}{8}$
Ditto,	No. 70,	$3\frac{7}{8}$
Negro,	No. 21,	$3\frac{7}{8}$
Ditto,	No. 22,	$4\frac{2}{8}$
European,	No. 44,	$4\frac{1}{8}$
Ditto,	No. 46,	$4\frac{6}{8}$
Raphael, Painter,		$5\frac{2}{8}$
La Fontaine, of France,		$4\frac{6}{8}$

* In Phrenological Society's Collection.

The relish for poetry or the fine arts is generally in proportion to the development of Ideality. It is essentially necessary to a player of tragedy. The tone or note of voice suitable to Ideality is elevated and majestic, and hence it is essential to enable the actor to feel and express the greatness of the personages whom he represents.

In some individuals the front part of this organ is most developed, in others the back part; and from a few cases which I have observed, there is reason to believe that the former is most intimately connected with beauty, and the latter with sublimity. The back part touches Cautiousness; and I suspect an excitement of this organ, in a moderate degree, is an ingredient in the emotion of the sublime. The roar of the thunder, or of the cataract; the beetling cliff suspended half way betwixt the earth and heaven, and threatening to spread ruin below by its fall,—impress the mind with feelings of terror; and it is only such objects that produce the sentiment of sublimity. It would be interesting to take two individuals with equal Ideality, but the one possessed of much, and the other of little, Cautiousness, to the Vale of Glencoe, the Pass of Borrowdale, the Cave of Staffa, or some other scene in which the elements of the sublime predominate, and to mark their different emotions. I suspect the large Cautiousness would give the most profound and intense sensations.

This faculty, like all others, may be abused. When permitted to take the ascendancy of the other powers, and to seek its own gratification, to the neglect of the serious duties of life, and when cultivated to so great an excess as to produce a finical and sickly refinement, it then becomes a source of great evils. It appears in Rousseau to have reached this state of diseased excitement. "The impossibility of finding actual beings (worthy of himself), threw me," says he, "into the regions of fancy; and seeing that no existing object was worthy of my delirium, I nourished it in an ideal world, which my creative imagination soon peopled to my heart's desire. In my continual ecstasies I drank in torrents of the most delicious sentiments which ever entered the heart

of man. Forgetting altogether the human race, I made society for myself of perfect creatures, as celestial by their virtues as their beauties, and of sure, tender, and faithful friends, such as I have never seen here below. I took such delight in gliding along the air with the charming objects with which I surrounded myself, that I passed hours and days without noting them; and losing the recollection of every thing, scarcely had I eaten a morsel, but I burned to escape," and return to this enchanted world. The theory of this condition of mind is simple and obvious. ROUSSEAU elevated every faculty in his imaginary personages, till it reached the standard of excellence fitted to please his large Ideality, and then luxuriated in contemplation of the perfection which he had created.

In common life the passion for dress, ornament, and finery, which in some individuals goes beyond all reasonable bounds, and usurps the place of the serious and respectable virtues, results from an abuse of Ideality, Wonder, and Love of Approbation, and is generally combined with a deficient development of Conscientiousness and Reflection.

In an hospital, Dr GALL found this organ considerably developed in a man who was insane; and remarked to the physicians who accompanied him, that he observed the exterior sign which indicated a talent for poetry. He possessed this talent in point of fact; for in his state of alienation, he continually composed verses, which sometimes were not deficient in point and vigour. He belonged to the lowest class, and had received no education. In the collection of M. ESQUIROL, Dr GALL saw a mask of an insane person, who also was habitually occupied in versifying; and in it the organ in question is considerably larger than any of the others.

This faculty corresponds in some degree to that of "Taste," admitted by Mr STEWART; only he regards taste as one of the powers acquired by habits of study or of business.

Dr THOMAS BROWN* treats of beauty as an original emo-

* Vol. iii. p. 134-5.

tion of the mind, and his doctrine might, with the change of names, be almost adopted by the Phrenologist in speaking of Ideality. According to our doctrine, the knowing and reflecting faculties perceive objects, as they exist in nature, say a landscape, or a Grecian temple; and the faculty of Ideality, excited into activity by their features, glows with a delightful and elevated emotion; and to the qualities in the external objects which kindle this lively sentiment of pleasure, we ascribe the attribute of beauty. Beauty, therefore, is perceived only when the knowing and reflecting faculties act in conjunction with Ideality. If the intellect acts alone, Ideality remaining quiescent, no strong emotion of beauty will be felt;—or, if a person is extremely deficient in Ideality, then the most lovely objects in external nature will appear to him invested in all their attributes of form, colour, size, and relative position; but he will never experience that sublime emotion, or that ecstatic delight, which draws forth the exclamation that the object contemplated is exquisitely beautiful. Dr Thomas Brown, in perfect conformity with this doctrine, says, "You are now in no danger of confounding that view of Beauty, which regards it as an *emotion*, dependent on the existence of certain previous perceptions or conceptions, which may induce *it;* but may also, by the operation of the common laws of suggestion, induce, at other times, in like manner, *other* states of mind, exclusive of that emotion,—with the very different doctrine, that regards beauty as the object of a peculiar internal *sense*, which might, therefore, from the analogy conveyed in that name, be supposed to be uniform in its feelings, as our other senses, on the presence of their particular objects, are uniform, or nearly uniform, in the intimations afforded by *them*. Such a *sense* of beauty," says he, "as a fixed regular object, we assuredly have not; but it does not follow, that we are without such an original susceptibility of a mere emotion, that is not, like sensation, the direct and uniform effect of the presence of its objects, but may vary in the occasions on which it rises, like our

other emotions; love, for example, or hate, or astonishment, which various circumstances may produce, or various circumstances may prevent from arising."

If Dr Brown had added to his theory, that some individuals possess from nature a great susceptibility of experiencing the emotion of beauty, while others appear almost insensible to it, as is the case also with the emotions of love, hate, and astonishment, which he mentions, and that this constitutional difference is one great cause of the different perceptions of beauty enjoyed by different persons, he would have rendered his explanation of the phenomena nearly complete.

Mr Stewart has written an Essay on Beauty, in which he arrives at the conclusion, that this word does not denote one single and simple emotion only, but that, in a variety of instances, in which external objects excite agreeable feelings, they are said to be beautiful, although the kinds of emotion which they call forth, are very different. Thus, it is correct speech to call a mathematical theorem beautiful, a rose beautiful, and a lovely woman beautiful; and yet the qualities of these three objects, and the kinds of emotion which they excite, are so different, that they have no common property, except that of the feeling excited by all of them being agreeable.

Mr Stewart appears to be correct in this observation, and it is valuable, in so far as it directs our attention to the vagueness of the word *beauty*; but it throws no light on the theory of the beautiful itself. Phrenology, however, enables us to supply Mr Stewart's deficiency in this respect. Every faculty is gratified with contemplating the objects to which it is naturally related. An elevated hymn pleases the faculty of Veneration, and is, on account of raising this delight, pronounced to be beautiful. A symmetrical shape gratifies the faculty of Form, and on account of the pleasure it produces, is also termed beautiful. A closely logical discourse pleases Causality and Comparison, and on this account is also said to be beautiful. Hence, the inventors of language, little prone to nice and metaphysical distinctions, framed the word

beauty, to express only the general emotion of pleasure, of a calm and refined nature, arising in the mind, on contemplating a variety of outward objects; and in this sense a person may be alive to beauty, who enjoys a very imperfect endowment of Ideality. But the function of this faculty is to produce peculiarly grand and intense emotions of a delightful nature, on surveying certain qualities in external objects; and it surpasses so vastly in strength and sublimity, the feelings of beauty communicated by the other faculties, that it may itself be regarded as the fountain of this delightful emotion, and be styled the Faculty of the emotion of Beauty.

Mr JEFFREY's article on Beauty, in the Supplement to the Encyclopædia Britannica *, appears to me to proceed on a misconception of the theory of Dr BROWN, and to be unsound and inconsistent with human nature. Mr JEFFREY conceives, that all "emotions of beauty and sublimity must have for their objects the sufferings or enjoyments of sentient beings;" and he rejects, "as *intrinsically absurd and incredible*, the supposition, that material objects, which obviously do neither hurt nor delight the body, should yet excite, by their mere physical qualities, the very powerful emotions which are sometimes excited by the spectacle of Beauty." Accordingly he lays it down, that the pleasure we enjoy in contemplating a Highland landscape, arises from associating, with the wilds which we gaze upon, ideas of the rude sons of the mist and the mountain who inhabit them; from our conjuring up, while we look upon their scenes, recollections of their loves, their hates, their strifes, their shouts of victory, and their lamentations over the dead; and from our ascribing the delight occasioned by these emotions to the external objects themselves, as their cause, and conceiving them to possess the quality of beauty, when in truth they are only the occasions which excite these other emotions in our minds. In the bust of Mr JEFFREY, Ideality is not the most prominent feature of the head; but the organs of Individuality, Comparison, and

* Page 181.

Causality are large; and this combination would produce precisely such a state of mind, on surveying a mountain-pass, as he here describes. Ideality not being very energetic, the emotions of sublimity and grandeur would be secondary in power; whereas Individuality, Comparison, and Causality, being more vigorous, and in ceaseless activity, would suggest a thousand *facts* and their *relations* connected with the scene. This state of mind, however, would be peculiar to those possessing this combination.

To put this theory to the test of experience, I accompanied a French gentleman to the Trosachs, and marked his emotions as he stood right in the gorge of the pass leading towards Loch Katrine. He was comparatively a stranger to the manners, customs, and history of Scotland; although, at the same time, from acquaintance with English literature, he might have possessed some few ideas concerning the inhabitants of the mountains to associate with the rocks which he beheld. He possessed, however, considerable Ideality, and a cultivated understanding. When the scene burst upon him, in the full effulgence of its glory, he stood in mute astonishment and delight, until I asked him, What *ideas* were passing in his mind? His answer was, "Mon Dieu, je sens, et je ne pense pas." I explained to him the motive of the question, and he declared that he experienced only emotions of the most intense and elevating kind; that every nerve thrilled with pleasure, and that he thought of nothing, but resigned himself entirely to these delightful sensations. On analysing his emotions he said, that he felt his mind excited to rapture, by the exquisite elegance of the trees and shrubs with which the mountains were clothed; that his soul was awed into sublimity, by the stupendous cliffs which towered in magnificence to the clouds; and that even the chill of fear crept silently along his nerves, as the projecting precipices were perceived threatening to fall, and cut off communication with the world around; and again he declared, that he thought not, and cared not who inhabited the wilds, until the force of the first and most exquisite impression was spent; and then his mind began to

be occupied with ideas of collateral objects, or coolly to think, and every moment thereafter the impression diminished in intensity, and at last ceased entirely to be felt.

On another occasion I accompanied a gentleman, also of education and a cultivated understanding, but with little Ideality, to the same spot. He looked calmly around and observed: "Pretty trees these! High hills! Terrible uproar of elements been here! Difficult pass for the Highlanders!" &c. &c. but exhibited no emotion, and no deep-toned sentiment of the sublime, like the other.

The first of these instances shewed, that the supposition "that material objects, which obviously do neither hurt nor delight the body, should yet excite, by their mere physical qualities, the very powerful emotions which are sometimes excited by the spectacle of beauty," is not quite so "intrinsically absurd and incredible," as Mr JEFFREY imagines; while the second instance indicated that Ideality is truly the faculty which feels the beautiful and the sublime, and that, where it is not powerful, the most magnificent scenes may be regarded with comparative indifference.

In composition, this faculty imparts splendour and elevation to the style, and it may manifest itself in prose as well as in poetry. The style of Lord BACON is remarkably imbued with the splendours of Ideality, sometimes to excess, while that of LOCKE is as decidedly plain; and the portraits of both shew that their heads correspond. HAZLITT's head, which I have seen, indicates a large development of Ideality, and the faculty glows in all his compositions. In Mr JEFFREY's head, as it appears in the bust, it does not predominate. The report was current at the time, that the review of Lord BYRON's Tragedies, which appeared in No. lxxii. of the Edinburgh Review (February 1822), was the joint production of these two celebrated authors; and keeping in view the fact, that Mr HAZLITT's Ideality is larger than Mr JEFFREY's, it would not be difficult, by a careful analysis of the article, to assign to each the sentences which he wrote. Mr JEFFREY's predominating intellectual organs are Individuality, which

treasures up simple facts and observations; Comparison, which glances at their analogies and relations, with Causality, which gives bearing and consistency to the whole. HAZLITT, on the other hand, possesses a large Comparison, respectable Causality, with a decidedly large Ideality, elevating and adorning all his intellectual conceptions. Proceeding on these views, I would attribute the following sentence to JEFFREY's pen, as characteristic of his manner. Speaking of the qualities of SHAKESPEARE's writings, the reviewer says, " Though time may have hallowed many things that were at first but common, and accidental associations imparted a charm to much that was in itself indifferent, we cannot but believe that there was an original sanctity which time only matured and extended; and an inherent charm, from which the association derived all its power. And when we look candidly and calmly to the works of our early dramatists, it is impossible, we think, to dispute, that, after criticism has done its worst on them; after all deductions for impossible plots and fantastical characters, unaccountable forms of speech, and occasional extravagance, indelicacy, and horrors; there is a facility and richness about them, both of thought and of diction; a force of invention, and a depth of sagacity; an originality of conception, and a play of fancy; a nakedness and energy of passion, and, above all, a copiousness of imagery, and a sweetness and flexibility of verse, which is altogether unrivalled in earlier or in later times; and places them, in our estimation, in the very highest and foremost place among ancient or modern poets *." In this passage, we have the minuteness of enumeration of Individuality, the discrimination of Comparison and Causality, and the good taste of a fair, but none of the elevation and ornament of a large, Ideality. In another part of the same review, we find the following sentences: In BYRON †, " there are some sweet lines, and many of great weight and energy; but the general *march* of the *verse* is cumbrous and unmusical. His *lines* do *not vibrate like po-*

* P. 416–17. † P. 420.

lished lances, at *once strong and light*, in the hands of his persons, but are *wielded like clumsy batons in a bloodless affray*."—" He has too little sympathy with the ordinary feelings and frailties of humanity, to succeed well in their representation. His soul is like a star, and dwells apart."—" It does not 'hold the mirror up to nature,' nor *catch the hues of surrounding objects*; but, *like a kindled furnace, throws out its intense glare and gloomy grandeur on* the *narrow scene which* it irradiates." Here we perceive the glow of Ideality, the simplicity of the former style is gone, and the diction has become elevated, figurative, and ornamental. I am not informed regarding the particular sentences which each of the above gentlemen wrote in this review; but these extracts will serve as brief examples of the differences produced on the style, when Ideality sheds few or many beams on the pen of the author; and I regard the probabilities as very strong, that the passages are assigned to their appropriate sources.

The organ is ascertained.

WONDER.

IMMEDIATELY above Ideality, a blank space appears in the busts and plates of the head; the function of this part of the brain was not ascertained when the other organs were numbered, and it therefore was left unmarked. The faculty connected with it is now determined, but for the reasons stated on page 58, no number is assigned to it.

Dr GALL observes, that some individuals imagine themselves to be visited by apparitions of persons dead or absent; and he asks, How does it happen, that men of considerable intellect often believe in the reality of ghosts and visions? Are they fools, or impostors? or, Is there a particular organization, which imposes, in this form, on the human understanding? and, How are such illusions to be explained? He then enters into a historical sketch of the most remarkable

instances of visions. SOCRATES spoke frequently and willingly to his disciples of a demon or spirit, which served him as a guide. Dr GALL remarks, that he is quite aware of the common explanation, that SOCRATES referred only to the force and justness of his own understanding; but adds, that if he had not himself believed in a genius communicating with him, the opinion that he had one would have been lost in the twenty-three years, during which ARISTOPHANES had made it a subject of ridicule, and his accusers would not have revived this as a charge against him. JOAN OF ARC also related an appearance of St MICHAEL to her, who told her that GOD had pity on France, and that she was commissioned to raise the siege of Orleans, and to instal CHARLES VII. as King at Rheims. TASSO asserted himself to have been cured by the aid of the Virgin MARY, and St SCHOLASTIC, who appeared to him during a violent attack of fever. In the historical notes which accompany the Life of TASSO, the following anecdote appears, extracted from the Memoirs of MANSO, Marquis of Villa, published after the death of TASSO, his friend.

" TASSO, in his delirium, believed that he conversed with familiar spirits. One day, when the Marquis endeavoured to drive these ideas from his mind, TASSO said to him, ' Since I cannot convince you by reason, I shall do so by experience; I shall cause the spirit, in which you refuse to believe, to appear to your own eyes.' I accepted the offer," says the Marquis, " and next day, when we sat by the fire conversing, he turned his eyes towards the window; and looking with stedfast attention, appeared so completely absorbed, that when I called to him, he did not answer. ' See!' said he, at length, ' See! my familiar spirit comes to converse with me.' I looked with the greatest earnestness, but could see nothing enter the apartment. In the mean time TASSO began to converse with this mysterious Being. I saw and heard himself alone. Sometimes he questioned, and sometimes answered; and from his answers, I gathered the sense of what he had heard. The subject of his discourse was so elevated, and the expressions so sublime, that I felt myself in a kind of ecstasy.

I did not venture to interrupt him, nor to trouble him with questions, and a considerable time elapsed before the spirit disappeared. I was informed of its departure by TASSO, who, turning towards me, said, 'In future you will cease to doubt.' 'Rather,' said I, 'I shall be more sceptical, for although I have heard astonishing words, I have seen nothing.' Smiling, he replied, 'You have perhaps heard or seen more than—' He stopt short; and, fearing to importune him by my questions, I dropt the conversation *." Dr GALL quotes this dialogue from "La Vie du TASSO, publiée à Londres en 1810;" and I have translated from Dr GALL's citation †.

SWEDENBORG believed himself miraculously called to reveal to the world the most hidden mysteries. "In 1743," says he, "it pleased the Lord to manifest himself to me, and appear personally before me, to give me a knowledge of the spiritual world, and to place me in communication with angels and spirits, and this power has been continued with me till the present day." "SWEDENBORG," says his biographers, "was a man of unquestionable sincerity, but one of the most extravagant enthusiasts that ever existed ‡."

Dr GALL remarked, in the first fanatic who fell under his observation, a large development of the part of the brain lying between the organs of Ideality and Imitation, and subsequently met with many similar instances. Dr JUNG STILLING, says he, whom he often saw with the late Grand Duke of BADEN, was a tailor in his youth, then a tutor, and afterwards doctor in medicine, moralist, divine, journalist, illuminatus, and visionary; and in him this part of the brain was largely developed. He believed firmly in apparitions, and wrote a book in exposition of this doctrine. In the *Maison de Detention* at Berne, Dr GALL saw a fanatic, who believed that JESUS CHRIST, surrounded by a brilliant light, as if a million of suns had combined their splendours, had ap-

* Sur les Fonctions du Cerveau, tome v. p. 341.

† For the original, see Rev. Mr BLACK's Life of TASSO, vol. ii. p. 240.

‡ Lib. cit. p. 342.

peared to him to reveal the true religion. A gentleman, who moves in the best society in Paris, asked Dr GALL to examine his head. The Doctor's first remark was, "You sometimes see visions, and believe in apparitions." The gentleman started from his chair in astonishment, and said, that he *had* frequent visions; but never, up to this moment, had he spoken on the subject to any human being, through fear of being set down for being absurdly credulous. On another occasion, Dr GALL, when he observed the development of the head of Dr W., said, that he ought to have a strong liking for the marvellous and supernatural. "For once," replied he, "you are completely mistaken, for I have laid down the rule, to believe in nothing which cannot be mathematically demonstrated." After talking with him on various scientific subjects, Dr GALL turned the conversation towards animal magnetism, which appeared a fit topic to put the mathematical rigour of his proofs to the test. He instantly became greatly animated, assured Dr GALL again very solemnly, that he admitted nothing as true that was not mathematically demonstrated; but added, he was convinced that a spiritual being acted in magnetism; that it operated at great distances; that no distance indeed presented an obstacle to its action, and that, on this account, it could sympathize with persons in any part of the world. "It is the same cause," continued he, "which produces apparitions. Apparitions and visions are rare, no doubt, but they undoubtedly exist, and I am acquainted with the laws which regulate their production. On this occasion," says Dr GALL, "I thought within myself, that my inference from his development was not so very erroneous as the worthy Doctor wished me to believe."

A man named HALLERAN, of Vienna, imagined himself continually accompanied by a familiar spirit; he saw the spirit, and conversed with it. When he reached his sixtieth year, his genius appeared as if he wished to leave him, and only on certain days in the month was he favoured with his presence. At Gersbach, near Durlach, in the Grand Duchy of Baden, Dr GALL knew a curate who was confined because he con-

ceived himself to have a familiar spirit. At Manheim there is a man who sees himself continually attended by several spirits: Sometimes they march at his side, in visible forms; at other times they attend him under ground. In these persons Dr GALL found the part of the brain in question largely developed. He states as questions for consideration, "Does this convolution form part of the organ of Imitation? and, Does its extreme development exalt the talent for mimicry, to such a degree as to personify simple ideas, and to give them, thus metamorphosed, a locality, out of the individual? or, Does it constitute parts both of Ideality and Imagination? or, finally, Does it constitute a separate organ? These points can be determined only by farther researches *."

Dr GALL mentions, that the organ appears large in the busts of SOCRATES, JOAN OF ARC, CROMWELL, SWEDENBORG, and other individuals by whom the tendency before described has been manifested.

Dr SPURZHEIM, in his recent work, "Phrenology †," observes, "There is still a sentiment which exerts a very great influence over religious conceptions, and which, in my opinion, contributes more than veneration to religious faith. Some find all things natural, and regulated by the laws of creation; many others are amused with fictions, tales of wonders, and miraculous occurrences. They find in every passing event extraordinary and wonderful circumstances, and are constantly searching after whatever can excite admiration and astonishment. This sentiment is to be observed among mankind at large, both among savages and civilized nations. In every age, and under every sky, man has been guided and led by his credulity and superstition. The founders of all nations have had a fabulous origin ascribed to them, and in all countries miraculous traditions and marvellous stories occur in ample abundance. There are many disposed to believe in dreams, sorcery, magic, astrology, in the mystic influence of spirits and angels, in the power of the devil, in second sight, and in miracles and incomprehensible representations of all

* Sur les Fonctions du Cerveau, tome v. p. 346. † P. 206.

sorts. Some, also, are disposed to have visions, and to see ghosts, demons, and phantoms. This sentiment gains credence to the true and also to the false prophet, aids superstition, but is also essential to faith and refined religion. It is more or less active, not only in different individuals, but also in whole nations. Its functions are often disordered, constituting one species of insanity.

"The legislators of antiquity, aware of the great influence of this faculty, made frequent use of it to enforce and to confirm their laws. They spoke in the name of God, of angels, or of supernatural powers. In our own days, the religious sects of Swedenborgians, Methodists, Quakers, and many others, particularly demonstrate its influence and presence. In dramatic representations, the introduction of ghosts, angels, transformations, and supernatural events, proclaims its activity both in the author, and in the public, by whom such exhibitions are relished and sought after.

"The existence of this feeling is certain. Its organ is situated anterior to Hope, and a great development of the convolutions on which it depends, enlarges, and elevates the superior and lateral parts of the frontal bone. It is remarkably prominent in the heads of Socrates, of Torquato Tasso, Dr Price, Young Stilling, Wesley, &c. My observations on it are extremely numerous, and I consider it as established."

My own observations on this organ are the following.—I have met with persons excessively fond of news, which, if extravagant, were the more acceptable; prone to the expression of surprise and astonishment in ordinary discourse; deeply affected by tales of wonder; delighting in the Arabian Nights' Entertainments, and the mysterious incidents abounding in the Waverley Novels; and in them I have uniformly found the part of the brain in question largely developed. When the organ predominates in an individual, there is a peculiar and unconscious turning up of the exterior angles of the eyelashes, expressive of surprise. In other persons, I have found the part of the brain in question small, and in them it was accompanied with a staid soberness of feeling, diametrically the

opposite of the manifestations above described. Such individuals were annoyed by every thing new or strange; they scarcely felt or expressed surprise, and had no taste for narratives leaving the beaten track of probability or reality, and soaring into the regions of supernatural fiction. On analysing these manifestations, they all appear to be referable to the sentiment of Wonder, an emotion which is quite distinguishable from those hitherto enumerated.

Philosophers have long been puzzled to account for the circumstance, that a particular form of furniture or dress is pleasing, and is regarded as even beautiful, when first introduced, but that it appears ridiculous and antiquated, after it has been superseded by a newer fashion. Probably one cause of this feeling may be found in the faculty now under consideration; and the agreeable impressions made on it by new objects, may be one source of the gratification which a change of fashion affords. Love of Approbation unquestionably prompts multitudes to *follow* the fashion, without much relish for novelty itself; but some individuals must take the lead, and there must be some principle in the mind to be gratified by mere change, which excites them to do so; and Wonder may contribute to this effect. Indeed, as every faculty has a useful and legitimate sphere of action, I am disposed to infer, that the legitimate tendency of this sentiment is to inspire the mind with a longing after novelty in every thing, and that its proper effect is to stimulate to invention and improvement. Fashion is not a real element of beauty in external objects; and to persons who possess a good endowment of Form, Constructiveness and Ideality, intrinsic elegance is much more pleasing and *permanently* agreeable, than forms of less merit, recommended merely by being new. Hence there is a beauty which never palls, and objects, over which fashion exercises no controul. A Chinese teapot may be rendered agreeable, by being fashionable, but will look ugly when the mode changes; while a Vase of exquisite proportions, will please in all countries and in all ages. The teapot I conceive to owe its attractions to the impression which its novelty makes on the faculty of Wonder; but when this has ceased, it is judged of by its pro

per qualities and condemned, from the inelegant proportions being then criticised by the eye of taste; while the vase, by gratifying the faculties which take cognizance of intrinsic beauty, continues always to please. This view is strengthened by the fact, that the greatest votaries of fashion have frequently execrably bad taste; a result perfectly accordant with the supposition, that the mere love of novelty is the chief element in this disposition.

The French in general possess a considerable development of the organs of Ideality, Wonder, and Love of Approbation; and they have long been celebrated as leaders of fashion. Their ordinary discourse, also, is replete with terms of admiration and approbation, which to Englishmen appear excessive. Every object is "*superbe*," "*magnifique;*" and the terms *bon*, *beau*, *excellent*, denote such faint praise as almost to imply disapprobation.

Captain Ross, R. N. mentioned to me, that young men, born and bred up in inland situations, who enter the Navy voluntarily, generally possess a large development of this organ, the gratification of which, he inferred, prompted them to choose the sea as a profession.

According to this view, Wonder may aid genius, by prompting to novelty in all the conceptions of the mind. Dr Samuel Johnson is strongly suspected of believing in ghosts and apparitions, which indicates an excessive endowment of this faculty; and his style is full of new words and unusual forms of expression, to which he was probably prompted by the same feeling. Dr Chalmers also, shews a strong tendency to coin new vocables, and occasionally to give strange turns to his discourse; which perhaps originates from Wonder acting with Comparison, as his brilliancy and elevation spring chiefly from Ideality. Mr Tennant, the author of Anster Fair, and Mr Hazlitt, shew some degree of the same disposition in their writings; and I have observed the organ full in both of their heads. The faculty prompts, as Dr Spurzheim remarks, to the use of machinery in poetry, and to the introduction of supernatural agency. In the portraits of Shakspeare, and the busts of Sir Walter Scott, it is large.

Dr SPURZHEIM concludes his account of this faculty with the following remarks. "The preceding facts," says he, "determined me formerly to designate this feeling by the name of Supernaturality; and it is certain that it is *principally manifested by a belief in miraculous and supernatural circumstances*, in the foundation of religion by supernatural means, and in its dogmatical points. As, however, the feeling may be applied both to natural and supernatural events, and in every case fills the mind with amazement and surprise, I do not hesitate to change the name of Supernaturality into that of *Marvellousness*. This name I prefer to that of *Wonder*, adopted by Mr COMBE, because, according to Dr JOHNSON's Dictionary, *wonder* is applicable only to surprise excited by natural objects, whilst *marvellousness* embraces both kinds of astonishment caused by natural and supernatural circumstances."

When Dr SPURZHEIM observes, in the foregoing passage, that this faculty is "*principally* manifested by a belief in miraculous and supernatural circumstances," I do not understand him to mean that this belief is its *legitimate function*. The period when Divine Power manifested itself by extraordinary means was brief, and is long since past; and philosophy cannot acknowledge any object or event that occurs in the present day as miraculous or supernatural; a special faculty, therefore, for belief in such objects, appears inadmissible. The fact, however, mentioned by Dr SPURZHEIM, that persons, in whom this organ is large, have a natural disposition to believe in the wonderful and miraculous is certain. Some individuals, so endowed, have informed me, that when any marvellous circumstance is communicated to them, the tendency of their minds is to believe it *without examination;* and that an effort of philosophy is necessary to *resist* the belief, instead of evidence being requisite to produce it. This tendency appears to me to arise from too great energy in this faculty, not directed by reflection; but it is not inconsistent with the idea, that the primary sentiment is that of Wonder. Every propensity and sentiment desires objects suited to afford it gratification; Acquisitiveness longs for wealth, Love of Ap-

probation for praise; and, in like manner, Wonder will ardently desire the marvellous. Individuals, therefore, in whom the organ is large, will delight in extraordinary narratives, the pleasure felt in them will render the intellect little prone to a severe scrutiny of their truth: and hence the tendency to believe in such communications is easily accounted for. Still, however, this longing for the marvellous appears to be an abuse of the sentiment. Philosophy does not recognise the "supernatural," while it admits surprise at new and extraordinary circumstances as a legitimate state of mind. With the greatest deference to Dr Spurzheim, therefore, Wonder appears to me to be the more correct name for this faculty; and in this analysis I am supported by the authority of the metaphysicians.

Dr Adam Smith, in the History of Astronomy *, calls Wonder a sentiment, and attempts to distinguish it from surprise. "We *wonder*," he says, "at all extreme and uncommon objects; at all the rarer phenomena of nature; at meteors, comets, eclipses; at singular plants and animals; and at every thing, in short, with which we have before been either little, or not at all acquainted; and we still wonder, though forewarned of what we are to see."

"We are *surprised*," he continues, "at those things which we have seen *often*, but which we least of all expected to meet with in the place where we find them; we are surprised at the sudden appearance of a friend, whom we have seen a thousand times, but whom we did not imagine we were to see there."

Dr Thomas Brown † also admits Wonder as a primitive emotion, and contends with success, that surprise and wonder are intrinsically the same feeling, only excited by different objects or occurrences. We wonder at the comet, from its novelty; we are surprised to meet a friend in Edinburgh, whom we believed to be in London; but it is the novel and unexpected *situation* in which we meet him, that causes the surprise, and not his appearance itself.

Dr Brown ‡ somewhat strangely observes, that "it seems

* Page 2. † Vol. iii. p. 59. ‡ Vol. iii. p. 55.

most probable that the feeling of *wonder*, which now attends any striking event that is unexpected by us, would *not* arise in the infant mind on the occurrence of events, all of which might be regarded as equally new to it; since *wonder* implies, not the mere feeling of *novelty*, but the knowledge of some *other circumstances*, which were expected to occur, and is, therefore, I conceive, inconsistent with *absolute ignorance*." The facts which we daily observe prove the very opposite of this doctrine. The organ of Wonder existing, every *new* object excites it, and creates wonder; and hence the greater the ignorance, the more frequent and more intense the astonishment, for then *every* occurrence is novel.

Dr Brown * observes more justly, that "we may be struck at the same time with the beauty or grandeur of a new object, and our mixed emotion of the novelty and beauty combined, will obtain the name of *admiration*."

Mr Stewart and Dr Reid do not treat of this emotion.

The subject of visions is still attended with considerable difficulty. I have met with cases similar to those recorded by Drs Gall and Spurzheim. In London Bedlam, I examined the head of a patient whose insanity consisted in seeing phantoms, and being led to act as if they were realities; although, as he himself stated, he was convinced by his understanding at the very time, that they were mere illusions; but could not regulate his conduct on this conviction. In him the organ of Form was well developed, and that of Wonder was decidedly large. When asked whether he experienced any sensation in the head when afflicted with visions, he pointed to the spot on each side where the organ of Wonder is situated, and said that he felt an uneasy sensation there.

I have also seen a person in the west of Scotland, who is liable to spectral illusions. He is thirty-eight years of age, in sound health, remarkably intelligent, and by no means liable to extravagance either in his sentiments or ideas. He mentioned, that there is almost constantly present to his mind the appearance of a carpet in motion, and spotted with figures.

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* Vol. iii. p. 57.

On visiting Glasgow, he saw a large log of wood, mounted on two axles and four wheels, passing along the street; and on returning home, the apparition of the timber and its vehicle, with the horses, driver, &c. stood before him in the dimensions and hues of actual existence. On another occasion, he saw a funeral pass by the bottom of Queen Street, Glasgow; and for some time afterwards, whenever he shut his eyes or was in darkness, the procession moved before his mind, as distinctly as it had previously done before his eyes. These are merely a few instances, out of many, of objects and beings whom he has seen reappearing to his fancy. He is not conscious of the appearance of the phantom of any object which he has not previously seen; and he is rarely, or almost never, troubled with these visions, when actual existences are before his eyes in broad light; but at all times they appear to a greater or less extent when his eyes are shut, or darkness prevails. His head is in general well formed; the different organs, with the exception of the organ of *Wonder* (which is decidedly large, and which seems to be the origin of this affection), are fairly proportioned; the Knowing Organs preponderating a little over the Reflecting.

He mentioned, that this peculiarity has descended to his son. Lately, the boy made up to what he conceived to be a beggar-man, and endeavoured to speak to him. The figure retired; and the boy followed, till it disappeared at a high wall, seeming to glide into it. The boy ran up to the wall, and groped it with his hands, when he discovered that the beggar was a spectral illusion. I had not an opportunity of examining the head of the son; but the father stated, that, in other respects, there was no peculiarity about his mental constitution.

This tendency of mind, occurring in remote and secluded districts of the Highlands, has probably given rise to the *second sight.* The individual above described, if placed in a situation where his chieftain, his clansmen, their dogs and their flocks, were almost the only animated objects presented to his eyes, would have been visited with frequent spectral appearances of them. If, after the occurrence of such apparitions,

the chief had been killed, or the clansmen drowned, or their flocks buried in the snow, the coincidence would have been marked, and the event held to have been predicted by an exercise of the second sight. Where nothing followed the spectres, nothing would be said of their appearance, just as happens in the case of dreams. A correspondent of the Phrenological Society *, gives an account of a Highland gentleman, who believed that an apparition of the second sight had occurred to himself; and he states, that, in his head, the organ of Wonder is large.

At the same time, it is difficult to comprehend how an exalted state of this organ should produce these effects, unless we suppose it to do so merely by exciting the organs of Form, Colouring, &c. to activity, so as to conjure up illusions fitted for the gratification of Wonder; just as involuntary activity of Cautiousness during sleep, excites the intellectual organs to conceive objects of terror, producing thereby frightful dreams. This theory is rendered probable by the fact, that diseased excitement of the knowing organs produces spectral illusions, independently of an affection of the organ of Wonder. Mr Simpson has communicated an admirable paper on this subject to the Phrenological Journal †, to which I shall have occasion afterwards to refer.

The general function of the organ is regarded as ascertained; but its metaphysical analysis is still incomplete.

17. CONSCIENTIOUSNESS.

This organ is situated on the posterior and lateral parts of the coronal surface of the brain, upwards from Cautiousness, and backwards from Hope. In Dr Gall's Plates, the function is marked as unascertained, so that the discovery and establishment of the organ are due to Dr Spurzheim.

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* No. vii. p. 362. † No. vi. p. 290.

The dispute among philosophers about the existence of a moral faculty in the human mind, is of very ancient standing, and it has been conducted with great eagerness since the publication of the writings of HOBBES in the middle of the seventeenth century. This author taught, "that we approve of virtuous actions, or of actions beneficial to society, from self-love; because we know, that whatever promotes the interest of society, has, on that very account, an indirect tendency to promote our own." He farther taught, that, "as it is to the institution of government we are indebted for all the comforts and confidence of social life, the laws which the civil magistrate enjoins are the ultimate standards of morality *."

CUDWORTH, in opposition to HOBBES, endeavoured to shew that the origin of our notions of right and wrong, is to be found in a particular power of the mind, which distinguishes truth from falsehood.

MANDEVILLE, who published in the beginning of the last century, maintained, as his theory of morals, That by nature man is utterly selfish; that among other desires which he likes to gratify, he has received a strong appetite for praise; that the founders of society, availing themselves of this propensity, instituted the custom of dealing out a certain measure of applause for each sacrifice made by selfishness to the public good, and called the sacrifice Virtue. "Men are led, accordingly, to purchase this praise by a fair barter;" and "the moral virtues," to use MANDEVILLE's strong expression, are, "the *political offspring* which *flattery* begot upon *pride*." And hence, when we see *virtue*, we see only the indulgence of some selfish feeling, or the compromise for this indulgence, in the expectation of some praise †."

Dr CLARKE, on the other hand, supposes virtue "to consist in the regulation of our conduct, according to certain *fitnesses* which we perceive in things, or a peculiar congruity of certain relations to each other;" and WOLLASTON, whose views are essentially the same, "supposes virtue to consist in

* STEWART's Outlines, p. 128. † Fable of the Bees, vol. i. p. 28-30. 8vo., London; 1728. and BROWN's Lectures, vol. iv. p. 4.

acting according to the *truth of things*, in treating objects according to their *real character*, and not according to a character or properties which they truly have not *."

Mr HUME, it is well known, wrote an elaborate treatise, to prove, "that utility is the constituent or measure of virtue:" In short, to use the emphatic language of Dr SMITH, "that we have no *other* reason for praising a man, than that for which we commend a chest of drawers †."

There is another system "which makes the *utility* according to which we measure virtue, in every case our *own* individual advantage. Virtue, according to this system, is the mere search of pleasure, or of personal gratification. It gives up *one* pleasure, indeed, but it gives it up for a *greater*. It sacrifices a present enjoyment; but it sacrifices it only to obtain some enjoyment, which, in intensity and duration, is fairly worth the sacrifice." Hence, in every instance in which an individual seems to pursue the good of others, *as good*, he seeks his own personal gratification, and nothing else ‡.

Dr HUTCHESON, on the other hand, strenuously maintains the existence of a moral sense, on which our perceptions of virtue are founded, independently of all other considerations.

Dr PALEY, the most popular of all the writers on moral philosophy, does not admit a natural sentiment of justice as the foundation of virtue, but is also an adherent of the selfish system, under a modified form. He makes virtue consist in "the doing good to mankind, in obedience to the will of God, and *for the sake of everlasting happiness* ||." According to this doctrine, "the will of GOD is our rule, but private happiness our motive," which is just selfishness in another form.

Dr ADAM SMITH, in his Theory of Moral Sentiments, endeavours to shew, that the standard of moral approbation is *sympathy* on the part of the impartial spectator, with the action and object of the party whose conduct is judged of.

Dr REID and Mr STEWART maintain the existence of a

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* BROWN's Lectures, vol. iv. p. 17. † Lib. cit. p. 32. ‡ Lib. cit. p. 64.
|| Lib. cit. vol. iv. p. 100, 101.

faculty in man, which produces the sentiment of right and wrong, independently of any other consideration.

These disputes are as far from being terminated among metaphysicians at present, as they were a century ago; and it will be observed, that one of the latest writers on the subject, namely, the Author of the article Moral Philosophy in the Edinburgh Encyclopædia, disputes the existence of a moral sense, and founds virtue upon religion and utility.

I have introduced this sketch of conflicting theories, to convey some idea of the boon which Phrenology would confer upon moral science, if it could fix, on a firm basis, this single point in the philosophy of mind, That a power or faculty exists, the object of which is to produce the sentiment of Justice, or the feeling of moral duty and obligation, independently of selfishness, hope of reward, fear of punishment, or any extrinsic motive; a faculty, in short, the natural language of which would be, "Fiat justitia, ruat cœlum." Phrenology does this by a demonstration, founded on numerous observations, that those persons who have the organ now under consideration large, experience powerfully the sentiment of justice, while those who have that part small, are little alive to this emotion. This evidence is the same in kind as that adduced in support of the conclusions of physical science.

The faculty produces the feeling of obligation, incumbency, right and wrong, for which we have no single definite expression in the English language; just as Ideality produces the sentiment of Beauty. Justice is the result of this sentiment, acting in combination with the intellectual powers. The latter investigate the motives and consequences of actions; but, after having done so, they, of themselves, experience no emotions. In surveying human conduct, however, as soon as the intellect has thoroughly penetrated into the springs from which it proceeds, a feeling of decided approval or condemnation, distinct from all other sentiments, and from pure intellection, arises in the mind; and this is produced by the faculty of Conscientiousness.

This faculty is of the very highest importance as a regulator of all the others. If Combativeness be too active, Conscientiousness prescribes a limit to its indulgence; it permits defence, but no malicious aggression: if Acquisitiveness urge too keenly, it reminds us of the rights of others: if Benevolence tend towards profusion, this faculty issues the admonition, Be just before you be generous: if Ideality aspire to its high delights, when duty requires laborious exertions in a humble sphere, Conscientiousness supplies the curb, and bids the soaring spirit stoop its wing.

Nay, not only does it operate as a curb upon our too active desires, but as a spur to excite the faculties, when too feeble in their energy. If Benevolence be weak, Conscientiousness proclaims, in a voice of authority, that it is our DUTY to relieve the miserable;—if Acquisitiveness be too feeble to prompt to industry, this sentiment calls aloud on us to labour, that we may do justice to those around us. From this regulating quality Conscientiousness is an important element in constituting a practical judgment.

When this faculty is powerful, the individual is disposed to regulate his conduct by the nicest sentiments of justice: there is an earnestness, integrity, and directness in his manner, which inspire us with confidence, and give us a conviction of his sincerity. Such an individual desires to act justly from the love of justice, unbiassed by fear, interest, or any sinister motive.

The activity of this faculty takes a wider range than respect merely to the legal rights and property of others. It prompts those, in whom it is strong, to do justice in judging of the conduct, the opinions, and the talents of others. Such persons are scrupulous, and as ready to condemn themselves as to find fault with others. When predominant, it leads to punctuality in keeping appointments, because it is injustice to sacrifice the time and convenience of others, by causing them to wait till our selfishness finds it agreeable to meet them. It prompts to ready payment of debts, as a piece of justice to those to whom they are due. It will not permit

even a tax-collector to be sent away unsatisfied, from any cause except inability to pay; because it is injustice to him, as it is to clerks, servants, and all others, to require them to consume their time in unnecessary attendance, for what is justly due and ought at once to be paid. It leads also to great reserve in making promises, but to much punctuality in performing them. It gives consistency to the conduct, because, when every sentiment is regulated by justice, the result is, that "daily beauty in the life" which renders the individual in the highest degree useful and respectable. It communicates a pleasing simplicity to the manners, which commands the esteem, and wins the affections, of all well constituted minds.

A deficiency of this sentiment produces effects exactly opposite. The weakness of the faculty appears in the general sentiments of the individual, although circumstances may place him beyond reach of temptation to infringe the law. The predominant propensities and sentiments then act without this powerful regulator. If Benevolence and Adhesiveness attach us to a friend, then we are blind to all his imperfections, and extol him as the most matchless of human beings. If he happen to offend us, then he becomes a monster of ingratitude and baseness; he passes in an instant from an angel to a demon. If Conscientiousness had been large, he would have been viewed all along as a man, and the esteem towards him would have been regulated by principle, and the offence candidly dealt with. If Love of Approbation be large, and Conscientiousness deficient, then it prompts to the adoption of every means that will please, without the least regard to their justice and propriety. If an individual have a weak point in his character, Love of Approbation will then lead to flattering it; if he have extravagant expectations, it will join in all his anticipations; if he be displeased with particular persons, Love of Approbation will affect to hate with his hate, altogether independent of justice. In short, the individual in whom this faculty is deficient, is apt to act and also to judge of the conduct of others, exactly according to his predominant sentiments for the time: he is friendly when under the im-

pulse of Benevolence ; severe when Destructiveness predominates ; admires, when his pride, vanity, or affection, give him a favourable feeling towards others, and condemns when his sentiments take an opposite direction, still unregulated by principle. He is not scrupulous, and rarely condemns his own conduct, or acknowledges himself in the wrong.

The laws of honour, as apprehended by some minds, are founded on an absence of Conscientiousness, with a great predominance of Self-Esteem and Love of Approbation. If a gentleman is conscious that he has unjustly given another offence, it is conceived by many that he degrades himself by making an apology ; that it is his duty to fight, but not to acknowledge himself in fault. This is the feeling produced by a powerful Self-Esteem and Love of Approbation, with a great deficiency of Conscientiousness. Self-Esteem is mortified by an admission of fallibility, and Love of Approbation gives the feeling that the esteem of the world will be lost by such an acknowledgment ; and if no higher sentiment be present, in a sufficient degree, the wretched victim goes to the field and dies in support of conduct that is truly indefensible. If Conscientiousness be strong, the possessor feels it no degradation to acknowledge himself in fault, when he is aware that he is wrong ; in fact he rises in his own esteem by doing so, and knows that he acquires the respect of the world ; while, if he is fully conscious of being in the right, there is none more inflexible than he.

This sentiment is essential to the formation of a truly philosophic mind, especially in moral investigations. It produces the desire of discovering truth, the tact of recognising it when discovered, and that perfect reliance on its invincible supremacy, which gives at once dignity and peace to the mind. A person in whom it is deficient, views all propositions as mere opinions ; esteems them exactly as they are fashionable or the reverse, and cares nothing about the evidence on which they rest. Love of Approbation and Secretiveness, joined with this sentiment deficient, lead to paradox ; and if Combativeness is added, there will be a tendency to general scepticism, and

the denial or disputation of the best-established truths on every serious subject.

No sentiment is more incomprehensible to those, in whom the organ is small, than Conscientiousness. They are able to understand conduct, proceeding from ambition, self-interest, revenge, or any other motive; but that determination of soul, which suffers obloquy and reproach, nay death itself, for the pure and disinterested love of truth, is to them utterly unintelligible. They regard it as a species of insanity, and look on the individual as "essentially mad, without knowing it." Madame De Stael narrates of Buonaparte, that he never was so completely at fault, in his estimate of character, as when he met with opposition from persons actuated by the pure principle of integrity alone. He did not comprehend the motives of such a man, and could not imagine how he might be managed. The maxim, that "every man has his price," will pass as profoundly discriminative with those in whom Acquisitiveness or Love of Approbation is very large, and Conscientiousness moderate; but there are minds whose deviation from the paths of rectitude no price could purchase, and no honours procure; and those, in whom Conscientiousness, Firmness, and Reflection, are large, will give an instinctive assent to the truth of this proposition.

I have observed that individuals, in whom Love of Approbation was large and Conscientiousness not in equal proportion, were incapable of conceiving the motive which could lead any one to avow a belief in Phrenology, while the tide of ridicule ran unstemmed against it. If the public opinion should change, such persons would move foremost in the train of its admirers: They instinctively follow the doctrines that are most esteemed from day to day; and require our pity and forbearance, as their conduct proceeds from a great moral deficiency, which is their misfortune rather than their fault. The fact that this organ is occasionally deficient in individuals in whom the organs of Intellect are amply developed, and the animal propensities strong, accounts for the unprincipled

baseness and moral depravity exhibited by some men of unquestionable talents.

It is here, as in other cases, of the greatest importance to attend to the distinct functions of the several faculties of the mind. No mistake is more generally committed than that of conceiving, that, by exercising the faculty of Veneration, we cultivate those of Benevolence and Justice; but if Veneration be large, and Conscientiousness small, a man may be naturally disposed to piety and not to justice; or if the combination be reversed, he may be just and not pious, in the same manner as he may be blind and not deaf, or deaf and not blind. Deficiency of Veneration does not necessarily imply profanity; so that although an individual will scarcely be found who is profane and at the same time just, yet many will be found who are just and not pious, and *vice versa.*

This faculty, when powerful, is attended with a sentiment of its own paramount authority over every other, and it gives its impulses with a tone which appears like the voice of heaven. The scene in "The Heart of Mid-Lothian," in which Jeany Deans is represented giving evidence on her sister's trial at the bar of the High Court of Justiciary, affords a striking illustration of its functions and authority, when supported by piety. A strong sense of the imperious dictates of Conscientiousness, and of the supreme obligation of truth, leads her to sacrifice every interest and affection which could make the mind swerve from the paths of duty; and we perceive her holding by her integrity, at the expence of every other feeling dear to human nature.

Repentance, remorse, a sense of guilt, and demerit, are the consequences of this faculty, when the actions have been in opposition to its dictates. It is a mistake, however, to suppose, that great criminals are punished by the accusations of conscience; for this organ is generally very deficient in men who have devoted their lives to crime, and, in consequence, they are strangers to the sentiment of remorse. HAGGART felt regret for having murdered the jailor of Dumfriess, but no remorse for his thefts. His large Benevolence induced the

uneasy feeling on account of the first crime, and his small Conscientiousness was the cause of his indifference to the second. If Conscientiousness had been strong, he could not have endured the sense of the accumulated iniquities with which his life was stained. In Bellingham, both Benevolence and Conscientiousness are small, and he manifested equal insensibility to justice and mercy, and testified no repentance or remorse.

Dr Gall does not admit a faculty and organ of Conscientiousness. He formerly considered remorse as the result of the opposition of particular actions of an individual to his predominant dispositions; and, according to him, there were as many consciences as faculties: for example, if a person, in whom Benevolence was large, injured another, this faculty would be grieved; and this he considered as regret or repentance. If a usurer or a libertine neglected an opportunity, they would repent, the first for not having gratified Acquisitiveness, the latter for not seducing some innocent victim. Dr Gall called this *natural conscience*, and said, that we could not trust to it; and hence, that laws and positive institutions became necessary. Dr Spurzheim answered this argument in an able manner, and shewed that the mere feeling of regret is totally different from that of remorse. We may regret that we lost a pair of gloves, or spent half-a-crown; but this feeling bears no resemblance to the upbraidings of conscience for having robbed a neighbour of his right, committed a fraud, or uttered a malevolent falsehood. Dr Gall now regards Benevolence as the moral faculty: but the sentiment of right and wrong is as clearly distinguishable from mere goodness or kindness, as Hope is from Fear; and, besides, positive facts prove that the two feelings depend on different organs.

This organ deficient, and Secretiveness large, and especially when the latter is aided by Ideality and Wonder, produces a natural tendency to lying, which some individuals, who have possessed the advantages of education and good society, have never been able to overcome.

Some criminals, on being detected, confess, and seem to

court punishment, as the only means of assuaging the remorse with which their own minds are devoured. The Phrenological Society has a cast of the skull of one person who displayed this desire to atone for his crime. It is that of JOHN ROTHERHAM, who met a servant girl on the highway and murdered her, out of the pure wanton impulse of Destructiveness; for he did not attempt to violate her person; and of her property, he took only her umbrella and shoes. When apprehended, he confessed his crime,—insisted on pleading guilty,—and, with great difficulty, was induced by the judge to retract his admission. The organ is large in him. He appears to have acted under an excessive influence of Destructiveness.

JAMES GORDON, on the contrary, who murdered the pedlar boy in Eskdale Muir, stoutly denied his guilt, and, after conviction, abused the jury and judge for condemning him. Before his execution, he admitted that his sentence was just. In him, the organ of Conscientiousness is defective.

The organ is very large in Mrs H., the Rev. Mr M., and in Dr HETTE, who all manifested the sentiment powerfully. Considerable attention is requisite to discriminate accurately the size of this organ. When Firmness is large, and Conscientiousness small, the head slopes at an acute angle downwards from Firmness, as in HAGGART and King ROBERT BRUCE. When both Firmness and Conscientiousness are large, the head rises and again descends in a full and rounded arch from Cautiousness to Cautiousness, as in the Rev. Mr M. When both of these organs are small, the head does not rise, but goes off flat from Cautiousness to Cautiousness, as in the boy GIBSON, and in MARY STREET, a child distinguished like him for lying and deceit.

The *difference of development* of this organ in different nations and individuals, and its combinations with other organs, enable us to account for the differences in the notions of justice entertained at different times, and by different people. The sentiment of Truth is found by the English Judges to be so low in the Africans, the Hindoos, and in the aboriginal Americans, that the natives of these countries are not received

as witnesses in the Colonial Courts; and it is a curious fact, that a defect in the organ of Conscientiousness is a reigning feature in the skulls of these nations, in possession of the Phrenological Society. The notions of justice of that individual are most fit to be assumed as a standard, in whom this organ is decidedly large, in combination with a large endowment of the other moral sentiments and reflection; just as we assume the person possessed of the greatest organ of Tune, in combination with the organs of the moral sentiments and reflection, to be the best judge of musical compositions. It is obvious, also, that laws, or positive commands, ordering and forbidding certain actions, become necessary, as rules to those who do not possess a sufficient endowment of this sentiment from nature, to regulate their conduct. Those who are favourably gifted, are, in the language of St Paul, "a law unto themselves."

It has been objected, that persons possessing a large development of this organ, not unfrequently act in opposition to the dictates of the sentiment, and practise selfishness, or sacrifice justice to ambition, exactly as those do in whom the organ is small; and it is asked, What becomes of the organ on such occasions? The plurality of organs and faculties explains this phenomenon. Conscientiousness is not the only faculty in the mind, and, although it is paramount in authority, it is not always so in strength. A person in whom Benevolence and Destructiveness are both large, may, under special circumstances, which peculiarly excite Destructiveness, manifest that faculty in rage, revenge, or undue severity, in direct opposition to Benevolence. In like manner, an individual in whom Acquisitiveness and Self-Esteem are large, may, if these are very forcibly addressed, obey their impulse in opposition to that of Conscientiousness; but the benevolent man, when the temptation is past, feels the opposition between his conduct and the dictates of Benevolence; and, in like manner, the individual last supposed, on cool reflection, becomes conscious of the opposition betwixt his unjust preference of himself, and the dictates of Conscientiousness; and both repent,

and will make atonement, and desire to avoid repetition of such errors. If Benevolence and Conscientiousness had been small, they would not have felt that their actions were wrong; they would have experienced no remorse; and their lower faculties would have operated with greatly increased violence.

Another difficulty is experienced in the doctrine, that Conscientiousness is merely a sentiment, and does not form specific ideas of what is just. This will be best removed by an example: A judge hears one side of a cause, and Conscientiousness, acting on the statement presented to it, through the medium of the intellect, produces the feeling that this first party is in the right. The other litigant is next heard, new facts appear, and Conscientiousness may now produce the feeling that justice lies on his side. If this faculty itself had formed specific ideas of what is just, it would have been an intellectual power, and reasoning would have been in proportion to it, which is not the case; but, as it is only a sentiment, its real function is to produce an emotion of justice or injustice, on the particular case or assemblage of facts presented to it by the intellect. An illustration of this doctrine is found in the "Hermit" by PARNELL. The angel throws the servant over the bridge; and this is felt to be unjust, while nothing more is known than the result; but when the intellect is afterwards informed, that he intended next night to murder his master, Conscientiousness feels that his destruction by the angel was just. This is not Conscientiousness giving opposite decisions on the same case; but the intellect presenting different cases, or different views of the same case, and Conscientiousness producing its peculiar emotion, in regard to each as it is laid before it.

This organ is occasionally found diseased, and then the most awful sentiments of guilt, generally imaginary, harrow up the mind. I have seen two individuals labouring under this disease. One of them believed himself to be in debt to an enormous amount, which he had no means of paying. The other imagined himself to be guilty of murder, and every variety of wickedness contained in the records of iniquity; when, in fact, the whole conduct of both while in health, had

been marked by the greatest honour and scrupulosity. When this organ, and that of Cautiousness, are diseased at the same time, the individual imagines himself to be the most worthless of sinners, and is visited with fearful apprehensions of punishment. Such patients sometimes present a picture of despair which is truly appalling. Slight degrees of disease of these organs, not amounting to insanity, are not unfrequent in this country, and produce an inward trouble of the mind, which throws a gloom over life, and leads such persons to see only the terrors of religion.

In the first edition of this work, I stated that gratitude probably arises from this faculty; but Sir G. S. MACKENZIE, in his "Illustrations of Phrenology," has shewed that "gratitude" is much heightened by Benevolence,—a view in which I now fully acquiesce.

It is premature to speak of the combinations of the faculties, before we have finished the detail of the simple functions; but this is the most proper occasion, in other respects, to observe, that Phrenology enables us to account for the origin of the various theories of morals before enumerated.

HOBBES, for instance, denied every natural sentiment of justice, and erected the laws of the civil magistrate into the standard of morality. This doctrine would appear natural and sound to a person in whom Conscientiousness was very feeble; who never experienced in his own mind a single emotion of justice, but who was alive to fear, to the desire of property, and other affections which would render security and regular government desirable. It is probable that HOBBES was so constituted.

MANDEVILLE makes selfishness the basis of all our actions, but admits a strong appetite for praise; the desire for which, he says, leads men to abate other enjoyments, for the sake of obtaining it. If we conceive MANDEVILLE to have possessed a deficient Conscientiousness, and a large Love of Approbation, this doctrine would be the natural language of his mind.

Mr HUME erects utility, to ourselves or others, into the standard of virtue; and this would be the natural feeling of a

mind in which Benevolence and Reflection were strong, and Conscientiousness weak.

PALEY makes virtue consist in obeying the will of GOD, as our rule, and doing so for the sake of eternal happiness as the motive. This is the natural language of a mind in which the selfish or lower propensities are considerable, and in which Veneration is strong, and Conscientiousness not remarkable for vigour.

CUDWORTH, HUTCHESON, REID, STEWART and BROWN *, on the other hand, contend most eagerly and eloquently for the existence of an original sentiment or emotion of justice in the mind, altogether independent of other considerations; and this is the natural feeling of persons in whom this faculty is powerful. A much respected individual, in whom this organ is predominantly large, mentioned to me, that no circumstance in philosophy occasioned to him greater surprise, than the denial of the existence of a moral faculty; and that the attempts to prove it, appeared to him like endeavours to prop up, by demonstration, a self-evident axiom in mathematical science.

The organ is regarded as established.

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* I embrace this opportunity of paying a humble tribute to the talents of the late Dr THOMAS BROWN. The acuteness, depth, and comprehensiveness of intellect displayed in his works on the Mind, place him in the highest rank of philosophical authors; and these great qualities are equalled by the purity and vividness of his moral perceptions. His powers of analysis are unrivalled, and his eloquence is frequently splendid. His "Lectures" will remain a monument of what the human mind was capable of accomplishing, in investigating its own constitution, by an imperfect method. In proportion as Phrenology becomes known, the admiration of his genius will increase; for it is the highest praise to say, that, in regard to many points of great difficulty and importance in the Philosophy of Mind, he has arrived, by his own reflections, at conclusions harmonizing with those obtained by phrenological observation. Of this, his doctrine on the moral emotion discussed in the text, is a striking instance. Sometimes, indeed, his arguments are subtle, his distinctions too refined; and his style is circuitous; but the Phrenologist will pass lightly over these imperfections, for they occur only occasionally, and arise from mere excess of the faculties of Secretiveness, Comparison, Causality, and Wit; on a great endowment of which, along with Concentrativeness, his penetration and comprehensiveness depended. In fact, he possessed the organs of these powers largely developed, and they afford a key to his genius.

18. FIRMNESS.

This organ is situated at the posterior part of the coronal surface of the head, close upon the middle line.

Dr Gall observed, that persons of a firm and constant character have this part of the brain much developed; and Lavater had previously distinguished the same configuration, in concomitance with that kind of disposition. It is difficult to determine, by analysis, the ultimate principle of this faculty. Dr Gall remarks, that, properly speaking, Firmness is neither an inclination nor a faculty; "*c'est une manière d'être qui donne à l'homme une empreinte particulière que l'on appelle le caractère;* he who is deficient in it," says he, "is the sport of external circumstances, and of communicated impressions." Its effects, says Dr Spurzheim, are mistaken for Will; because those in whom it is large are prone to use the phrase "I will," with great emphasis, which is the natural language of determination; but this feeling is different from proper volition. It gives fortitude, constancy, perseverance, determination, and, when too energetic, produces obstinacy, stubbornness, and infatuation. It will be found very large in stubborn and untractable children.

The organs of Self-Esteem, Concentrativeness, and Firmness, form a group which has no relation to external objects; their influence terminates on the mind itself; and they add only a quality to the manifestations of the other powers: thus Firmness, acting along with Combativeness, produces determined bravery; with Veneration, sustained devotion; and with Conscientiousness, inflexible integrity. It gives perseverance, however, in acting only upon the other faculties which are possessed in an available degree. An individual having much Firmness and considerable Tune, may persevere in making music;—if Tune were greatly diminished, he would not be disposed to persevere in that attempt; but if he possessed much Causality, he might persevere in abstract study. At the same time Dr Gall justly remarks, that Firmness of cha-

racter ought not to be confounded with perseverance in gratification of the predominating dispositions of the mind. Thus, an individual, in whom Acquisitiveness is the strongest propensity, may, although Firmness be deficient, exhibit unceasing efforts to become rich, but he will be vacillating and unsteady in the means which he employs;—he will to-day be captivated with one project; to-morrow with another; and the next day with a third; whereas, with Firmness large, he would adopt the plan which appeared to him most promising, and steadily pursue it to the end.

When this organ predominates, it gives a peculiar hardness to the manner, a stiffness and uprightness to the gait, with a forcible and emphatic tone to the voice.

A due degree of it is essential to the attainment of eminence in any difficult pursuit. Dr GALL observes, that, when it is large, the motto of the individual will be, "*Tu ne cede malis, sed contra audacior ito.*" It produces the "*tenax propositi vir.*" The organ is larger in the British than in the French, and the latter are astonished at the determined perseverance of the former, in the prosecution of their designs, whether these relate to the arts, sciences, or war. NAPOLEON knew well the weakness of the French character in this point, and, in his conversations, recorded by Count LAS CASES, frequently complains of it. In war, the effects of this organ are very conspicuous in the conduct of the two nations. The French, under the influence of a large Combativeness and moderate Cautiousness, make the most lively and spirited attacks, shouting and cheering as they advance to the charge; but if steadily resisted, their ardour abates; and, from deficiency in Firmness, they yield readily to adversity. The British, on the other hand, advance to the assault with cool determination, arising from great Firmness, and considerable Cautiousness and Secretiveness; and although repulsed, they are not discomfited, but preserve presence of mind to execute whatever may appear most advisable, in the circumstances which have occurred.

This faculty contributes greatly to success in any enterprise, by communicating the quality of perseverance. Exhaustion will damp the ardour of the bravest after much exertion, and hence he who is able to maintain his faculties in a state of vivid application for the greatest length of time, will at last frequently succeed, by merely wearying out his opponent. Fortitude and patience, also, as distinguished from active courage, result from this faculty. The organ is large in the American Indians, and their powers of endurance appear almost incredible to Europeans. Dr GALL found it very large in a highwayman, who was exceedingly hardened in crime. He was kept in close confinement for a considerable time, with the view of forcing him to disclose his accomplices; but this had no effect, and he was then put to the torture by beating. Finding this infliction intolerable, he strangled himself with his chain. After his death, the parietal bones were found separated precisely at the point where the organ of Firmness is situated. Dr GALL could not determine whether the separation arose from the violent strangulation, the excessive energy of the organ, or from accident; but records the fact, to call attention to similar cases, should they occur in future. This organ, and that of Destructiveness, are very large also in JOHN THURTELL, executed for the murder of WEARE, and he manifested both powerfully in his conduct. The organ is also very large in King ROBERT BRUCE; and he was distinguished for unshaken firmness, in circumstances in which an ordinary mind would have been overwhelmed by despair. It is large in D. HAGGART, who also manifested determination in crime and constancy in suffering, in a remarkable degree.

When the organ is small, the individual is prone to yield to the impulses of his predominating feelings. When Benevolence assumes the sway, he is all kindness; when Combativeness and Destructiveness are excited, he will be passionate, outrageous, and violent: and thus afford a spectacle of habitual weakness and inconsistency. If Love of Approbation and Benevolence be large, and Firmness small,

solicitations will, with great difficulty, be resisted. The organ is very small in the cast of Mrs H., and she manifested much unsteadiness of purpose.

I am not aware that the metaphysicians admit any faculty corresponding to this sentiment. It exercises a great influence in forming the character, and its omission is very important, in any system of mental philosophy.

The effects of disease of the organ seem not to have been observed. We may infer, that they will be exaltation of the function, namely, extreme stubbornness and infatuation.

The organ is regarded as established.

Order II.—INTELLECTUAL FACULTIES.

These faculties communicate to man and animals knowledge of their own internal sensations, and also of the external world; and their object is to know existence, and to perceive qualities and relations. They consist of three genera; the first includes the Five Senses; the second, those powers which take cognizance of external objects; named Knowing or Perceptive Faculties; and the third, the faculties which trace abstract relations, and reason, or reflect.

Genus I.—EXTERNAL SENSES.

By means of the Five Senses, man and animals are brought into communication with the external world. Dr Spurzheim, in his "New Physiognomical System," and his recent work, "Phrenology," gives admirable treatises on the senses; of which I avail myself largely in the following pages.

The opinions entertained by philosophers, in regard to the functions of the senses, have been whimsical, extravagant, and contradictory. Since the time of Bacon and Locke, the greater number of philosophical systems rest on the axiom of Aristotle, that all ideas come into the mind, by means of the external senses. According to this notion, he who possesses them in the highest state of perfection, is able to manifest most powerfully the faculties of the mind; or, in other words, the faculties, both of man and animals, ought to be proportionate to the perfection of the five senses, and to the education bestowed upon them. Daily experience, however, contradicts this hypothesis.

Philosophers of another class maintain, that the mind acts independently of all organization, and that the senses, instead of being instruments of action, are rather impediments to it. They complain much of the illusions of the five senses; and

they despise all testimony, and all conclusions grounded upon sensation. Such notions are unworthy of being refuted.

A great many philosophers have also attributed to the external senses many acts which are performed by the internal faculties alone. For instance, HELVETIUS has said, that man owes his arts to the structure of his hands; and that, if the hoof of the horse had been joined to the human arm, he would have been still wandering wild in the woods. But many animals have instruments equally curious and perfect in their structure as those to which peculiar capacities of mind are attributed in man; and yet these instruments do not produce in them the corresponding functions. Monkeys have hands almost as nicely formed as those which are attached to the human arm; but, Do monkeys put wood upon the fire to support combustion? or, Do they construct works of art? According to this opinion, also, insects, craw-fish, lobsters, and still more the cuttle-fish, ought to have exact ideas of extension, of size, and of the theorems of geometry, in consequence of their numerous and perfect organs of touch.

In point of fact, however, the external instruments are often similar, while the functions performed by them are quite different. The hare and rabbit have similar feet; yet the hare lies on the surface of the fields, while the rabbit burrows under ground. We have also examples of similar functions observed in animals which have instruments quite different. The proboscis is to the elephant what the hand is to man and to the monkey. The hands of monkeys, and the feet of parrots and squirrels, are certainly different; yet, by means of these instruments, they all move their food to their mouths in eating. In order to dig up truffles, the hog ploughs the earth with his snout, and the dog scratches it with his feet.

Other philosophers, again, have taught, that the functions of the senses are not ordained by nature, but acquired by experience. For example, the metaphysicians have written much about the *rectification* of the sense of sight, by means of touch; and about what they call the *acquired perceptions* of sight.

Each sense, however, performs its functions in consequence of its own innate constitution alone, and the relations of every sense to external impressions are determinate, and subjected to positive laws. If an odour make an impression upon the olfactory nerve, the impression is immediately found to be agreeable or disagreeable; and this feeling arises from the constitution of the sense, and the relation established betwixt it and the odorous particles which excite it to activity. The functions of every sense depend only on its peculiar organization: and hence no preceding exercise or habit is necessary, in order to acquire the special power of any sense. If the organization be perfect, the functions are perfect also; and if the organization be diseased, the functions are deranged, notwithstanding all preceding exercise. If the optic apparatus be perfect in newly hatched birds, their sight is perfect; as is the case with chickens, ducks, partridges, and quails: If, on the contrary, at the first entrance into life, the organization of the eyes or the ears be imperfect, the power of the animal to see or hear is proportionally deficient. In adult persons, vision is deranged if the eyes be diseased. In old persons, the functions of the five senses lose their energy, because the vital power of the organs is diminished.

It is indeed ridiculous to suppose that Nature should have produced any sense which could not perform its functions, without being supported by another and a different sense:—that, for example, we should not be able to see without feeling, or to hear without seeing. Hence the propositions appear self-evident,—that no sense acquires its functions by means of any other sense, and that any *one* sense cannot be the instrument of producing the sensations experienced by means of *all* the senses collectively. But we must observe, that different senses may enable us to perceive the same object; and that one sense is more fitted than another to make us acquainted with different objects, and their qualities. For example, we may obtain a conception of the figure of a book, by means of the sense of touch, and also by means of the sense of sight.

Each sense, as already observed, is subject to its own positive laws. For example, we see, according to the laws of the refraction of light; and hence, a straight rod half plunged in water appears crooked, although touch proves that, in this situation, the rod continues straight.

This is a kind of rectification; but it must not be confounded with the doctrine which maintains that one sense acquires its functions by means of the rectification of another sense. Touch may shew, that a rod which is plunged in water, and looks crooked, is straight; but the eyes will see it crooked as before. The rectifications, thus effected by the senses, are mutual, and not the prerogative of one sense. In this view, the eyes may rectify the sense of touch. If, without our knowledge, a piece of thin paper be placed betwixt one of our fingers and the thumb, we may not *feel*, but we may *see* it. Even smell and taste may rectify the senses of seeing and of touch. Thus, many fluids *look* like water; and it would be impossible to discover them to be different substances by the sense of touch; but it is easy to do so by smell and taste. Thus each sense has its peculiar and independent functions, and each is subject to positive laws. But every sense also perceives impressions of which another is not susceptible; and it is in consequence of this circumstance that the external senses rectify one another; or rather produce, by their co-operation, an extent of accurate conception, which, in an unconnected state, they would have been incapable of producing.

It is a task of considerable difficulty to point out accurately the precise limits of the functions of the senses, because, in every act of perception, their instrumentality is combined with that of the internal faculties of the mind; and it is not easy to discriminate to what extent the act depends upon the one, and to what extent upon the other. For the elucidation of this point, I submit the following considerations to the attention of the reader.

The senses themselves do not *form ideas*. For example, when an impression is made upon the hand, it is not the or-

gans of touch which form the conception of the object making the impression: but the nerves of feeling in the hand receive the impression, and a *faculty of the mind* perceives the object. Without the nerves of feeling, the internal faculty could not experience the perception; because the medium of communication betwixt it and the object would be wanting. But neither could the hand experience the perception without the instrumentality of the internal faculty, because the nerves of *feeling* do not perform the function of perception.

Hence, previous to every perception, there must be an antecedent impression on the organs of sense; and the whole functions of these organs consist in receiving and transmitting this impression to the internal faculties. The nature of the impression depends on the constitution of the senses, and on the established relation betwixt them and external objects; and, as it is absolutely impossible for the human will to change either the constitution of the senses, or the relation betwixt them and the external world, it is clearly absurd to speak of acquired impressions.

But, as the senses are constituted with a determinate relation to external objects, so the internal faculties are constituted with a determinate relation to the organs of sense. In virtue of the first relation, a certain object makes a certain impression; and, in virtue of the second, a certain impression gives rise to a certain perception; and both depend on nature, and not on the will, nor on exercise or habit.

But we must distinguish betwixt the perceptions we experience of external objects, and the inferences concerning their qualities, which we draw by reasoning from these perceptions. All those ideas which are pure perceptions are formed intuitively, on the presentation of objects fitted to excite them. Inferences from these, on the other hand, are the result of our reasoning powers. What are sometimes called "acquired perceptions," are merely *habits of reasoning*, from the impressions naturally made on the senses; and these habits are just as much a part of our *nature* as the original perceptions. It appears to me, that the visible and tangible

appearances of bodies are simple perceptions, because, after the amplest experience of some of these being deceitful, we cannot in the slightest degree alter our perceptions of them. For example, a rod half immersed in water appears crooked, in defiance of every endeavour to see it straight. When we stand three or four yards distant from a mirror, and perceive our image in it, we cannot, by any efforts, succeed in perceiving the image as if formed on the surface of the mirror, although we know perfectly that it is so. It appears always at the same distance behind the surface as we are before it. If a picture be painted according to the rules of perspective, and the laws of optics, so as to represent a vista in the country, or a long street in a city, we are altogether incapable, when in the proper position for viewing it, of perceiving the surface to be plain. The picture appears to us to represent objects at different distances, and the most determined resolution to see them all equally near, is of no avail, although we know that, in point of fact, they are so.

If, previous to experience, all objects seen by the eye appear only as of different colours and shades, and all equally near, although really at different distances; and if we learn by experience only, that this natural appearance is deceitful, and that, in point of fact, one object is near and another distant; I cannot perceive a reason, why we might not learn by experience also, to perceive pictures as plain surfaces, and images as formed on the surfaces of mirrors; and, in short, to get quit altogether of the illusions of optics. If it be easy to acquire, by habit, the power of perceiving objects as at different distances, which naturally appear to the eye as all equally near, it ought to be no difficult matter to learn by experience, to perceive a surface to be plain which really is so, after we are certain of the fact; and yet, I have never heard of an instance of a person who had made such an acquisition. Colour, Form, Magnitude, and Distance, appear to be objects of intuitive perception; and, accordingly, no experience, and no repetition of acts of volition, can alter such appearances, if

the refraction of light, state of the eye, and the internal faculties, remain the same.

The following appears to me a correct mode of ascertaining the limits of the functions of the senses. Whatever perceptions or impressions received from external objects, *can be renewed* by an act of recollection, cannot depend exclusively upon the senses; because the organs of sense are not subject to the will, and never produce the impressions which depend upon their constitution, except when excited by an external cause. On the other hand, whatever impressions we are unable to recall, must, for the same reason, depend on the senses alone.

These principles will be best elucidated by examples. For instance, when a bell has been rung in our presence, and the impressions have ceased, they cannot be recalled by an effort of the will; because their existence depended on the apparatus of the ear being in a certain state of excitation, which cannot be reproduced by an act of volition. Hence these impressions belong to the ear alone. But if an individual is endowed with the internal faculty of Tune, and if a piece of music be played over in his presence, then, after the sound of the instrument has ceased, although he cannot recall that sound, he can with facility reproduce the internal impressions which the notes made upon his mind; in short, he can enjoy the tune internally anew, by an act of recollection. The power of experiencing the perception of melody, and of enjoying the impressions which it makes, appears, therefore, to depend on the internal faculty of Tune, while the sound alone depends upon the ear. Hence the perfection of the power of perceiving melody in any individual, is not in proportion to the perfection of the external ear alone, but in joint proportion to the perfection of that organ, and the internal faculty. Without the external ear, the internal faculty could not receive the impressions; but the external ear could never of itself produce the perceptions of melody. Accordingly, we see every day that many individuals enjoy the sense of hearing unimpaired, who have no perception of melody.

The same principles applied to the other senses will point out distinctly the precise limit of their functions. We may take an example from the sense of touch. If we embrace a square body with the hands, certain impressions are made on the nerves of touch, called Sensations, in consequence of which the mind forms an idea of the figure of the body. Now, we can recall the conception of the figure; but not the sensation which excited it. The conception, therefore, depends on an internal faculty; the sensation on the nerves of touch. The whole functions of the nerves of touch are to produce the sensation; but the power of conceiving is not in invariable proportion to the power of feeling, but in proportion to the perfection of the internal faculty, and the external senses jointly. The perception, however, depends as entirely on nature as the sensation; and the power of perceiving the form of the body is not acquired by experience.

Dr Spurzheim observes on this head, that, where the *same ideas* are acquired by the instrumentality of *two* or more senses, the ideas cannot possibly be formed by *the senses*, because Nature, so far as man has discovered, never endows *different instruments* with the *same functions*, in the same individual. For example, we can acquire ideas of Form by the instrumentality of the sense of Sight, and likewise by means of Touch. Now, from this circumstance alone, it is evident that the conception of figure is formed, not by the eyes, or by the nerves of Feeling, because this would be an instance of two separate senses performing the same functions; but by an internal faculty, which perceives Figure, in consequence of impressions made on either of these two different senses. The impressions made upon the eye are totally different from those made upon the nerves of Touch, but the internal faculty is adapted by nature to both; and hence the same perceptions are experienced by means of the same faculty, although through the instrumentality of different media; but the same function is not performed by distinct senses.

These views of the functions of the senses are illustrated

and confirmed by the phenomena which take place, when the organs of Sense are diseased. For example, when the ear becomes inflamed, it often happens that spontaneous sensations of sound are experienced; when too much blood flows into the eye, impressions, like those of light, are felt; when the nerves of Taste become diseased, disagreeable savours are experienced; when the nerves of Touch are excited by internal causes, a tickling or disagreeable sensation is felt; when the muscular system is relaxed by nervous diseases, and flying spasms occur over the body, impressions occasionally arise from these spasmodic affections, so precisely resembling those of touch, that the individual is at a loss to distinguish them.

Every one is acquainted with the ridiculous theories which have been framed by philosophers, to account for the phenomena of perception. ARISTOTLE taught, says Dr REID, "That, as our senses cannot receive external material objects themselves, they receive their species, that is, their images or forms without the matter, as wax receives the form of the seal, without any of the matter of it *." The Platonists differed from ARISTOTLE in maintaining, "That there exist *eternal and immutable ideas*, which were prior to the objects of sense, and about which all science was employed." They agreed with him, however, as to the manner in which these ideas are perceived. Two thousand years after PLATO, Mr LOCKE represents our manner of perceiving external objects, by comparing the understanding "to a closet, wholly shut from light, with only some little opening left, to let in external visible resemblances or ideas of things without." The notion of all these philosophers was, that, from the existence of these images or ideas, the mind inferred, by a process of reasoning, the existence of the external objects themselves.

Dr REID refuted, by a very simple process, these doctrines. He pointed out merely the fact, that the mind is so formed, that certain impressions, produced by external objects, on our

* Essays on Intellectual Powers, p. 25.

organs of sense, are followed by certain sensations; and that these sensations are followed by perception of the existence and qualities of the bodies by which the impressions are made; and that all the steps of this process are equally incomprehensible.

It will at once be perceived, that the doctrine here laid down regarding the functions of the senses, corresponds precisely with the philosophy of Dr Reid.

The organs of each sense are double; and yet the consciousness of all impressions experienced by the mind is single. Various theories have been propounded to account for this fact; but none of them are satisfactory. Dr Gall ventured to give an explanation different from all these. "He distinguishes two states of activity in organs of the senses, calling one active, the other passive. The functions are passive, if performed independently of the will; the eye, for instance, necessarily perceives the light which falls upon it, and the ear the vibrations propagated to it. Now, we perceive *passively* with both organs, says he; we see with both eyes, hear with both ears, but the active state is confined to one organ, and commonly to the strongest. We see with both eyes at the same time, but we look with one only; we hear with both ears, we listen only with one; we feel with both hands, we touch with but one, &c.

"There is no doubt that we look with one eye only. In placing a pencil or any other thin body between us and a light, keeping both eyes open, and throwing the axis of vision, the stick, and the light, into a right line, did we look with both eyes, the pencil should occupy the diagonal, and its shadow fall on the nose. But this always falls on one eye, on that which the person, who makes the experiment, ordinarily uses in looking with attention. If the pencil be kept in the same position, and the eye not employed in looking be shut, the relative direction of the objects will seem to remain the same; but if he shut the eye with which he looked, it will be altered, and the pencil will appear removed far from its former place. Again, let any one look at a point but a little way distant, both

eyes will seem directed towards it; let him then shut his eyes alternately. If he close the one with which he did not look, the other remains motionless; but if he shut that with which he looked, the other turns immediately a little inwards, in order to fix the point. Moreover, the eyes of many animals are placed laterally, and cannot both be directed at once to the same object. Finally, the gestures of man and animals prove that they look with one eye, and listen with one ear; for they direct one eye or one ear towards the object to be seen or heard *.

"Notwithstanding what has been said, Dr GALL's explanation, seems to me," says Dr SPURZHEIM, "little satisfactory. Indeed, it is very remarkable, that passively, we perceive, at the same time, the impressions of both organs of any sense, not only if one, but also if different, objects impress the two. Even different impressions of different objects may be perceived by both organs of two senses at once. We may, for instance, with both eyes see different objects at the moment that with both ears we hear different sounds. As soon as we are attentive, however, as soon as we look or listen, we perceive but one impression. It is impossible, therefore, to attend to two different discourses at once. The leader of an orchestra hears passively all the instruments, but he cannot be attentive except to one. The rapidity of mental action deceives several, and makes them think it possible to attend to different objects at the same moment. It follows that there is a difference between the active and passive state of the senses; but whether this difference suffices to explain the single consciousness of every sense is another question; I think it does not.

"First, this explanation would only apply to functions in their active, not at all in their passive state; and the cause of single consciousness must be the same in both. Further, the active state is not produced by the external senses themselves, any more than voluntary motion by the mere muscles.

* Dr SPURZHEIM's Phrenology, p. 221.

Some internal power renders the senses active; they themselves are always passive, and merely propagate external impressions; they appear active only, when something internal employs them to receive and to transmit impressions to the brain. It is therefore probable, that the internal cause which excites only a single organ of the external senses to activity, is also the cause of the single consciousness of different impressions. Dr GALL's explanation of single consciousness is consequently not only grounded upon an inaccurate notion, but would be far from satisfactory, were the supposition even true *."

The mind has no consciousness either of the existence of the organs of sense, or of the functions performed by them. When the table is struck, and we attend to the subject of our own consciousness, we perceive the impression of a sound; but by this attention we do not discover that the impression has been experienced by the instrumentality of any organ whatever. Hence the perceptions of the mind are always directed to the objects which make the impressions, and not to the instruments by means of which the impressions are experienced. The instruments perform their functions under Nature's care; and, as has been already observed, are not subject to the will. We should have been distracted, not benefited, by a consciousness of their internal action, when they perform their functions. It is when they become diseased that we become conscious of their action, and then the consciousness is painful. Every one must be sensible of this fact, whose eyes or ears have been diseased.

Dr SPURZHEIM observes, that "the brain seems to be necessary to every kind of perception, even to that of the immediate functions of the external senses; but it is not yet ascertained, though it is probable, that one fundamental power, inherent in a particular part of the brain, knows and conceives as sensations, all the varied impressions made on the external senses. Some phrenologists think that each external sense

* Lib. cit. p. 223.

has a peculiar portion of brain for this end, and that the combined action of its nerve and of this cerebral part, is necessary to the accomplishment of its functions. That the nerve of taste and a portion of brain, for instance, are necessary to perceive savours; the olfactory nerve and a cerebral part, to distinguish odours, &c. I do not believe that consciousness happens without brain, but I see no reason to surmise that the immediate functions of each external sense require a particular portion of the brain, in order to be recognised as determinate sensations *."

After these general considerations, which apply to all the external senses, a few words may be added on the specific functions of each sense in particular.

FEELING OR TOUCH.

Dr Spurzheim inferred, from pathological facts, that the nerves of motion must be distinct from the nerves of feeling; and subsequent experiments have proved his inference to be well founded. The sense of feeling is continued, not only over the whole external surface of the body, but even over the intestinal canal. It gives rise to the sensations of pain and pleasure; of the variations of temperature; and of dryness and moisture. These cannot be recalled by the will; and I therefore consider them as depending on the sense alone. The impressions made upon this sense serve as the means of exciting in the mind perceptions of figure, of roughness and smoothness, and numerous other classes of ideas; but the power of experiencing these perceptions, is in proportion to the perfection of certain internal faculties, and of the sense of touch jointly, and not in proportion to the perfection of this sense alone.

* Dr Spurzheim's Phrenology, p. 257.

TASTE.

The functions of this sense are, to produce sensations of taste alone; and these cannot be recalled by the will. We may judge of the qualities of external bodies, by means of the impressions made on this sense; but to form ideas of such qualities is the province of the internal faculties.

SMELL.

By means of smell, the external world acts upon man and animals from a distance. Odorous particles are conveyed from bodies, and inform sentient beings of the existence of the substances from which they emanate. The functions of smell are confined to the producing of agreeable or disagreeable sensations, when the organ is so affected. These cannot be reproduced by an effort of the will. Various ideas are formed of the qualities of external bodies, by the impressions which they make upon this sense; but these ideas are formed by the internal faculties of the mind.

HEARING.

In new-born children, this sense is not yet active; but it improves by degrees, and in proportion as the vigour of the organ increases. It is a very common opinion, that music, and the faculty of speech, are the result of the sense of hearing; but this notion is erroneous.

As already mentioned, the auditory apparatus being excited to activity by an external cause, produces only the impression of sound: and here its functions terminate. If, besides, the faculty of tune is possessed by any individual, melody in sounds is perceived by that faculty. If the faculty is not possessed, such perceptions cannot exist. Hence, among birds, the female hears as well as the male; and yet the song of the male is very much superior to that of the female. Among mankind, also, many individuals hear, and yet are insensible

to melody. Thus, both in man and other animals, there is no proportion betwixt the perfection of hearing, and the perfection of the power of perceiving melody. If it were part of the functions of the auditory apparatus to give the perception of melody, how does it happen that, in one individual, the apparatus can perform only one-half of its functions, while in others it performs the whole? This is not like Nature's work. Finally, hearing cannot produce music; because the auditory apparatus is excited only by sounds, which are already produced. The first musician began to produce music before he had heard it; and he did so from an internal impulse given by a faculty of the mind. Singing birds, moreover, which have been hatched by strange females, sing naturally, and without any instruction, the song of their species, as soon as their internal organization is active. Hence the males of every species preserve their natural song, though they have been brought up in the society of individuals of a different kind. Hence also musicians, who have lost their hearing, continue to compose. They possess the internal faculty; and it being independent of the auditory apparatus, conceives the impressions which different sounds naturally produce, long after the ear has ceased to be capable of allowing these sounds to be experienced anew; hence, likewise, deaf and dumb persons have an innate sentiment of measure and cadence. Though, however, hearing does not produce music, yet, without an auditory apparatus, fitted to receive the impressions made by tones, melody could not be perceived; and, unless that apparatus had once been possessed, neither could melody be produced, because the individual could not judge of the impressions which the sounds he made were fitted to make upon those who hear.

It is a very common opinion also, that hearing alone, or hearing and voice jointly, produce the faculty of speech. This error will be refuted, by considering in what any language consists, and how every language is produced. Language has been divided into two kinds, natural and artificial. In both kinds, a certain sign is used to indicate to others certain feel-

ings or ideas of the mind. Various motions of the body, and expressions of the countenance, indicate, the moment they are beheld, certain emotions and sentiments. In this case, the expression of the countenance, or the motion of the body, is a sign fitted by nature to excite in us the perception of the feeling. It is obvious, that the power of the sign, in this case, to excite the perception, does not depend either upon hearing or voice; for neither is employed in producing it: but that the effect is an ultimate fact of our constitution, which must be referred to the will of our Creator. Besides these signs, however, we make use of many others to communicate our thoughts, which have no original connection with the things signified. For example, the word TABLE has no necessary connection with the thing upon which I now write. How, then, does the word come to indicate the thing? The internal faculties first conceive the object: having done so, they wish to fix upon a sign by which that conception shall be always indicated again. They, therefore, *employ the voice* to make the sound which we express when we utter the word *table*. The thing itself being pointed out, and the sound being uttered at the same time, the meaning of it comes to be understood; and hence every time it is pronounced, the idea of the thing is suggested. But we are not to suppose that the auditory apparatus, or the organs of voice conceived the idea of the table. This was done by the internal faculties alone; and these merely made use of the organs of voice as instruments for producing a sign. Hence, the reason why monkeys do not speak is, not because they want the sense of hearing, and organs of voice, but because they have not certain internal faculties, which fix upon signs to indicate the conceptions formed by the mind.

The proper function, then, of the sense of hearing, is confined to the production of the impressions which we call sounds; yet it assists a great number of internal faculties.

The auditory nerve has a more intimate connection with the organs of the moral sentiments, than with those of the intellectual faculties.

SIGHT.

This fifth and last of the senses, is the second of those which inform man and other animals of remote objects, by means of an intermedium; and the intermedium, in this instance, is Light.

This sense has been said to acquire its functions by touch or by habit. Dr Reid, and many other philosophers, have written ingenious disquisitions, to shew that our perceptions of distance, figure, and motion, are acquired. These speculations have proceeded on the principle, that Nature has done little for man, and that he does a great deal for himself, in endowing himself with perceptive powers. But vision depends on the organization of the eye; and is weak or energetic, as the organization is imperfect or perfect. Some animals come into the world with perfect eyes; and these see perfectly from the first. The butterfly and honey-bee fly at the first attempt, through fields and flowery meadows; and the young partridge and chicken run through stubble and corn-fields. The sparrow, on taking its first flight from the nest, does not strike its head against a wall, or mistake the root of a tree for its branches; and yet, previous to its first attempt at flight, it can have no *experience* of distance.

On the other hand, animals which come into the world with eyes in an imperfect state, distinguish size, shape, and distance, only by degrees. This last is the case with new-born children. During the first six weeks after birth, their eyes are almost insensible to light; and it is only by degrees that they become fit to perform their natural functions. When the organs are so far matured, however, the children see, without habit or education, as well and as accurately as the greatest philosopher.

Indeed, as has been formerly mentioned, the kind of perception which we enjoy by means of the eyes, is dependent solely on the constitution of the eyes, and the relation esta

blished betwixt them and the refraction of light. So little power has experience to alter the nature of our perceptions, that even in some cases where we discover, by other senses, that the visible appearance of objects is illusive, we still continue to see that appearance the same as before. For example, the greatest philosopher, standing at one end of a long alley of trees, cannot see the opposite rows equally distant from one another at the farthest end, as they appear to be at the end nearest to him, even after experience has satisfied him that the fact really is so. He must see according to the laws of perspective, which make the receding rows appear to approach; and there is no difference, in this respect, betwixt his perceptions, and those of the most untutored infant. In like manner, the greatest philosopher, on looking into a concave spoon, cannot see his right hand upon the right side, and his left hand upon the left side, even after he has learned, by the study of the laws of optics, that the image of himself, which he sees in the spoon, is reversed.

It is very true, that Nature does not give us intuitive perceptions of the number of feet or inches at which any object is distant from us; because these are artificial measures, with which nature has nothing to do. But when two objects, equal in size, are presented to the eye, the one double in point of distance to the other, the mind has always an intuitive perception that they are not equally near, unless the external or internal organs, or both, are deficient or deranged.

What, then, are the true functions of the eye? No organ of sense *forms ideas*. The eye, therefore, only receives, modifies, and transmits the impressions of light; and here its functions cease. Internal faculties form conceptions of the figure, colour, distance, and other attributes of the objects making the impressions: and the power of forming these conceptions is in proportion to the perfection of the eyes and the internal faculties jointly, and not in proportion to the perfection of the eyes alone. Hence the lower animals, although they have eyes equal in perfection to those of man, are not able to form the ideas of the qualities of bodies, which he forms by means of his in-

ternal faculties, through the instrumentality of the eye, because in them the internal faculties are wanting.

The senses may be exercised, and their powers greatly improved, by exercise. The taste of the gourmand is more acute than that of the peasant; and the touch of the artisan, than that of the ploughman.

Genus II.—INTELLECTUAL FACULTIES,

which perceive the existence of external objects, and their physical qualities.

The faculties now to be treated of take cognizance of the existence and qualities of external objects. They correspond, in some degree, to the Perceptive Powers of the metaphysicians; and form ideas. Their action is attended with a sensation of pleasure, but (except in the case of Tune) it is weak, compared to the emotions produced by the faculties already treated of; and the higher the functions, the less vivid is the emotion attending their active state.

19. INDIVIDUALITY.

This organ is situated in the middle of the lower part of the forehead. Two places are marked with the same number, $\frac{1}{19}$ and $\frac{2}{19}$; the reason of which will be explained below.

After Dr Gall had discovered an external sign of the talent for learning by heart, he was not long in perceiving that it by no means indicated every species of memory. He observed, that, among his school-fellows, some excelled in verbal memory, and remembered even words which they did not understand; while others were deficient in this qualification, but recollected with uncommon facility facts and events; that

some were distinguished by a great memory of places; some were able to repeat, without mistake, a piece of music which they had heard only once or twice, while others excelled in recollecting numbers and dates; but no individual possessed *all* of these talents combined in himself. Subsequently to these observations, he learned that philosophers before him had arrived at similar conclusions, and had distinguished three varieties of memory,—memory of things, "*memoria realis*;" verbal memory, "*memoria verbalis*;" and memory of places, "*memoria localis*." In society, he observed persons who, though not always profound, were learned, had a superficial knowledge of all the arts and sciences, and knew enough to be capable of speaking on them with facility; and he found in them the middle of the lower part of the forehead very much developed. At first he regarded this as the organ of the "memory of things;" but, on farther reflection, he perceived, that the name "memory of things" does not include the whole sphere of activity of the organ now under consideration. He observed, that persons who had this part of the brain large, possessed not only a great memory for facts, but were distinguished by prompt conception in general, and an extreme facility of apprehension; a strong desire for information, and instruction; a disposition to study all branches of knowledge, and to teach these to others; and also, that, if not restrained by the higher faculties, such persons were naturally prone to adopt the opinions of others, to embrace new doctrines, and to modify their own minds according to the manners, customs, and circumstances with which they were surrounded. He therefore rejected the name, "memory of things," and he now uses the appellations "*Sens des choses, sens d'educabilité, de perfectibilité*;" to distinguish this faculty.

When both parts of the brain, marked 19., are large, they are accompanied with the power of quickly observing facts and occurrences, of storing up and retaining knowledge with great facility, and of reproducing it with much readiness. In common life, they confer curiosity to know, aptitude for acquiring details, and a great talent for observation. The charac-

ter of *Miss Pratt*, as drawn by the author of "Inheritance," a novel, is a personification of Individuality, when predominantly powerful, and not directed by higher faculties. "But people who make use of their eyes" says the author, "have often much to see, even between two doors; and in her progress from the hall door to the drawing room, *Miss Pratt* met with much to attract her attention. True, all the objects were perfectly familiar to her; but a real *looker*, like a great genius, is never at a loss for a subject—things are either better or worse since they saw them last—or if the things themselves should happen to be the same, they have seen other things, either better or worse, and can therefore either approve or disapprove of them. *Miss Pratt's* head then turned from side to side a thousand times as she went along, and a thousand observations and criticisms about stair-carpets, patent lamps, hall-chairs, slab-tables, &c. &c. &c. passed through her crowded brain (viz. through her organ of Individuality).—At length *Miss Pratt* and *Mr Lindsay* were announced, and thereupon entered *Miss Pratt* in a quick paddling manner, as if in all haste to greet her friends." —"*Miss Pratt* then appeared to her *(Gertrude)* a person from whom nothing could be hid. Here eyes were not by any means fine eyes—they were not reflecting eyes,—they were not soft eyes,—they were not sparkling eyes,—they were not melting eyes,—they were not penetrating eyes; neither were they restless eyes, nor rolling eyes, nor squinting eyes, nor prominent eyes—but they were active, brisk, busy, vigilant, immoveable eyes, that looked as if they could not be surprised by any thing—not even by sleep. They never looked angry, nor joyous, or perturbed, or melancholy, or heavy; but morning, noon, and night they shone the same, and conveyed the same impression to the beholder, viz. that they were eyes that had a look—not like the look of STERNE's monk, beyond this world—*but a look into all things on the face of this world.* Her other features had nothing remarkable in them; but the ears might evidently be classed under the same head with the eyes—they were something resembling rabbits'

—long, prominent, restless, vibrating ears, *for ever listening, and never shut by the powers of thought.*"

The organs of Individuality are of great importance to a philosopher: When directed to physical science, they are attended with the desire to know the existence and phenomena of objects, and prompt to discovery by experiment. They do not seek to arrive at new truths by reasoning, but enquire at nature, at men, at books, for information; and hence, many brilliant physical discoveries have been made by persons largely endowed with these, and the other perceptive organs, whose reflecting faculties have not surpassed mediocrity. Since BACON's rules of philosophising have been duly appreciated and become fashionable, science has been extensively and successfully cultivated by a class of minds, which, while the method of speculative reasoning prevailed, was excluded from such pursuits. This class is composed of persons in whom the organs under consideration greatly predominate over those of the reflecting powers. Such individuals are constituted by nature to become observers; and Natural History, particularly botany, anatomy, and even chemistry, are great departments of knowledge fitted for the exercise of their peculiar talent. The substance of these sciences consists in a knowledge of the existence, appearances, and properties of natural objects as *facts;* and we need not be surprised to meet with eminent professors in these branches, in whose heads the knowing organs predominate over the reflecting.

The lawyer who possesses the organs of Individuality largely developed, is enabled readily to apprehend the details of his cases, and also easily to recollect the principles of law, the dicta of legal authors, and the decisions of courts, as matters of fact. His power of applying these to new cases, depends on the reflecting faculties; but although these be powerful, yet, if Individuality be deficient, he may feel great difficulty in preparation, and much embarrassed through want of command of *data.* In point of fact, the most eminent practical lawyers, particularly in England, are distinguished by a great development of these organs; which are equally necessary to the pu-

blic speaker, to give him a command over the *materiel* or details of his subject, and to enable him to set it forth clearly and naturally to his audience. I have observed them large also in practical physicians; for, in the profession of medicine, prompt and accurate observation is one important element in excellence.

The organs are large also in authors who acutely observe life, manners, and occurrences, such as Le Sage, De Foe, and the Author of Waverley; and they are essential to the composition of such works as Robinson Crusoe and Gulliver's Travels, in which a strong impression of reality is produced by a minute enumeration of particular objects. In a mask of Swift preserved in Dublin, the organs appear very large. They appear also to give the tendency to personification, or to invest abstract or inanimate objects with personality.

To the artist, these organs are of great importance. They enable him to give body and substance to the conceptions of his other faculties, and confer on him a capacity for attending to details. In the pictures of an artist, in whose head Individuality is deficient, there is an abstractness of conception, and a vagueness of expression, that greatly detract from their effect. In the works of an individual in whom these organs are large, every object appears full of substance and reality; and if he paints portraits, the spectator will be so impressed with their Individuality, that he will be apt to fancy himself acquainted with the originals.

These organs confer on the merchant, banker, and practical man-of-business, that talent for detail and readiness of observation, which are essential to the advantageous management of affairs. To a shopman or warehouseman they are highly useful; and contribute to that ready smartness which is necessary in retail trade.

Persons who excel at whist, generally possess the lower Individuality large; and if both of the organs be deficient, eminence will not easily be attained in this game.

When the organs of both Individualities are small, the in-

dividual will retain only general ideas, and will experience great difficulty in becoming learned; he may see, hear or read many facts, but they will make only a faint impression, and soon escape from the mind; and he will feel great difficulty in commanding, without previous preparation, even the knowledge which he possesses.

As already mentioned, the two Individualities desire only to know existence and facts, and do not reason or trace relations. Hence a person in whom they are strong, and in whom the reasoning powers are deficient, gains his knowledge by questioning and observation. If we tell him two facts, which clearly imply a third, he will not naturally endeavour to find it out by his own suggestion, but will instantly put another question. Hence, also, the tendency of these faculties is to recollect facts, according as they occur, and not according to any philosophical relations between them. *Mrs Quickly's* speech to *Falstaff* is a beautiful illustration of this kind of understanding. She is reminding him of his promise of marriage, and says, "Thou didst swear to me *on a parcel-gilt goblet, sitting in my dolphin-chamber, at the round-table, by a sea-coal fire, on Wednesday in Whitsun-week, when the Prince broke thy head* for likening his father to a singing man of Windsor; thou didst swear to me *then, as I was washing thy wound*, to marry me, and make me my lady thy wife. Canst thou deny it? Did not *goodwife Keech, the butcher's wife, come in then, and call me gossip Quickly? coming in to borrow a mess of vinegar;* telling us, *she had a good dish of prawns;* whereby thou didst *desire to eat some; whereby I told thee, they were ill for a green wound;* and didst not thou, *when she was gone down stairs, desire me to be no more so familiarity with such poor people*, saying, that ere-long, they should call me Madam? And didst thou *not kiss me, and bid me fetch thee thirty shillings.* I put thee now to thy book oath; deny it if thou canst*." Here is a surprising variety of trivial circumstances, connected by no link but that of the order of their occurrence.

* Second Part of King Henry IV. Act 2. scene 2.

Yet every one must perceive that they have an effect in producing the impression of reality on the mind. We feel it impossible to doubt the promise, which is substantiated by so particular a detail of facts, every one of which, indeed, becomes, as it were, a witness to its truth.

As already noticed, there are strong grounds for believing that two organs are included in the space, originally marked No. 19, on the busts, and now marked $_{1}^{1}{}_{9}$ and $_{1}^{2}{}_{9}$, because the upper and lower parts are sometimes found to differ widely in size in the same individual. The preceding observations refer to both organs large, or both small in the same person, and I shall now state such information as is possessed relative to the separate functions of each.

Dr SPURZHEIM, in his "Phrenology," treats of the two organs as distinct. He names the lower organ INDIVIDUALITY, and says, that it "is the faculty which recognises the existence of individual beings, and whose activity and presence are denoted by substantives in language. I acknowledge, says he, that objects are inseparable from their qualities, and that these constitute objects; but I think it possible to conceive an existence or entity, without knowing its qualities, as GOD,—the mind. This faculty excessively active, is, like all others, liable to be abused. It inclines to personify notions, and even phenomena and abstract ideas. It is, indeed, a higher stretch of understanding to separate the existence of beings from their phenomena. The agency of Individuality is observed in every branch of science. In philosophy it has originated numerous and grave errors. It has personified motion, life, disease, attention, memory, judgment, imagination, the passions, &c. Inactivity of the faculty, on the other hand, disposes men to overlook or deny the existence of external objects. The kind of knowledge procured by Individuality is essential and fundamental. The cerebral part, on which its manifestations depend, is situated behind the root of the nose, and its greatest development enlarges the forehead between the eye-brows, producing that beautiful form of nose called Grecian."

He names the upper organ "EVENTUALITY," and states, that "Individuals who have it large, are attentive to all that happens around them, to phenomena, or events, or facts; they are fond of history, of anecdote; are inquisitive, and desire information on every branch of natural knowledge. Moreover, continues Dr SPURZHEIM, it seems to me that this faculty recognises the activity of every other, whether external or internal, and acts in its turn upon all of them. It desires to know every thing by experience, and consequently excites all the other organs to activity; it would hear, see, smell, taste, and touch; is fond of general instruction, and inclines to the pursuit of practical knowledge. It is essential to editors, secretaries, historians, and teachers. By knowing the functions of the other powers, this faculty contributes essentially to the unity of Consciousness. It seems to perceive the impressions, which are the immediate functions of the external senses, and to change these into notions or ideas. Moreover, it appears to be essential to attention in general, and to the recognition of the entity *myself* in philosophy. Its sphere of activity is very great, and every philosophic system has taken account of some of its operations *."

My own observations are, that UPPER INDIVIDUALITY, marked $\frac{1}{19}$, is large in persons who are fond of natural history, and in those who have a great talent for remembering facts recorded in books, or narrated by men; and that LOWER INDIVIDUALITY, or $\frac{2}{19}$, is large in those who are extremely observant of what is occurring around them, and who take an interest in events.

A person possessing the upper large may become deeply conversant with objects which exist, and circumstances which have happened; but if the lower be very small, he may be inattentive to occurrences happening around him; he may walk the streets without observing what is passing; or sit in a room without attending to what others are doing. If, on the other hand, the lower is large, the individual may be on

* Phrenology, p. 283.

the alert to every thing that happens, and possess stores of information, concerning all that he has seen or handled; while, if the upper organ is small, he may have no talent for more general knowledge.

Upper Individuality is generally large in children, and their tendency, amounting often to intense curiosity, to become acquainted with objects, is well known.

Dr Spurzheim states, that the Upper Individuality "recognises the activity of every other faculty, whether external or internal; and acts, in its turn, upon all of them." No doubt, if Cautiousness be affected, and violent fright ensue, at the sight of a certain object, it is Individuality which observes it; and if, at a distance of time afterwards, it become the topic of conversation, Individuality recollects not only the appearance of the object, but also the mental fact, that fear was then felt at beholding it. In this sense, it has cognisance of the affections of all internal faculties, because these are facts or occurrences; but it must not be supposed, that this faculty gives the metaphysical tendency of reflecting on our own Conscientiousness,—a talent which belongs to powers of which I have not yet treated.

Dr Spurzheim farther observes, of the same faculty, that "it appears to be essential to attention in general, and to the recognition of the entity *myself* in philosophy." According to this view, the cases referred to, on p. 52. of this work, in which consciousness of personal Identity became impaired through disease, will be attributable to derangement of this organ. Observation alone, however, can determine the point.

Dr Gall treats only of the part of the brain which constitutes the Upper Individuality. He regards it as the organ of "the sense" of things in man, and of educability or perfectibility, in the lower animals. While he admits, that every faculty is susceptible of improvement by education, he forms a scale of the heads of animals, from the crocodile and frog up to man, with the view of proving, that the more this part of the brain is developed, in each species, the higher are its natural susceptibilities of being tamed

and taught. Camper and Lavater, he adds, had made similar observations; but they did not distinguish special faculties and organs. Dr Spurzheim acknowledges the correctness of the facts stated by Dr Gall, that tame animals have fuller foreheads than wild ones, and that animals are generally tameable, in proportion to the development of their foreheads; but conceives, that Dr Gall attributes to a single faculty, manifestations which depend on intellect generally. Individuality does not fill the whole forehead; and the other organs, situated there, also contribute to the effects observed by Dr Gall. The observation of the latter, therefore, is deficient in precision, rather than in truth. Dr Gall regards the organ of Benevolence, in the lower animals, as the source of gentleness of disposition, and describes it as situated in them, in the middle of the *upper* part of the forehead. The organ of Educability, which is distinct, he says, is situated in the middle of the *lower* part of the forehead.

The older metaphysicians do not treat of any faculty distinctly analogous to Individuality; but Dr Thomas Brown*, whose acuteness I have so often praised, admits a power of the mind under the name of "Simple Suggestion," which corresponds very closely with it; and he reduces Conception and Memory, of the metaphysicians, to this principle of Simple Suggestion.

The frontal sinus is occasionally found under the lower space, marked No. 19.; and this limits the evidence in favour of the organ to the negative kind; that is, when externally there is a depression, the brain in that part is necessarily small, and the mental power is invariably found weak; but when there is an external elevation, the power is not invariably strong, as in some individuals the swelling outwards is caused by the sinus and not the brain. The organ is large in Sir J. E. Smith, Roscoe, Fraser, Henri Quatre, Swift, Macinnes; moderate in Voltaire and Haydon.

The general functions of these organs are regarded as esta-

* Lectures, vol. ii. p. 192.

blished; but the analysis of the faculties is far from being complete. Some ingenious observations on the elementary principles of Mind, supposed to be connected with them, will be found in note A. of the Appendix.

20. FORM.

Dr Gall was struck with the circumstance, that certain persons and animals recognize, with the greatest facility, individuals whom they have not seen for years, and even then only in passing. In himself, this faculty is weak; and frequently, on rising from table, he has had no recollection of the person who sat next to him, so as to be able to recognize him again in society, and been, in consequence, exposed to many painful embarrassments and awkward mistakes. Being desired to examine the head of a young girl who had an extreme facility of distinguishing and recollecting persons, he found her eyes pushed laterally outward, and a certain squinting look; and after innumerable additional observations, he now speaks of an organ of the knowledge of persons.

The organs lie on the two sides of, and contiguous to, the *crista galli*. When small, the orbitar plate approaches close to the sides of the crest, and then the external width across the nose from eye to eye is small; when large, there is a considerable space betwixt the orbitar plate and the crest, and a great external breadth across the nose.

Dr Gall observes, that those individuals who never bestow more than a superficial attention on phenomena, and who have always reasonings, or at least sophisms, ready in explanation of every fact, pretend that a deficiency, such as he experiences in recognizing persons, is owing to the eyes; that, in such cases, the vision is indistinct, or there is a squint. His personal experience, he adds, affords a refutation of this hypothesis; for he has never had a squint, and his vision is particularly acute and clear. As a physician and naturalist, he has made it his constant occupation, to distinguish accurately

both diseases and the infinite variety of objects that surround us in nature; and, although he can neither paint nor design, he has always been able to seize, with great facility, the numerous forms of the head; and if he were required to direct a painter, he would unquestionably be able to point out to him the most characteristic traits of the person whose portrait was to be drawn. Nevertheless, he is very deficient in the power of recognizing persons; and, therefore, regards this talent as depending on an original faculty. This inference, he says, is supported by innumerable facts. Often children from three to five years of age have a great memory for persons. Some dogs, at the distance of years, recognize an individual whom they have only once seen, while others, after a few days' absence, do not know again persons whom they have seen frequently. Monkeys, dogs, horses, elephants, and even birds, distinguish, with greater or less facility, their master, or those who have been kind or cruel to them among a thousand. All the animals which belong to a herd, and also all the bees in a hive, from 20,000 to 80,000 in number, know each other. When a stranger attempts to introduce himself, they drive him away, or kill him *.

Dr Spurzheim has analyzed the mental power connected with the organ in question, and considers it in the following manner: "To me," says he, "there seems to exist an essential and fundamental power, which takes cognizance of configuration generally, and one of whose peculiar applications or offices is recollection of persons; for persons are only known by their forms. I separate the faculty which appreciates configuration from that of individuality, since we may admit the existence of a being without taking its figure into consideration. Individuality may be excited by every one of the external senses, by smell and hearing, as well as by feeling and sight; while the two latter senses alone assist the faculty of configuration. It is this power which disposes us to give a figure to every being and conception of our minds; that of an

* Sur les Fonctions du Cerveau, tome v. p. 1, 2, &c.

old man, to God; to Death, that of a skeleton, and so on. The organ of configuration is situated in the internal angle of the orbit; if large, it pushes the eye-ball towards the external angle a little outwards and downwards. It varies in size in whole nations. Many of the Chinese I have seen in London had it much developed. It is commonly large in the French, and bestows their skill in producing certain articles of industry. Combined with Constructiveness, it invents the patterns of dress-makers and milliners. It leads poets to describe portraits and configurations, and induces those who make collections of pictures and engravings to prefer portraits, if they have it in a high degree. It is essential to portrait-painters. Crystallography also depends on it; and to me it appears that conceptions of smoothness and roughness are acquired by its means *." I have met with numerous facts, in proof of this faculty and organ.

A gentleman of this city, who had a passion for mineralogy from early youth, has a very large development of this organ, as also of comparison; and I have seen many children who were expert at cutting figures in paper possess this organ, with those of Imitation and Constructiveness large. A gentleman called on me in whom Constructiveness, Locality, and other organs which go to form a talent for drawing landscape and botanical figures are large, but in whom Form is deficient; and he said, he could not, except with great difficulty and imperfection, draw or copy portraits.

The late King, George III., was remarkable for his talent of recollecting persons, and the organ is decidedly large in his mask. In the casts of two Chinese skulls, also in the Phrenological Society's Collection, it is greatly developed; and in a collection of portraits of eminent painters, presented by Sir G. S. Mackenzie to the Society, the organ appears uncommonly large in those who excelled in portrait painting.

The metaphysicians do not admit a faculty of this kind.

Mr Jeffrey, in the article "Beauty," in the Supplement

* Phrenology, p. 274.

to the Encyclopædia Britannica, agrees with another author, whom he quotes, Mr KNIGHT, in maintaining, that "There are no *forms* that have any *intrinsic beauty*, or any power of pleasing or affecting us, *except through their associations, or affinities to mental affections*, either as expressive of fitness and utility, or as types and symbols of certain moral or intellectual qualities, in which the sources of our interest are obvious." From these observations one would suspect Mr JEFFREY and Mr KNIGHT to be endowed with small organs of Form themselves, and that they have taken their own experience as that of mankind in general. The notion which Mr JEFFREY has erected into a fundamental principle, and on which his whole essay on Beauty is built,—that external objects possess no qualities of their own fitted to please the mind, but that all their beauty and interest arise from human feelings which we have associated with them,—is contradicted by daily experience. The mineralogist, when he talks of the beauty of his crystals, has a distinct and intelligible feeling to which the name of Beauty is legitimately applied; and yet he connects no human emotions with the pyramids, and rhombs, and octagons, which he contemplates in the spars. In short, I have met with persons in whom this organ is large, and they declared that they enjoy a perceptible pleasure from the contemplation of mere form, altogether unconnected with ideas of utility and fitness, or of moral or intellectual associations; and that they can speak as intelligibly of elegant and inelegant, beautiful and ugly shapes, regarded merely as shapes, as of sweet and bitter, hard and soft.

Dr GALL remarks, that some authors present the reader with descriptions of the persons whom they introduce, drawn with great minuteness and effect. MONTAIGNE, for example, and STERNE are distinguished for this practice, and in the portraits of both the organ of Form is conspicuously large.

The frontal sinus does not affect this organ.

It is regarded as established.

21. SIZE.

The faculty of distinguishing Form differs from the faculty of Size; because there is an essential difference between the idea of size and that of form. The size may be the same, and the form different. One of these kinds of knowledge may exist without the other; and there is no proportion between them. Besides, as formerly mentioned, the nerves of touch, and the organ of sight, do not form ideas of any kind; so that the power of conceiving size cannot be in proportion to the endowment of them. Dr Spurzheim, therefore, inferred by reasoning, that there would be a faculty, the function of which is to perceive size; and observation has proved the soundness of this conclusion, for the situation assigned by him to the organ has been found correct, and it is now regarded as probable.

A member of the Phrenological Society called on Dr Spurzheim in Paris, and the latter remarked that he had this organ largely developed. This proved to be a correct indication of the talent in his case; for he possesses the power of discriminating size with great nicety. He is able to draw a circle without the aid of any instrument, and to point out the centre of it with mathematical accuracy. Being in the army, he found himself able to make his company fall from column into line with great exactness; estimating correctly by the eye the space to be occupied by the men, which many other officers could never learn to do. Locality, which also he largely possessed, would aid him in this practice. A lady, with whom I am acquainted, has Form large and Size deficient, and in drawing she copies the *form* of an animal or the human figure easily and precisely, but is always at fault in the Size. She felt this as a natural defect, and complained of it before she heard of phrenology.

There is reason to believe that this faculty is connected with the power of perceiving distance, and that it is a chief

element in a talent for perspective. Mr Ferguson, tutor in the family of Sir G. S. Mackenzie, stated, that he had a difficulty in "understanding a landscape" in a picture; and explained, that "it appeared to him to present a group of objects on a plain surface, without any perceptible fore or back ground." He attributed this defect in his perceptions to his not having been taught the rules of perspective at school. In the course of farther interrogation, he stated, that he sees the forms of objects distinctly, as also their colour; that he likes brilliant tints best, and that in nature he perceives distance also. He has visited Roslin (in the neighbourhood of Edinburgh), and not only perceived the beauty which characterises that delicious spot, but enjoyed it with a keen relish. He has also seen many pieces of Highland scenery, and been delighted with them. Rivers, meadows, trees, or cultivated ground, are, however, the objects which interest him most. On turning his back upon any natural landscape, or shutting his eyes upon it, his recollections instantly become very confused. He is not able to recall in his mind the "relative positions" of the objects; while he distinctly recollects the *pleasing impressions* which they had made upon him; this remembrance does not soon fade. His *recollection* of Roslin, for example, is like that of a confused picture of rocks and trees, and a river winding through them; but his remembrance of the impressions of grandeur and beauty, produced by the objects, is vivid and distinct.

For a long time it was difficult to account for this curious deficiency of mental power. Mr F. permitted a cast of his face and forehead to be taken (which is sold in the shops), and in it the organ of *Size* appeared to be decidedly small, and Form and Locality not very fully developed; while, by examining his head, it appeared, that Ideality, Wonder, Benevolence, with the organs of the other sentiments, and also of the intellectual powers, were nowise deficient; but to which of the three organs of Size, Form, or Locality, the imperfection fell to be ascribed, it was not easy to determine.

Subsequently, however, Mr Douglas, miniature painter,

a member of the Phrenological Society, stated in conversation, that one of the earliest indications of a liking for painting which he had experienced, was an extraordinary interest in matters connected with perspective. When a mere child, the appearance of approach in the far end of ploughed ridges puzzled him exceedingly, and he crawled across the fields, before he could well walk, to measure the actual distance betwixt each ridge with a stick, and was lost in astonishment when he found that the space between each was actually the same at both ends, notwithstanding of the great difference which appeared between them to the eye. He continued from this time to take a great interest in perspective, as a quality in painting, and gave up landscape for miniature painting, not from inclination, but from motives of a different kind. On comparing his head with Mr Ferguson's, the organ of Size was found to differ more than any of the others; it was very large.

On subsequently examining the head of Mr P. Gibson, who is known greatly to excel in perspective, I again found the organ of Size very large. And, finally, in the head of a gentleman with whom I am intimately acquainted, this organ is developed rather below than above an average degree; and he stated to me, that, with the power of perceiving and recollecting distance with facility, he has nevertheless felt great difficulty in representing it correctly on paper; and, while he understands the general theory of perspective, he could never learn to practise it by tact of hand, and, on this account, gave up all attempts at drawing.

The frontal sinus throws a difficulty in the way of observing this organ; and the negative evidence is, therefore, chiefly to be relied on.

It is stated as only *probable.*

22. WEIGHT.

There seems to be no analogy between the weight or resistance of bodies, and their other qualities. They may be of all forms, sizes, and colours, liquid or solid, and yet none of

these features would necessarily imply that one was heavier than the other. This quality, therefore, being distinct from all others, we cannot logically refer the cognisance of it to any of the faculties of the mind which judge of the other attributes of matter; and, as the mental power undoubtedly exists, there appears reason to conjecture that it may be manifested by means of a special organ. Persons who excel at archery and quoits, also those who find great facility in judging of momentum and resistance in mechanics, are observed to possess the parts of the brain lying nearest to the organ of Size largely developed; and the organ is now regarded as probable. STATICS, or that branch of mathematics which considers the motion of bodies arising from gravity, probably belongs to it.

Mr SIMPSON read to the Phrenological Society an interesting and ingenious Essay * on this organ, in which he enumerates a great number of examples, in proof of its functions. It is large, says he, in Dr CHALMERS, Dr BREWSTER, Sir JAMES HALL, Sir GEORGE MACKENZIE, Professor LESLIE, and in Mr JARDINE and Mr STEVENSON, two eminent engineers. "We have lately seen," he continues, "Professor FARISH of Cambridge, who manifests a high endowment of mechanical skill, and has the organ large; as has Mr WHEWELL of the same University, who has written a work of merit on the same subject. In a visit we lately made to Cambridge, we saw much that was interesting, in regard to this organ. Professor FARISH's son inherits the mechanical turn and the organ. We saw both the statue and bust of Sir ISAAC NEWTON, by RUBILLIAC. The bust was a likeness taken in the prime of his years, and in it the knowing organs are still more prominent than in the statue. *Weight* is very pre-eminent. The same organ is very large in the bust of the lamented Dr CLARKE, the traveller; and, as might have been expected, *Locality* quite extraordinarily developed †. We met with se-

* Since published in Phrenological Journal, vol. ii. p. 410.

† In the numerous living heads we saw at Cambridge, we met often with the organ of Number large, and found, invariably, that it was accompanied in the

veral persons with small Weight, who at once acknowledged deficiency in mechanical talent, and awkwardness in their actions and movements. A child of two years old was mentioned to us, although we did not see it, quite remarkable to every one for the large development of brain at this part of the frontal bone, and the uncommon steadiness of its walk, at an age when other children totter, and it is the theme of wonder to all who know it." The organ is large in the mask of MACLAUCHLAN, a weaver of Saltcoats, who spent much time and money in devising means to regulate the stroke of the common pump, so as to make the working-rod move with the same momentum, up and down. It is large also in the mask of BRUNEL, the celebrated engineer and mechanician. In examining masks, a depression of muscle, which sometimes takes place at this part, must not be mistaken for a fulness of the organ.

Mr SIMPSON proceeds: "The faculty now under consideration, in high endowment, manifests itself in engineering, in dynamical skill, in the knowledge and application of mechanical forces. What may be its *lesser* endowments? Where do we find the organ? Situated in the midst of that group, which gives us the perception of the qualities of material objects; namely, Form, Size, Locality, Colouring, Order, and Number. It is evident there is a quality of bodies most essential to their nature, not included in these qualities, singly or combined; namely, their density and corresponding weight. As bodies gravitate in a well-known ratio to their density, and their density and weight are the same thing, Weight is only one name for gravitation. Does it then serve any important purpose in our being, or is it essential to our animal existence, that we should have an instinctive perception of

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individual with algebraic celebrity. The organisation generally corresponded to the cause of the person's rank in the University; and although there were exceptions, most of the persons who have achieved honours, evidently owe them to the great power of their knowing organs;—clearly shewing, that those who were also gifted with deeply-reflecting and combining powers, are not called to use them either in classical or mathematical studies. Many men, on the contrary, have figured in public life, in virtue of their great endowment of Causality and Comparison, who, from a smaller gift of the knowing organs, have held a very humble grade at Oxford and Cambridge.

gravitation, operating constantly and independently of reason? That state of rest which the law of gravitation constitutes the natural state of all bodies, solid, fluid, and aëriform, is called their *Equilibrium*. The simplest animal motions, what are they but alternate disturbance and restoration of *equilibrium?*"—"The land-animal walks and runs, and avails itself of the resistance of the earth,—the bird flies by its instinctive perception of the resistance of the air,—the fish uses its fins and tail, instinctively perceiving the resistance of the water."

"Some degree, therefore, of the power of adapting motions to the law of gravitation, some power over equilibrium, must be possessed by the whole animated creation,—for without it, it is plain, they must perish. May the organ of Weight be the organ of this faculty? To man alone is given the power to aid this power, and render his motion more effectual, and force more availing by the use of instruments,—and FRANKLIN well named him a tool-making, or rather a tool-using, animal. What are his tools? They are all modifications of the elementary mechanical powers. His club and bow are levers,—his axe, knife, sword, and arrow, are wedges. He instinctively aids his own muscular force by the lever, when he applies a bar of wood to raise a stone from the ground;—if he wishes to raise that stone to a certain height, perpendicularly, he will instinctively counteract its gravitation by forcing it up an inclined plane, instead of applying his own bodily force to lift it perpendicularly. The principle of the pulley will suggest itself whenever he has obtained a block with a cord, or thong, to draw water out of a pit. The screw is only the inclined plane wrapt spirally round a cylinder; to avail himself of which he would be led, whenever he attempted, as he early did, to build a tower."

These views, says Mr SIMPSON, are strongly supported by diseased affections of this part of the brain. Miss S. L. was attacked with headach, and pain in the region of the organ of Weight, and "her perception of equilibrium was deranged, and she experienced giddiness, inclined position of horizontal floors and ceilings, and the sensation of being lifted up, and of

again falling down and forward. Her account of it is worthy of remark, for she said she felt as if she had been *tipsy*." Mr Simpson refers to a diseased condition of this, and some other of the knowing organs, a curious mental affection, which Mr John Hunter, the celebrated anatomist, experienced in 1776, and which is recorded in his life, written by Sir Everard Home. "From great anxiety of mind," says he, "Mr H. had a severe illness. It attacked him on a journey, and his first sensation, it is well worthy of remark, was that *of having drunk too much*, although he had taken nothing but a little weak punch. On going to bed, he felt as if *suspended in the air*, and soon after *the room seemed to go round* with very great rapidity. This ceased, but the strange sensation, like Miss S. L.'s of being lifted up, continued; and, on being brought home in his carriage, his sensation was that of *sinking or going down*. The symptoms of whirling and suspension increased; and his own head, when he raised it from his pillow, seemed to move from him to some distance with great velocity. When he became able to stand without being giddy, he was unable to walk without support; "for," says Sir E. Home, "*his own feelings did not give him information respecting his centre of gravity*, so that he was unable to balance his body, and prevent himself from falling." We need not add, continues Mr Simpson, the obvious comment, that the organ of *Weight* was diseased, and the very function we have imputed to it, the instinct of equilibrium (expressed almost in our own words by Sir E. Home), unequivocally impeded *.

The phenomena of intoxication are explained by Mr Simpson in a similar way. "Both Miss S. L. and Mr John Hunter," says he, "bore testimony to the illusive *feeling* of being intoxicated, while Miss S. L. had acute pain in the organ of the instinct or power of preserving the balance, and maintaining an upright posture. But for an innate, steady, and never-failing perception of equilibrium, animal movements would be only staggering and tumbling. The intoxicated soon lose a steady

* Phrenological Journal, vol. ii. p. 302.

gait, fall down, see perpendiculars at other angles, believe the floor itself perpendicular, and grasp the ground to save themselves from falling off its surface; they feel lifted up, sinking down, and whirling round. Sickness would follow these sensations independent of the stimulus of the liquor to the stomach; and it is extremely probable that sea-sickness results from the inverted feelings occasioned by motion which violates our habitual perception of equilibrium *."

A correspondent of the Phrenological Journal mentions †, that he was struck with this remark about sea-sickness arising from the disturbance of equilibrium, and found by experience when at sea, that, by standing at the vessel's side, directing his eyes to an object on shore perfectly still, the top of a mountain for example, and shutting out with the palms of his hands all sight of the ship and the sea, sickness invariably left him, but always returned, whenever he withdrew his hands, and allowed any part of the vessel to catch his eye.

Sir G. S. Mackenzie has suggested the name "Resistance," as more appropriate for this faculty than that of Weight. "We cannot judge," says he, "of Weight, as we do of Form, without repeated experience. We may see before us two balls of the same size and colour. We take up one of them, and perceive that it requires a certain exertion or resistance on the part of the muscles of the arm and hand to support it. From this, however, we cannot determine that the other ball will produce the same effect, for it may be hollow. Now, although we have obtained the experience that two similar balls may not produce the same effect; this experience is of no use to us, for we must always make the experiment of lifting both, in order to determine which is the heavier. The impression of *Resistance* is, however, left with us; and probably it is the function of the faculty which Dr Spurzheim calls that of Weight, to give us conceptions of resistance in general ‡." Mr Simpson, I believe, is now disposed to admit the correctness of this analysis.

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* Phrenological Journal, vol. ii. p. 428. † No. viii. p. 645.

‡ Illustrations of Phrenology, p. 160.

In conformation of the above, by day I am never sea sick when I can find a deck, & looking to the prow of the ship can regulate my own equilibrium feelings by the steadiness of the vessel, at night I am very apt to be sick.

23. COLOURING.

Although the eyes are affected agreeably or disagreeably by the different modifications of the beams of light or by colours, yet they do not conceive the relations of different colours, their harmony or discord, and they have no memory of them. Certain individuals are almost destitute of the power of perceiving colours, who yet have the sense of vision acute, and readily perceive other qualities in external bodies, as their size and form. This fact has been remarked by Mr Stewart. He says, "In the power of conceiving colours, too, there are striking differences among individuals: and, indeed, I am inclined to suspect, that, in the greater number of instances, the supposed defects of sight in this respect, ought to be ascribed rather to a defect in the power of conception. One thing is certain, that we often see men who are perfectly sensible of the difference between two colours when they are presented to them, who cannot give names to these colours with confidence, when they see them apart; and are, perhaps, apt to confound the one with the other. Such men, it should seem, feel the sensation of colour like other men, when the object is present; but are incapable *(probably in consequence of some early habit of inattention)*, to conceive the sensation distinctly, when the object is removed *."

In this quotation, we have a specimen of the usual mode of conducting metaphysical speculations. When the most curious and striking phenomena of the mind are mentioned, and when we look anxiously for an explanation of them, *habit* or *association* is dragged in to solve the difficulty; and this often merely in a parenthesis, as if no difficulty existed.

Observation proves, that individuals who have the part of the brain marked No. 23. largely developed, possess in a high degree the power of discriminating colours, and, on this account, the Phrenologist admits this as a fundamental faculty of the mind.

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* Elements, ch. iii.

The faculty gives a delight in contemplating colours, and a vivid feeling of their harmony and discord. Those in whom the organ is deficient experience no interest in colouring, and are almost insensible to difference of shades. In the Phrenological Transactions, Dr Butter reports the case of Mr Robert Tucker, whose eye-sight was not deficient, and who was neither able to distinguish nor to recollect many of the primitive colours, even when shewn to him. "Orange, he calls green, and green colours orange; red, he considers as brown, and brown as red; blue-silk looks to him like pink, and pink of a light-blue colour; indigo is described as purple*." The organ is reported to be decidedly deficient in this gentleman's head. The case of Mr James Milne, brass-founder in Edinburgh, is also peculiarly illustrative of this faculty; and, as I obtained the facts from himself, they may be implicitly relied on.

Mr Milne's grandfather, on the mother's side, had a deficiency in the power of perceiving colours, but could distinguish forms and distance easily. On one occasion, this gentleman was desirous that his wife should purchase a beautiful green gown. She brought several patterns to him, but could never find one which came up to his views of the colour in question. One day he observed a lady passing on the street, and pointed out her gown to his wife, as the colour that he wished her to get; when she expressed her astonishment, and assured him, that the colour was a mixed brown, which he had all along mistaken for a green. It was not known till then that he was deficient in the power of perceiving colours.

Neither Mr Milne's father, mother, nor uncle, on the mother's side, were deficient in this respect; so that the imperfection passed over one generation. In himself and his two brothers, however, it appeared in a decided manner; while in his sisters, four in number, no trace of it is to be

* Page 210.

found; as they distinguish colours easily. Mr SPANKIE, a cousin once removed, has a similar defect *.

Mr MILNE is rather near-sighted, but never could find glasses to aid his defect. He rather excels in distinguishing forms and proportions; and, although he cannot discover game upon the ground, from the faintness of his perception of colours, yet he is fond of shooting; and, when a boy, was rather an expert marksman, when the birds were fairly visible to him in the air. He sees them, however, only in the sky-light; and, on one occasion, when a large covey of partridges rose within ten or twelve yards of him, the back ground being a field of Swedish turnips, he could not perceive a single bird. His eye is decidedly convex to a considerable degree.

Mr MILNE's defect was discovered in rather a curious manner. He was bound apprentice to a draper, and continued in his service for three years and a half. During two years, he fell into considerable mistakes about colours, but this was attributed to inexperience and ignorance of the names of the shades merely. At length, however, in selling a piece of olive corduroy, for breeches, the purchaser requested strings to tie them with; and Mr MILNE was proceeding to cut off what he considered as the best match, when the person stopt him, and requested strings of the same colour as the cloth. Mr MILNE begged him to point out a colour to please himself; and he selected, of course, a green string. When he was gone, Mr MILNE was so confident that he himself was right, and the purchaser wrong, in the shade that he had chosen, that he cut off a piece of the string which he intended to give, and a piece of that which had been selected, and carried both home, with a piece of the cloth also, and shewed them to his mother. She then told him, that *his ribbon* was a *bright*

* I have examined the heads of Mr MILNE's brothers, who are deficient in the power, and in them the organ is evidently little developed. I have also examined its development in one of his sisters, and found no deficiency, but rather a fulness in the organ. Mr LYON, a member of the Society, states, that he has examined the head of Mr SPANKIE, and found the organ rather deficient.

scarlet, and the *other a grass green*. His masters would not believe in any natural defect in his power of perceiving colours; and it was only after many mistakes, and some vituperation, that he was permitted to resign the business, and to betake himself to another, that of a brass-founder, to which he had a natural disposition; for he had used the turning-loom in constructing playthings, when a mere boy.

As to the different colours, he knows blues and yellows, certainly; but he cannot distinguish browns, greens and reds. A brown and green he cannot discriminate or name when apart; but when together, he sees a difference between them. Blue and pink, when about the same shade, and seen in day-light, appear to him the colour of the sky, which he calls blue; but seen in candle light, the pink appears like a dirty buff, and the blue retains the appearance which it had in day-light. The grass appears to him more like an orange, than any other coloured object with which he is acquainted. Indigo, violet and purple, appear only different shades of one colour, darker or lighter, but not differing in their bases. He never mistakes black and white objects: he distinguishes easily between a black and a blue, and is able even to tell whether a black be a good or a bad one. In the rainbow he perceives only the yellow and the blue distinctly. He sees that there are other shades or tints in it, but what they are he cannot distinguish, and is quite unable to name them. In day-light, crimson appears like blue or purple, but in candle-light, it seems a bright red.

When in Glasgow, his greatcoat was carried off from the travellers' room by mistake, and on inquiring at the waiter what had become of it, the question was naturally put, what the colour of the coat amissing was? Mr MILNE was quite puzzled by the interrogatory; and although he had worn it for a year, he could only reply, that it was either snuff-brown or olive-green, but which he could not tell. The waiter looked as if he suspected that Mr MILNE wanted to get a coat instead of wishing to recover one; but the coat was found, although even yet Mr MILNE is not able to tell the colour. He is apt

to mistake copper for brass, unless he distinguish them by the file.

A mask of Mr MILNE is sold in the shops, and in it the organs of Form, Size, and Constructiveness * are well developed, while that of Colouring is decidedly deficient; there being a depression, in the part corresponding to this organ, into which the point of the finger falls on passing it along. As a contrast, the reader may compare with it the masks of Mr DAVID WILKIE, Mr HAYDON, Mr DOUGLAS, or Mr WILLIAMS, all eminent painters; and as the organ is large in these masks, a very marked difference will be perceptible.

Cases of this description are not rare. In the mask of Mr SLOANE of Leith, the development is small, and in a letter, dated 20th February 1822, addressed to me, this gentleman says, "When I see a piece of tartan, or any other complication of Colours, I can easily distinguish the difference of shades; but were the different Colours presented to me singly, I could not say which was which. I feel particularly at a loss to distinguish betwixt green and brown, and likewise betwixt some shades of red and blue. I am not sensible of being deficient in seeing any thing at a distance, or of being unable to perceive as small a particle as the generality of men can do." In this mask, the deficiency is not so great as in that of Mr MILNE, but the organ of Colouring is greatly less developed in it than in the masks of the painters before alluded to.

The proper way to observe the development of this organ, is to distinguish to what extent the centre of each eye-brow projects forward. In Mr MILNE it is slightly depressed below the neighbouring parts; in Mr SLOANE, it is scarcely depressed, but it does not project, so as to overhang the eyeball; in the painters it is large and prominent, forming a heavy shade above the eye.

Mr JEFFREY, in the article "Beauty," already alluded to,

* This is an example of the organ of Constructiveness being situated higher than usual, as noticed on p. 116.

informs us, " That colour is, in all cases, absolutely indifferent to the eye ;" and adds, " that it is no doubt quite true, that, among painters and connoisseurs, we hear a great deal about the harmony and composition of tints, and the charms and difficulties of a judicious colouring. In all this, however, we cannot help thinking that *there is no little pedantry and no little jargon.*" Speaking of the natural gamut of colours, he continues, " We confess we have no faith in any of these fancies ; and believe, that if all these colours were fairly arranged, on a plain board, according to the most rigid rules of this supposed harmony, nobody, but the author of the theory, would perceive the smallest Beauty in the exhibition, or be the least offended by reversing their collocation." It is a curious fact, that the organ of Colouring in Mr JEFFREY's head is actually depressed ; and it appears that, in the usual manner of metaphysical writers, he has conceived his own feelings to be an infallible standard of those of human nature in general. It is quite true that the *eye* is affected only by the degrees of light, but by this expression, the mind is here obviously meant. The author, when speaking in the next sentence of the gamut, draws no distinction between the powers of the mind and those of the eye. Those individuals, then, whose cases I have cited, and who cannot distinguish dark-brown from scarlet, buff from orange, or violet from pink, would probably subscribe to Mr JEFFREY's positions. But other individuals, such as WILKIE and HAYDON, have an intense sensibility to shades of every hue, and of every degree ; and some painters have assured me, that they experience a very decided emotion on contemplating colours, independent of every association ; and declare, that they perceive harmony, congruity, and incongruity, in their arrangements, even on a plain board, as certainly and as distinctly as they distinguish harmony and discord in sound.

Dr GALL holds it as an indubitable fact, that determinate laws of proportion in colours exist. The three primitive colours of blue, yellow, and red, says he, do not harmonize. If we mix two of these, an intermediate colour is produced :

Blue and yellow give a green; blue and red, violet; red and yellow, orange. To obtain a harmonious combination, we must place along-side of a primitive colour one that is mixed, into which the primitive enters as one element; the mixed colour will always be in harmony with the two primitive colours from which it is produced. If we place, says he, a silk ribbon, of a blue colour, and about an inch broad, on a sheet of white paper, and look at it stedfastly; at the end of a short time, we shall see, besides, yellow and red, and (at the side) orange, resulting from their mixture *.

A legal practitioner, in a country town of Scotland, whom I have seen, and in whom this organ was very large, was engrossed by a passion for showy flowers, even to the neglect of urgent calls on his attention. It is probable that the intense sensibility to colours, which accompanies a large development of the organ, was the source of this interest.

Phrenologists are accustomed to infer the particular powers which are most vigorous in an author's mind, from the manifestations of them in his works; and none affords better scope for observation than the faculty of Colouring. Unless the impressions made on the mind of an author by Colours were very strong, he has no inducement to introduce them, for he can easily treat of a great variety of subjects, without adverting to their hues. When, therefore, we find him minutely describing shades and tints, and dwelling on colours and their effects with evident delight, we may safely infer that the organ is large. Mr Tennant, the author of Anster Fair, frequently does so, and in his head the organ is large. Moore has innumerable allusions to Colour in his lyrical poetry, many of them exquisitely beautiful and appropriate; and hence I infer, that in him also the organ will be found large, although I am not informed, as matter of fact, that it is so.

The organ is generally larger in women than in men; and, accordingly, some women, as *colourists*, have equalled the masters among men, while as *painters*, women, in general,

* Sur les Fonctions du Cerveau, tome v. p. 82.

have always been inferior to the other sex. The faculty aids the flower-painter, enameller, dyer, and, in general, all who occupy themselves with colours. Its great energy gives a passion for colours, but not necessarily a delicate taste in them. Taste depends upon a perfect rather than a very powerful activity of the faculties. In several oriental nations, for example, the faculty appears, from their love of colours, to be strong, and, nevertheless, they display bad taste in the application of them.

The organ is now considered as established.

Genus III.—INTELLECTUAL FACULTIES,

which perceive the relations of external objects.

24. LOCALITY.

Dr Gall mentions, that the taste which he had for natural history induced him frequently to go into the woods to catch birds, or to discover their nests; and although he was expert in accomplishing these objects, yet, when he wished to return to the nests, he generally found it impossible to retrace his way, or to light upon the tree which he had marked, or the snares which he had placed. This difficulty did not arise from inattention, for, before quitting the spot, he stuck branches in the ground, and cut marks on trees, to guide him in his return, but all in vain. He was obliged to take constantly along with him one of his school-fellows, named Scheidler, who, with the least possible effort of attention, went always straight to the place where a snare was set, even although they had sometimes placed ten or fifteen in a quarter that was not familiarly known to them. As this youth possessed only very ordinary talents, in other respects, Dr Gall was much struck with his facility in recollecting places, and frequently asked him how he contrived to guide himself so surely; to which he replied by asking Gall, in his turn, how he contrived to lose himself

every where. In the hope of one day obtaining some explanation of this peculiarity, Dr Gall moulded his head; and endeavoured to discover persons who were distinguished by the same faculty. The celebrated landscape-painter Schænberger told him, that, in his travels, he was in the custom of making only a very general sketch of countries which interested him, and that afterwards, when he wished to produce a more complete picture, every tree, every group of bushes, and every stone of any considerable magnitude, presented itself spontaneously to his mind. About the same period Dr Gall became acquainted with M. Meyer, author of the romance of "*Dia-na-Sore*," a person who found no pleasure except in a wandering life. Sometimes he went from house to house in the country, and at other times attached himself to some man of fortune, to accompany him in extended travels. He has an astonishing faculty in recollecting the different places which he has seen. Dr Gall moulded his head also; he then placed it and the other two together, and compared them attentively; they presented great differences in many points, but he was struck with the singular form which appeared in all the three a little above the eyes, and on the two sides of the organ of Individuality, viz. two large prominences commencing near each side of the nose, and going obliquely upwards and outwards, almost as high as the middle of the forehead. From that time he was led to suppose, that the talent for recollecting places depended on a primitive faculty, of which the organ was situated under this part of the skull; innumerable subsequent observations confirmed this inference.

Dr Spurzheim states, that "the special faculty of this organ, and the sphere of its activity, remain to be determined. It makes the traveller, geographer, and landscape-painter, recollect localities, and gives notions of perspective. It seems to me, says he, that it is the faculty of Locality in general. As soon as we have conceived the existence of an object and its qualities, it must necessarily occupy a place, and this is the faculty that conceives the places occupied by the objects that

surround us*." Sir GEORGE S. MACKENZIE considers the primitive faculty to be that of perceiving *relative position*. Dr SPURZHEIM states, that "notions of perspective" are given by Locality, but certain facts, already noticed, appear to shew that these depend rather on Size: in other respects his observations coincide with my own experience.

Persons in whom this organ is large form vivid and distinct conceptions of situations and scenery which they have seen or heard described, and they have great power in recalling such conceptions. When the faculty is active from internal excitement of the organ, such ideas are presented to them involuntarily. In the mask of Sir WALTER SCOTT the organ is large. Readers, similarly endowed, are almost as much delighted with his descriptions of scenery, as by a tour made by themselves amid the mountain glens; while those in whom the organ is small, are quite uninterested by his most splendid poetical landscapes. This author writes so pictorially, that he almost saves an artist, who means to illustrate his pages, the trouble of invention.

An author, in whom this organ is moderately developed, treats of places in a very different manner. Mr TENNANT, the author of Anster Fair and the Thane of Fife, merely designates, by appropriate epithets, the leading features of a landscape, in a way which excites a pleasing and distinct recollection of it in those who have seen it, but which calls up no picture in the mind of a reader who was not familiar with it before; and in his head the organ of Locality is below an average size. The following lines are characteristic of his manner.

> "Next them the troopers each on fervent steed
> That dwell *within the warm and flowery dales*
> *Where Annan and where Esk, and Liddle, lead*
> *Their streams down tripping through the sunny vales,*
> And where the *stronger and more swelling Tweed*
> *Emergent from his midland mountain, trails*
> *Voluminous and broad his waters down*
> To meet the briny sea by bulwark'd Berwick town."

* Phrenology, p. 280.

The organ is large in the busts and portraits of all eminent navigators and travellers, such as Columbus, Cooke, and Mungo Park; also in great astronomers and geographers, as Kepler, Galileo, Tycho Brahe', and Newton. In Tasso the poet, it appears also to have been very large, and he manifested the faculty in a high degree. This faculty gives what is called "*Coup d'œil*," and judgment of the capabilities of ground. It is necessary to the military draughtsman, and is of great importance to a general in war. Dr Gall mentions, that he had observed the organ large in distinguished players at chess; and he conceived their talent to consist in the faculty of conceiving clearly a great number of the possible positions of the men.

Some persons have an instinctive tact at discriminating and recollecting the situation of the organs on the Phrenological bust, while others experience the greatest difficulty in doing so. The former have Locality and Form large, the latter small, indicated by a general narrowness at the top of the nose. The latter state their own inability as an objection against the system; but this is equally logical as if Mr Milne were to deny the existence of a great variety of shades in colours, because his own organ of colouring is so defective that he cannot perceive them.

Locality appears to be an element in a genius for geometry. In the heads or busts of six or seven eminent mathematicians which I have carefully examined, this organ, and also those of Size, Individuality and Comparison, are large. Indeed, pure geometry treats only of the relations of space, and does not imply agency, or any relation, except that of proportion; and hence it might be legitimately inferred to belong to the sphere of the organs now mentioned. Negative cases also coincide with these positive observations. Zhero Colburn, the American youth who was celebrated for his arithmetical powers, turned his attention to mathematics, but with very little success. He stated to me that he had been taught the first six books of Euclid, and understood the propositions, but felt no interest in the study. He liked algebra much better; and he

has the organ of Number large, but that of Locality deficient. The gentleman who had taken charge of his education, it is said, at first intended him to come out as a mathematician, but afterwards finding that his genius did not lie that way, directed his attention to law. Mr GEORGE BIDDER, when a mere child, displayed such astonishing talent as a mental calculator, that several gentlemen in Edinburgh were induced to take charge of his education; and, on the supposition that his abilities extended to mathematical science generally, selected for him the profession of an engineer. Having heard of this intention, and having observed that in his head the organs of the mathematical faculties were not developed in any extraordinary degree, I inferred that his eminence as a mathematician would not equal that which he had attained as a calculator, and communicated this conviction in writing to Principal BAIRD, one of his patrons. Mr BIDDER subsequently pursued the study of mathematics; but, at the end of two years, both he himself and Professor WALLACE informed me, that he was not distinguished for more than common ability in the class.

When the group of organs situated at the top of the nose, namely, Individuality, Form, Size, Weight, and Locality, are all large, there is generally a strong talent for dynamics. Persons thus endowed excel in turning, and in archery; and if Constructiveness be also full, and they have been bred to professions in which they find no scope for these faculties, they frequently set up private workshops, and become inventors and improvers of machinery.

The organ of Locality is generally much larger in men than in women; and the manifestations correspond.

Dr GALL cites several cases of diseased affection of this organ; and in the Phrenological Journal *, Mr SIMPSON gives a highly interesting detail of symptoms attending disorder of this and the other knowing organs already treated of.

This organ is possessed by the lower animals, and many in-

* No. vii. p. 426.

teresting facts are recorded of their manifestations of the faculty. Dr GALL mentions several instances of dogs returning to their homes from a great distance, without the possibility of their having been guided by smell or sight. "A dog," says he, "was carried in a coach from Vienna to St Petersburgh, and at the end of six months he reappeared in Vienna: Another was transported from Vienna to London;—he attached himself to a traveller, and embarked along with him; but at the moment of landing, he made his escape and returned to his native city. Another dog was sent from Lyons to Marseilles, where he was embarked for Naples, and he found his way back by land to Lyons." The common hypothesis, he observes, that dogs retrace their way by the aid of smell, appears abundantly absurd, when applied to cases in which they were transported by water, or in a coach; and the idea that these animals can discover the effluvia of their master's person across a space of several hundred leagues, appears equally preposterous. Besides, a dog does not return home by the straightest road, nor even by the precise line in which he was carried away; and some naturalists have therefore been obliged to admit an occult cause of this surprising talent, and named it a *sixth sense*. Dr GALL considers it to belong to the order of Locality. The falcon of Iceland returns to its native place from a distance of thousands of miles; and carrier pigeons have long been celebrated for a similar tendency, and have occasionally been employed in consequence to convey dispatches. Swallows, nightingales, and a variety of sea-fowls, migrate from one climate to another at certain seasons of the year, which is attributed by Dr GALL to periodical and involuntary excitement of this organ.

The frontal sinus has been stated as an objection to this organ, but it rarely ascends higher than the lower part of it; and while prominences formed by the sinus are irregular in form, and generally horizontal in direction, the elevations occasioned by a large development of locality, are uniform in shape, and extend obliquely upwards towards the middle of

the forehead. Farther, the negative evidence in favour of the organ is irresistible, and it is therefore held as established.

25. ORDER.

Order supposes a plurality of objects; but one may have ideas about a number of things and their qualities, without considering them in any order whatever. Every arrangement of external articles is not equally agreeable to the mind; and the capacity of being delighted with order, and distressed by disorder, is not in proportion to the endowment of any other faculty. There are individuals who are martyrs to the love of order, who are distressed beyond measure by the sight of confusion, and highly satisfied when every thing is well arranged. These persons have the organ in question large. The sort of arrangement, however, imposed by this faculty, is different from, although perhaps one element in, that philosophical method which is the result of the perception of the relations of things. The faculty of which we here speak, gives method and order in arranging objects, as they are physically related; but philosophical or logical inferences, the conception of systematising or generalizing, and the idea of classifications, are formed by the reflecting faculties. Dr Spurzheim mentions, that the Sauvage de l'Aveyron at Paris, though an idiot in a very high degree, cannot bear to see a cha , or any other object out of its place; and as soon as any thing is deranged, he, without being excited to it, directly replaces it. He saw also in Edinburgh a girl, who, in many respects, was idiotic, but in whom the love of order was very active. She avoided her brother's apartment, in consequence of the confusion which prevailed in it.

Dr Gall mentions, that he has met with facts which strongly indicate, that "order" depends on a primitive faculty; but that, on account of the difficulty of observing the organs placed in the superciliary ridge, and the small size of this organ in particular, as pointed out by Dr Spurzheim, he has not been

able to collect a sufficiency of determinate facts to authorise him to decide on its situation *.

I have seen several instances in confirmation of this organ. A gentleman of this city, whose mask is sold as an illustration of "order," has a large development of it; and his perception of symmetrical arrangement is exceedingly acute. On each superciliary ridge of this cast, there is an elevation resembling a small pea, which is frequently mistaken for the organ: that, however, appears to be merely a projecting point of the frontal bone, to which some fibres of the temporal muscle are attached. The development of the organ is indicated by a great fulness, producing a square appearance at the external angles of the lower part of the forehead. I have seen other cases, in which that part of the brain was very small, and the love of order was extremely deficient. On the whole, therefore, I am disposed to admit the organ as ascertained. The organ is large in the mask marked "French M. D.," and in HUMBOLDT, brother of the traveller.

26. TIME.

THE power of conceiving Time, and of remembering circumstances connected by no link, but the relation in which they stand to each other in chronology, and also the power of observing time in performing music, is very different in different individuals. Dr SPURZHEIM has a few observations in evidence of this organ; but it is stated as only probable. The special faculty seems to be the power of judging of time, and of intervals in general. By giving the perception of measured cadence, it appears to be the chief source of pleasure in dancing. It is essential to music and versification.

Mr SIMPSON, in an excellent essay on this faculty, published in the Phrenological Journal †, states that "We have

* Sur les Fonctions du Cerveau, tom. iv. p. 467.

† Vol. ii. p. 134.

found the organ largely developed in those who shew an intuitive knowledge of the lapse of minutes and hours, so as to name the time of the day, without having recourse to the clock; and also in those who perceive those minuter divisions, and their harmonious relations, which constitute rhythm, and who, when they apply the tact to music, are called good timists,—a distinct power from that of the mere melodist, and often wanting in him, while it is matter of the commonest observation, on the other hand, that this sensibility to rhythm, called Time, is marked in those who have a very moderate perception of melody. Such persons are invariably accurate dancers, observing delicately the time, though indifferent to the melody of the violin. We have made many observations, both in persons who have both Time and Tune large, and in those who have only one of them in large endowment, and we have never found the manifestations fail. Very lately we were struck with the uncommon prominence of the organ of Time in a whole family of young people, and inquired whether or not they danced with accuracy, and loved dancing? We were answered, that they did both in a remarkable degree; and as we lived near them for some weeks, we observed that dancing was a constant and favourite pastime of theirs, even out of doors. Their dancing-master informed us, that the accuracy of their time exceeded that of any pupils he had ever taught. There was thus evident in these young persons an intense pleasure in accurate rhythmical movements."

The fact, that many Deaf and Dumb persons dance with perfect precision, and much pleasure, is thus accounted for by Mr Simpson. "That Time," says he, "may be marked with the utmost precision to the eye is a fact familiar to every one, who has seen a regiment of soldiers go through the manual and platoon exercise, without a single word of command, by obeying the movements of the fugle-man, who gives the time to the eye; and who that has seen this done by a practised corps, is ignorant that there is great pleasure in witnessing the exquisitely timed movements of the exercise? Now, suppose a dancer, unaided by music, were to keep his

eye on any person or object which was marking dancing time to his sight, it cannot be doubted that he could dance to it. A deaf person could perform the manual exercise from the time given by the fugle-man; and just as easily could a deaf person dance with his eye upon the violin bow, or the player's arm, or on the movement of the drumsticks.

"It is unnecessary to go farther, and shew, that the sense of touch may be the channel through which the organ of Time is excited, as well as the sense of hearing and sight. No one will dispute that a soldier could perform the manual exercise to a succession of taps on the shoulder; and to time, in the same way given, might a person dance.

"What we have said is confirmed by fact. It is well known that the deaf and dumb do dance, taking the time by the eye, either from the violin-player's arm, or at second hand, but instantaneously from the other dancers. We are acquainted with a young lady and gentleman in England, both of rank, who are deaf and dumb, and who, in addition to many other accomplishments, dance with the greatest grace and precision."

The origin of the notion of Time has greatly puzzled the metaphysicians. Lord KAMES says, that we measure it by the number of ideas which pass in the mind; but experience contradicts this supposition, for time never appears so short as when ideas are most numerous, and pass most rapidly through the mind. The idea, that it depends on a separate faculty and organ, on the other hand, is in harmony with this fact; for, as the organ of Time may remain inactive, while the others are vividly excited, it follows, that our perceptions of duration will, on such occasions, be indistinct, and time will, in consequence, appear brief.

27. NUMBER.

A SCHOLAR of St Poelton, near Vienna, was greatly spoken of in that city, on account of his extraordinary talent for calculation.

He was the son of a blacksmith, who had not received any particular instruction beyond that bestowed on other boys at the same school; and in all other respects was nearly on a footing of equality with them. Dr GALL made him come to Vienna, and presented him to his audience, when he was nine years of age. "Lorsqu'on lui donnait," says Dr GALL, "je suppose, trois nombres exprimés chacun par dix à douze chiffres, en lui demandant de les additionner, puis de les soustraire deux à deux, de les multiplier et de les diviser chacun par un nombre de trois chiffres; il regardait une seule fois les nombres, puis il levait le nez et les yeux en l'air, et il indiquait le résultat de son calcul mental avant que mes auditeurs n'eussent eu le temps de faire le calcul la plume à la main. Il avait crée lui même sa méthode." An advocate of Vienna stated his regret that his son, of five years of age, occupied himself exclusively with numbers and calculation, in such a manner that it was impossible to fix his attention on any other object, not even on the games of youth. Dr GALL compared his head with that of the boy just mentioned, and found no particular resemblance, except in a remarkable prominence at the external angle of the eye, and a little to the side. In both, the eye was in some degree covered by the external angle of the upper eyebrow. These cases suggested the idea that the talent for calculation might be connected with a particular organ; and Dr GALL sought for men distinguished for this power, in order to verify the discovery. He repaired to the Councillor MANTELLI, whose favourite occupation was to invent and solve problems in mathematics, and particularly in arithmetic, and found the same configuration in him. He next went to Baron VEGA, author of Tables of Logarithms, at that time Professor of Mathematics, and who, in every other talent, "était un homme fort médiòcre," and found in him the same form of the head. He then visited private families and schools, and desired the children distinguished for ability in calculation to be pointed out to him; and still the same development recurred. He therefore felt himself constrained to admit a special organ and faculty for this talent.

The organ, when large, fills up the head outside of the external angle of the eye, a very little below the point called the external angular process of the frontal bone.

The special function of the faculty seems to be calculation in general. Dr Gall calls it "*Le sens des nombres;*" and while he states distinctly that arithmetic is its chief sphere, he regards it as also the organ of mathematics. Dr Spurzheim, on the other hand, limits its functions to arithmetic, algebra, and logarithms; and is of opinion that the other branches of mathematics, as geometry, &c. are not the simple results of this faculty. In this analysis he appears to me to be well founded. Mr George Bidder, when only seven years of age, and without any previous instruction, shewed an extraordinary talent for mental calculation; and I have seen him, when only eleven, answer the most complicated questions in algebra, in a minute, or a minute and a-half, without the aid of notation. When he first came to Edinburgh, and before I had seen him, a gentleman waited upon me, accompanied by three boys of nearly equal ages, and said, "One of these is George Bidder, the celebrated mental calculator, can you tell which is he by his head?" On examining the organ of Number in all of them, I replied that one of them ought to be decidedly deficient in arithmetical talent; that another should possess it in a considerable degree; but that the third must be Bidder, because, in him, the organ was developed to an extrordinary extent. The gentleman then stated that the indications were perfectly correct; that the first was a boy who had been remarked as dull in his arithmetical studies; the second was the most expert calculator selected from a school in Edinburgh; and the third was Bidder. Dr Gall mentions a similar experiment which was tried with him, and with the same result. He gives a detailed account of Zhero Colburn, the American youth who exhibited great talents for calculation, and in whom also the organ was found large. This young man visited Edinburgh, and afforded the phrenologists of this city an opportunity of verifying Dr Gall's observations, which were found to be correct. Masks of him

and BIDDER were taken, and now form part of the Phrenological Society's collection. These two examples, however, prove that Dr SPURZHEIM is right in limiting the function of this faculty to calculation of numbers; as neither of these young men have proved so eminent in geometry as in arithmetic and algebra. The organ is large also in the mask of HUMBOLDT, celebrated for his powers of calculation. This organ, and Individuality both large, give the talent of recollecting dates.

I am acquainted with other individuals in whom this organ is deficient, and who experience great difficulty in solving the most ordinary arithmetical questions, who, indeed, have never been able to learn the multiplication table, or to perform readily common addition and subtraction, even after persevering efforts to attain expertness. This organ is small in the mask marked "French M. D.;" and it serves as a contrast, in this respect, to those just mentioned, in which it is large.

Dr GALL observes, that when this organ predominates in an individual, all his faculties receive an impression from it. He knew a physician in whom it was very large, who laboured to reduce the study of medicine, and even the virtue of particular medicaments, to mathematical principles; and one of his friends, thus endowed, endeavoured to found an universal language on similar grounds.

Dr SPURZHEIM mentions, that "certain races of negroes make five the extent of their enumeration, that is, they count only as far as five by simple terms; they say, "five-one, five-two, five-three," &c. "Negroes in general," he continues, "do not excel in arithmetic and numbers; and, accordingly, their heads are narrow in the seat of the organ of Number." HUMBOLDT also mentions that the Chaymas (a people in the Spanish parts of South America) "have great difficulty in comprehending anything that belongs to *numerical* relations;" and that "the more intelligent count in Spanish with an air that denotes a great effort of mind, so far as 30, or perhaps 50;" and he adds, that "the corner of the eye is sensibly raised *up* towards the temple."

Dr GALL mentions, that two of his acquaintances felt pain

in the region of this organ, after being occupied for several days in succession with difficult calculations. In the Hospital of Vienna, he saw a patient whose insanity had degenerated into idiocy, but who nevertheless occupied himself solely with counting. He stopped, however, regularly at ninety-nine; could never be induced to say one hundred, and recommenced counting at one. M. L. A. Gælis, in his Treatise on Acute and Chronic Hydrocephalus, mentions the case of a boy, who, though stupid in every other respect, still manifested, in his twelfth year, an astonishing memory for numbers, and a strong feeling of Benevolence; which qualities, however, he adds, disappeared in proportion as his malady, hydrocephalus, increased.

It seems difficult to determine whether this faculty exists in the lower animals or not. George Le Roy states from observation, that magpies count three; while Dupont de Nemours asserts that they count nine; Dr Gall does not decide the question.

The organ is Established.

28. TUNE.

Dr Gall mentions, that a girl named Bianchi, of about five years of age, was presented to him, and he was asked for what talent she was most distinguished. He discovered in her no indication of an extraordinary memory; and the idea had not then occurred to him, that the talent for music could be recognised by the conformation of the head. Indeed, he had not at that time ascertained the different kinds of memory; but his friends nevertheless maintained, that the young Bianchi had an extraordinary memory for music, and, as he had not discovered that talent in her, they inferred that the doctrine which he taught of external signs for different kinds of memory was unfounded. This child repeated whatever she heard sung or played on the piano, and recollected whole concerts if she had heard them only twice. Dr Gall asked if she learned every thing by heart with equal facility, but he

was told that she possessed this astonishing memory in music alone. He concluded that a well marked difference existed between memory for music, and the other kinds of memory with which he was then acquainted, and that every kind had its distinct organ. He prosecuted his observations with fresh ardour, and at last discovered that the talent for music is connected with the organ now under discussion. He calls it "*Le sens des rapports des tons;*" "expression," says Dr GALL, "qui rattache la manière dont l'intellect du musicien met en œuvre les rapports des tons à la manière d'agir des sens en général."

The organ of Tune bears the same relation to the ears, as the organ of Colour does to the eyes. The ear receives the impressions of sounds, and is agreeably and disagreeably affected by them; but the ear has no recollection of tones, nor does it judge of their relations; it does not perceive the harmonies of sound; and sounds, as well as colours, may be separately pleasing, though disagreeable in combination. A great development of the organ enlarges the lateral parts of the forehead; but its form varies according to the direction and form of the convolutions. Dr SPURZHEIM observes, that, in GLÜCK, and others, this organ had a pyramidal form; in MOZART, VIOTTI, ZUMSTEG, DUSSEK, CRESCENTINI, and others, the external corners of the forehead are enlarged, but rounded. Great practice is necessary to be able to observe this organ successfully; and beginners should place together one person possessing a genius for music, and another who can scarcely distinguish between any two notes, and mark the difference of their heads. The superior development of the former will be perceptible at a glance. The faculty gives the perception of melody; but this is only one ingredient in a genius for music. Time is requisite to a just perception of intervals, Ideality, to give elevation and refinement, Secretiveness and Imitation to produce expression; and Constructiveness, Form, Weight, and Individuality are requisite besides, to supply mechanical expertness, necessary to successful performance.

Dr GALL mentions that he has examined the heads of the

most celebrated musical performers and singers, such as Rossini, Catalani, &c. and found the organ uniformly large, and that the portraits and busts of Haydon, Glück, Mozart, &c. shew it also largely developed. I have examined the heads of Madame Catalani, and many eminent private musicians, and found the organ confirmed in every instance. Dr Gall remarks farther, that a great development is not to be expected in every ordinary player on a musical instrument. With a moderate endowment, the fingers may be trained to expertness; but when the soul feels the inspiration of harmonious sounds, and the countenance expresses that voluptuous rapture which thrills through the frame of the real musician, a large organ will never be wanting.

"Il me parait," continues Dr Gall, "que les hommes qui sont capables de déduire les lois de la composition dès lois des vibrations sonores, et des rapports des tons, et d'établir ainsi les principes les plus généraux de la musique, doivent être doués en même temps *d'un organe des nombres* très develloppé; car l'exercise de ce degré du talent musical exige, sans contredit, beaucoup de calcul; aussi la circonvolution inférieure de l'organe musical, la plus large de toutes, se continue immédiatement dans l'organe des nombres. Céci explique pourquoi on peut être excellent musicien, et n'avoir pas le talent de la composition; être grand compositeur sans être en même temps grand musicien *."

The heads of Italians and Germans in general are broader and fuller at the situation of this organ than those of Negroes, Otaheitians, Spaniards, Frenchmen and Englishmen, in general and musical talent is more common in the former than the latter.

Mr Scott has published in the Phrenological Journal †, two admirable Essays "on Music, and the different faculties which concur in producing it," which will be found highly deserving of attention. He conceives Tune to be the primitive

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* Sur les Fonctions du Cerveau, tome v. p. 120.

† Vol. ii. pp. 170. and 556.

faculty which distinguishes, "1*st*, That agreement of component vibrations in simple sounds, which constitutes them *musical;* 2*d*, That relation in separate sounds emitted together, which constitutes *harmony;* and, 3*d*, That relation in successive notes, which constitutes melody." He then considers the *auxiliary faculties* requisite to the practical musician (namely those before enumerated), and points out the effect of each in conducing to musical genius. "Imitation," says he, "is necessary, particularly to the vocal performer, to enable him to imitate the sounds he hears, and to give, by his own vocal organs, a correct copy of the music which he wishes to execute. Accordingly, it is matter of observation, that all singers, who sing naturally and easily, possess a considerable organ of Imitation." He then enters, at considerable length, into the subject of musical expression. "It seems to me," says he, "although I do not pretend to have made observations sufficiently accurate and numerous to prove the fact, that there is a correspondence in all cases between the voices of men and women, and their cerebral development. The subject is a very curious one, and I mention it more for the purpose of inducing others to make observations, than from any value I attach to any observations of my own. Some facts there are, however, which are matters of common notoriety, and which go far to prove that there is at least a general correspondence; and further light might, doubtless, be thrown upon it, by more accurate and minute observers.

In the first place, it is a general rule, that the heads of women are comparatively smaller than those of men, and that their voices are, in a corresponding degree, smaller and shriller than the male voice.

"Boys under puberty, who have smaller heads than full grown men, have voices small, shrill, and soft, like a woman's.

"The voices of children of both sexes, but particularly girls, are shriller than even the adult female voice.

"As boys advance from puberty to manhood, and just at the time when the head is receiving the largest accessions, the

voice is changed from the small shrill pipe of the boy to the grave tones of the man.

"In men who have small or moderately-sized heads, particularly if the lower propensities are moderately developed, the voice approaches to the shrill pitch and softness of a woman's.

"In women who have large heads, particularly if the lower propensities are fully developed, the voice is generally grave, and approaches in its tones to a man's. I have been informed, that it has been observed of women who are subject to *nymphomania*, that, when under the influence of a paroxysm, their voices are harsh, low, and rough, like those of men. This fact, if sufficiently established, would go far to prove that low and rough notes are the natural language of the lower propensities.

"So far I have observed in general; but I would wish that those who have an opportunity would make observations which may confirm the above, or shew whether there are any exceptions to the rule. I do not recollect to have seen any. It would be desirable to ascertain, whether all the bass-singers in our bands and choirs have large heads, and the counter-tenors among men small ones; or whether the depth of voice is in proportion to the development of the cerebellum;—whether the women singers, whose voices are pitched low, have larger heads, or a fuller endowment of the lower propensities, than those who have treble voices.

"It is undoubted, that the quality of tone as well as the pitch, depends considerably on the nature of the development. In women who possess Combativeness and Destructiveness well developed, the voice, though shrill, is sharp, and the tones pierce the ear like a sword. In women who are given to scolding, this sharp piercing quality of voice will invariably be noticed; and it forms one of the most unpleasant circumstances attending it. If the lady would utter the same words in a moderate tone, the nuisance would not be nearly so great. In like manner, in men who have large Destructiveness, if the head is otherwise large and well-balanced, the voice, though

grave, will be clear, and have a peculiar edge and sharpness, which Destructiveness alone seems to give.

" When the head is in general large, but Destructiveness deficient, the voice will probably be grave and full, but soft, and will want the sharp ringing quality which Destructiveness confers. This is a voice, from its rarity, much in request among singers, and is called a *veiled voice* (*voce velata*). Madame Marconi, who sung at the first Edinburgh Festival, had a voice of this description. She was said to have been remarkable for good nature.

" In those in whom intellect predominates, the voice has a calm and composed, but not a touching expression. When Benevolence and the kindly and social affections are large, and when Tune, Imitation, and Ideality, are at the same time large, the voice has a degree of bewitching softness, as may be observed in the case of Miss Stephens or Miss Tree. But there occur in private life many instances to the same effect. When Benevolence and the higher sentiments are both united in full proportion, the voice is felt to be peculiarly delightful and harmonious. In men, there is generally too much of the lower propensities to admit of this in its highest degree; indeed, these seem so essential to a manly character, that in them it would not be desirable. But we have met with women whose every tone is music, and whose voices, even in ordinary discourse, have about them a delightfulness which is quite irresistible, and which makes its way directly to the heart. This softness and sweetness of voice, is remarked as a great point of female excellence by King Lear, where the old distressed monarch is enumerating the excellencies of his favourite Cordelia,—

"——Her voice was ever soft,
" Gentle, and low,—an excellent thing in woman*."

When an average development of Tune is combined with high intellectual organs, the superior objects with which these

* Phrenological Journal, vol. ii. p. 552.

are conversant, generally attract the mind, and music is little cultivated. When, on the other hand, these are small, and Ideality, Hope, Benevolence, Veneration, and Wonder, which Tune is particularly calculated to gratify, are large, the tendency to practise music is much stronger. Hence, with the same absolute development of this organ, very different practical results may ensue; but this is in exact accordance with the principles of the science; for it is the *predominance* of particular organs in an individual that decides the bias of his mind; the organs, largest in size, always tending most powerfully to seek gratification.

Tune is occasionally found strong in idiots, and, in some insane patients, its activity remains unimpaired amidst an extensive derangement of the other faculties. I have seen two idiots who manifested it in a considerable degree.

Dr Spurzheim mentions, that the heads and skulls of birds which sing, and of those which do not sing, and the heads of the different individuals of the same kind, which have a greater or less disposition to sing, present a conspicuous difference at the place of this organ. The heads of males, for instance, and those of females of the same kind of singing birds, are easily distinguished by their different development. The organ is large in Haydn, Macvicar; small in Sloane. —Established.

29. LANGUAGE.

The history of the discovery of this organ has already been given in the introduction.

A large development of this organ is indicated by the prominence and depression of the eyes, this appearance being produced by convolutions of the brain situated in the posterior and transverse part of the upper orbitary plate, pressing the latter, and with it the eyes, more or less forward, downward or outward, according to the size of the convolutions. If the fibres be long, they push the eye as far forward

as the eye-brows; if they are only thick, they push them towards the outer angle of the orbit, and downwards *. When the knowing organs are very large, and the eye-brows project, the eyes may *appear* less prominent than they really are. Their projection over the cheek-bone, and their depression downwards, are the proper signs of the organs being large.

The functions of this organ will be understood by a short elucidation. The different faculties being active, produce desires, emotions, and intellectual conceptions. The mind wishing to communicate a knowledge of these to other individuals, can accomplish this end only by making *signs* expressive of their existence. These signs may consist of the peculiar gestures, looks, and cries, that naturally accompany the activity of the several faculties, and which being part of our constitution, are universally understood, and constitute what is termed natural Language; for example, *nature* has formed an association betwixt the external appearance of misery, and the faculty of Benevolence, so that, on the presentation of the appearance, the faculty enters into activity, and generates the emotion of pity: She has associated the faculty of Wit with external objects, so that, on the presentment of certain circumstances, laughter is instantaneously excited. These signs require only to be presented, and they are understood in all countries, and by all nations.

But mankind possess the power of inventing and establishing *arbitrary signs* to express their feelings and conceptions. For example, the words Love, Compassion, and Justice, are mere conventional signs, by which we in Britain agree to express three internal feelings or sentiments of the mind; and there is no natural connexion betwixt the signs and the things signified. The metaphysicians might attribute this power to Association; but we observe it to belong to the faculty of Language. Persons possessing this faculty strongly, have a great natural power of inventing arbitrary signs, and of learning the use of them, when invented by others. But this faculty gives

* The organ of Form produces only *distance between* the eyes; without rendering them prominent, or pushing them downward.

the capacity of learning the *signs alone*, and the *meaning* of them is acquired by other faculties: If a horse, for instance, is presented to the mind, the faculty of Language gives the desire to find a name or sign, by which to indicate the conception of it, and also the power of associating the appearance of the object, with the sound or name when invented. But, then, the meaning or signification which the word will embrace, will depend on the perfection of other faculties. For example, the faculty of Form will judge of the form of the horse; Size, of its dimensions; Colouring, of its colour. Now, a blind man, by aid of the faculty of Language, may learn to connect his own notions of a horse with the sound of the name; but it is obvious that his conceptions must be very different from those attached to it by a person who sees; for the blind man could not judge of its colour at all, and not very correctly of its form and size. In the same way, any one having the faculty of Language, may learn the occasions and manner in which the word *justice* is generally used; but how imperfect must be the meaning attached to it, in the mind of a person like David Haggart, who was extremely deficient in the organ of Conscientiousness, compared with the notion attending it, in the mind of a person in whom that organ is extremely large.

Every metaphysical author complains of the ambiguity of words, and shews how the vagueness of their signification retards the progress of moral and intellectual science; and the exposition now given shews whence this vagueness arises. Before individuals can attach precisely the same conceptions to words expressing feelings and judgments of the understanding, they require to possess a similar combination of faculties, so as to be capable of feeling and judging alike; and as no two individuals do possess exactly similar combinations, there will be shades of difference in the meaning attached by different persons to such terms, in spite of every effort to define them. In consequence of this difference in faculties, the very definition itself is differently apprehended. In mathematics and algebra, the things indicated by the signs are not feelings, which vary in every individual,

but proportions and relations of space and quantity, which have a fixed and abstract existence, and which, if apprehended at all, can be conceived only in one way. Hence the precision of the Language of these sciences compared with that of metaphysics or moral philosophy.

If these principles be correct, they demonstrate the impossibility of framing a philosophical language, applicable, with perfect precision, to moral disquisitions. To apprehend the very definitions of the words, we must be able to experience the sentiments which they are intended to indicate; and many persons are able to do so only in a very imperfect degree. In attending to the style of an author, he will be found to use those words with most precision and felicity, which express mental feelings or operations naturally vigorous in himself. Mr Stewart, for example, writes with great beauty and correctness in narrative, and on every topic connected with moral sentiment; but his style becomes loose and inaccurate when he enters upon original abstract discussion, requiring the activity of the higher intellectual powers. I infer from this, that, in him, the knowing and sentimental organs are more amply developed than those of reflection. Moore uses epithets and illustrations, expressive of attachment, with great frequency and inimitable beauty; and we may conclude, that, in him, Adhesiveness, which gives such feelings, is very strong. John Bellingham, on the other hand, in his voluminous memorials, petitions and letters, was continually writing about justice and injustice, and about cruelty and oppression, exercised towards him; but the acts which he specifies are discovered by every well constituted mind, not at all to possess the character which he ascribes to them, and his writings on these points are replete with the grossest abuses of words. This, also, I apprehend to arise from the great deficiency of Conscientiousness which is discernible in his head. In professional practice, also, every lawyer meets with individuals who pretend to be ardently desiring justice, and who speak incessantly about it, but who evidently do not perceive at all what it is; the selfish faculties in their case so far predominating over Conscientiousness, that they never have correct notions

of the nature of justice. The same thing happens in regard to religion. Many talk about it, and against it, without in the least comprehending the object of their vituperation. In like manner every one will acknowledge in words that charity is a duty; but, on inquiring at different persons what constitutes charity, we shall find their notions of the meaning of the word, and of the duty also, to vary exceedingly, according to their development of Benevolence, in proportion to Acquisitiveness and Self-Esteem *.

The power of associating conceptions with external signs, by means of the faculty of Language, however, is limited in one respect. Any *indifferent* object may be selected and used as the arbitrary sign of a propensity, feeling or conception; but if the object stands already in a *natural* relation to any faculty, it cannot, except with great difficulty, be made the arbitrary sign of an opposite emotion. For example, we might, by a mutual understanding, constitute a square figure the artificial sign of the emotion termed *rage*. After the agreement was understood, that figure would suggest the notion of rage, just as well as the letters now composing that word, which are mere marks, placed in a certain order: But, if we were whimsical enough to make the outline of a sweet and

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* These principles enable us to explain, in a simple manner, the source and nature of eloquence. It is a trite observation, that every passion is eloquent, that is to say, any propensity or sentiment being vividly active, excites the faculty of Language to give it utterance; and as the mental emotion is strongly felt, the words partake of the force, and are distinguished by the precision which characterise the feeling. Popular eloquence draws largely from the propensities and sentiments, and hence in many distinguished orators we do not discover so large a development of the intellectual organs, as those would expect who imagine that oratory is altogether an intellectual product; but in them an ample endowment of the organs of the propensities and sentiments will be discovered. The Phrenological Society possesses masks of Burke and Curran. The former is by much the most distinguished for intellect in his printed remains, and his forehead is the best developed; but the impression made by Curran on a popular assembly was perhaps the greater of the two. On analysing Curran's orations, however, no higher degree of reflecting power will be discovered in them than is indicated by his mask.

smiling countenance, which likewise is merely a species of form, the sign of this emotion, we could not, except with great difficulty, associate the idea of rage with that figure, for it is already the natural sign of emotions entirely opposite; it would excite Benevolence *directly*, much more forcibly than Destructiveness, through the medium of Language, and call up in the mind ideas of joyfulness and innocence, rather than of fierce anger and cruelty. In the same way, we might associate feelings of veneration, pity, affection or grief, with soft and *slow* notes of music, because these notes, which produce emotions of a specific kind themselves, may become arbitrary signs of any other emotions of *a homogeneous kind*, which we please to attach to them. But it would be difficult to form an association, by which soft, slow and delicate tones, would become the artificial signs of violent rage, jealousy and fury; because the *natural* character of such tones is directly opposite to the character of such feelings.

Philosophers have written voluminous disquisitions on the influence of words on thought; but if the view, now presented, be correct, feelings and conceptions must, in every instance, *precede* words; and the invention of a term, for which no idea exists, instead of being a great step towards the advancement of knowledge, would be a simple absurdity. It is true that the language of any nation is a correct index of its attainments; but this happens, because, in proportion as the people acquire notions, they invent words to express them, and hence their Language is commensurate with their mental states.

The art of *writing* greatly facilitates the progress of knowledge; but it does so only, by giving precision to words and permanence to thought. Written words are to thinking what cyphers are to calculation; they record our past attainments, and enable us to advance, unincumbered, in the path of discovery: in no instance, however, can they possibly precede the march of ideas. The new nomenclature of chemistry smooths the study of that science; but the nomenclature itself was the *result* of correct and enlarged ideas of the na-

ture and relations of chemical substances, and could not possibly have been formed before these were obtained.

Persons who have a great endowment of the organ of Language abound in words. In ordinary conversation their language flows like a copious stream,—in a speech they pour out torrents. When this organ is extremely large, and those of reflection small, the individual is prone to repeat, to the inconceivable annoyance of the hearer, the plainest sentences again and again, as if the matter were of such difficult apprehension, that one telling was not sufficient to convey the meaning. This practice appears to originate in an immoderate power and activity of the faculty of Language, so great, that delight is felt in mere articulation, independent of reflection. The same combination produces a verbose, cumbersome, and inelegant style of literary composition. THOMSON's Seasons are chargeable with a redundancy of words, and, in the portraits of the author, the organ appears very large. In "Dramas of the Ancient World," by DAVID LINDSAY, we meet with examples of this kind of writing.

> "My gracious kinsman
> What good occasion now hath brought thee hither?
> NOAH.—Nothing of good, for good is flown for ever
> Away from this *stained* world, and *spotless* truth,
> And *weeping* mercy, veiling their *bright* looks
> With their *spread* pinions, have forsaken earth,
> And sought a refuge at the sacred foot
> Of the ALMIGHTY's throne."
>
> *The Deluge*, p. 16.

Another example occurs in the following passage, extracted from a periodical publication.

"We hope it will prove interesting to our readers, occasionally to take a *popular sketch* of the *brilliant success* attending the *meritorious activity* of the *respectable circle* of *scientific chemists*, whose pursuits, if *judiciously exhibited*, are fitted to interest every mind endowed with intellectual curiosity."

When the organ is very small, there is a want of command of expression, a painful repetition of the same words, and a consequent poverty of style, both in writing and speaking. The style of that author is generally most agreeable, in whom

the organs of language and of reflection bear a just proportion to each other. If the intellectual powers be very acute and rapid, and Language not in proportion, a stammer in speech is frequently the consequence. Individuality and Comparison greatly assist this faculty, when applied to the acquisition of foreign languages and grammar. I have observed that boys who are duxes in classes for languages generally have these two organs large; and that this endowment, with moderate Language, accomplishes more, in the way of scholarship, than a large development of the latter organ, with a small endowment of the former. Such individuals have a great facility in recollecting rules, as matters of fact and detail, and in tracing etymologies; and the combination alluded to gives them great readiness in using their knowledge, whatever the extent of it may be.

The doctrine before laid down, that the signification of words is learned by other faculties, removes an apparent difficulty that sometimes presents itself. A person with a moderate organ of Language will sometimes learn songs, poetry, or particular speeches by heart, with considerable facility and pleasure; but in all such cases, the passages so committed to memory will be found highly to interest his other powers, such as Ideality, Causality, Tune, Veneration, Combativeness, Adhesiveness; and the study and recollection of vocables only is to him difficult and disagreeable. To a person, on the other hand, in whom the organ is decidedly large, mere words are interesting, and he can learn them without caring much about their meaning. Hence, also, a person with a moderate organ of Language, and good reflecting organs, may, by perseverance, learn languages, and attain to proficiency as a scholar; but he will not display copiousness, fluency, and richness of expression in his style, either in his own or in a foreign tongue.

It is difficult to determine precisely, on what powers the talent for learning the *spirit* of languages depends. The fact is certain, that some individuals easily learn the spirit of different languages without having a great memory for words; while others readily acquire words, without catching the spirit

of any language. Dr GALL admits two organs of language; one he names "*Sens des mots, sens des noms, memoire des mots, memoire verbale;*" and the other, "*Sens du langage de parole; talent de la philologie;*" and attributes to the latter the talent of philology, and acquiring the spirit of languages. The former organ he describes as lying on the posterior half of the super-orbitar plate, and, when large, it pushes the eyes outwards; it gives a talent for learning and recollecting words; and persons possessing it large recite long passages by heart, after reading them once or twice. The latter organ, says he, is placed on the middle of the anterior part of the super-orbitar plate, and the eye-ball, in consequence, not only projects, but is depressed; the depression producing the appearance of a bag, or folding in the lower eye-lid. Persons possessing this form of eyes, he adds, have not only an excellent memory of words, but a particular talent for the study of languages, for criticism, and, in general, for all that has reference to literature *. Dr GALL states, at the same time, that the determination of the size of the organ of words is attended with much difficulty; as, from its situation, it may extend itself to the sides, as well as forwards, increasing, in the former case, the general breadth of the head across the temples, or even between the eyes; so that much remains to be ascertained in regard to it.

Dr SPURZHEIM, on the other hand, admits only one organ of Language, lying on the middle of the super-orbitary plates; and holds, that it takes cognisance both of words and the spirit of languages. "It seems to me," says he, "that the organ of words must have its laws as well as those of Colour, Melody, or any other faculty. Now, the law of words constitutes the spirit of language. I am satisfied," he continues, "that this opinion is correct; because the spirit of every language is the same, just as the essence of all kinds of music is alike; that is, the laws or principles of music and of language rule universally, and are constant; they are only modified in

* Sur les Fonctions du Cerveau, tome v. p. 18. and 30.

different nations, by modifications in their organs, and dissimilar combinations of these in each *."

I am disposed to coincide with Dr SPURZHEIM in this view; and, perhaps, by analysing the source whence the structure of Language proceeds, we may obtain some light on the origin of a taste for the spirit of languages, as distinguished from the power of learning and recollecting words.

Language, then, expresses merely the feelings and conceptions formed by the various primitive faculties, acting separately, or in combination. Now, let us imagine the cerebral development of a nation to be distinguished by large organs of the Propensities, Sentiments, and Knowing Faculties, small Reflecting organs, and little Secretiveness. Their language being the spontaneous growth of such a combination, would naturally abound in words, expressive of simple feelings, and conceptions of individual objects, and their qualities; while it would be poor in terms of abstract relations, conceived by the faculties of reflection. For the same reason, the transitions of such a language would be like those in Mrs *Quickly's* speech, rapid, and in the order of the casual occurrence of the circumstances which excited the ideas; Secretiveness being small, there would naturally be little involution in the arrangement of the words. Suppose, on the other hand, that, in another nation, Secretiveness, and the Reflecting organs, predominated, the genius of their language would differ widely from that of the people first described. Their expressions for discriminating individual conceptions would be fewer, while their stock of words and phrases, designative of abstract relations, would be more extensive, and the general structure of their sentences would be more involved. Now, suppose two individuals, with equal organs of language, and consequently equal power of learning words, as mere signs, to possess, the one a head like the former, and the other a head like the latter people, and that they attempted to learn these different languages, it appears probable, that the one with the first mentioned development would find the genius of the first language the most easy and natural to him; he would acquire

* Phrenology, p. 288.

its forms of collocation, its niceties of designation, and all its prettinesses, with facility and delight, because they would coincide with the modes of feeling and thinking of his own mind. If, on the other hand, his attention were directed to the language of the second people, he would meet with greater difficulties. Although he might master the words, he would not find the idioms natural; and the forms of expression depending on the reflecting powers, and likewise the involution introduced by Secretiveness, would appear to him extremely intricate and unintelligible; he would be obliged to learn them by *rule*, through defect of instinctive tact in apprehending them; and rules alone never produce a really excellent linguist. The second language, on the other hand, would come quite naturally to the individual possessing a head like that of the people who invented it.

If these views be correct, the talent for learning the genius or spirit of different languages will depend upon the development of the organ of words taken in conjunction with the power of the individual to enter into the feelings, and form the precise kinds of intellectual combinations, of different nations; or, in short, upon the capacity to go out of himself, and to enter into the mental states of others; and this is conferred chiefly by Secretiveness and Imitation, aided of course by the other primitive faculties. This will be best understood by an example. If two individuals have an equal development of all the organs except Secretiveness and Imitation, which the one possesses in a high degree, and the other only to a very limited extent, the former will have a power of entering into the feelings and reflections of others, which the latter would want; and this power, according to the view now presented, would render him more apt to acquire the spirit of different languages. This, however, is merely a theory, thrown out for the consideration of the reader, but it has been suggested by facts. I know an individual, who has an excellent development of the different organs, but is a very decided character, and possesses little of the talent of entering into or accommodating himself to the feelings of others, and he experienced an inconceivable difficulty in acquiring the simplest

French Idioms. I know another young gentleman who was in the same situation in regard to Latin, and who has little versatility. In them, the organ of Language is rather deficient, but then I have met with several persons in whom the organ was equally deficient, and who possessed the power of learning foreign idioms; and in them, on the other hand, the power of amalgamation with the mental states of others, was decidedly greater, and their organs of Secretiveness and Imitation larger.

Although the theory of the talent for philology is involved in considerable obscurity, it is quite certain that the ready command of words in speech or writing is in proportion to the development of the organ situated above the middle of the superorbitar plate, and that a fluent orator or author is never found with a deficiency of it.

Numerous cases are on record of the power of using words having been impaired by disease, when the ability to articulate, and the powers of perception and judgment, remained entire. In the Phrenological Transactions, Mr Hood of Kilmarnock has communicated a very interesting instance of this kind, which fell under his own notice as medical attendant. The patient, a sober and regular man of 65 years of age, possessed of the ordinary knowledge of written and spoken language, on the evening of 2d September 1822, suddenly began to speak incoherently, and became quite unintelligible to all those who were about him: "It was *discovered that he had forgotten the name of every object in nature.* His recollection of *things* seemed to be unimpaired, but the *names* by which *men* and *things* are known, were entirely obliterated from his mind, or rather he had lost the faculty by which they are called up at the controul of the will. He was by no means inattentive, however, to what was going on; and he recognized friends and acquaintances perhaps as quickly as on any former occasion; but their names, or even his own, or his wife's name, or the names of any of his domestics, appeared to have no place in his recollection.

"On the morning of the 4th September," says Mr Hood, "much against the wishes of his family, he put on his clothes,

and went out to the workshop; and, when I made my visit, he gave me to understand, by a variety of signs, that he was perfectly well in every respect, with the exception of some slight uneasiness referable to the eyes and eye-brows. I prevailed on him, with some difficulty, to submit to the reapplication of leeches, and to allow a blister to be placed over the left temple. He was now so well in bodily health that he would not be confined to the house; and his judgment, in so far as I could form an estimate of it, was unimpaired; but his memory for words was so much a blank, that the monosyllables of affirmation and negation seemed to be the only two words in the language, the use and signification of which he never entirely forgot. He comprehended distinctly every word which was spoken or addressed to him; and, though he had ideas adequate to form a full reply, the words by which these ideas are expressed seemed to have been entirely obliterated from his mind. By way of experiment, I would sometimes mention to him the name of a person or thing. His own name, for example, or the name of some one of his domestics,—when he would have repeated it after me distinctly, once or twice; but, generally, before he could do so a *third* time, the word was gone from him as completely as if he had never heard it pronounced. When any person read to him from a book, he had no difficulty in perceiving the meaning of the passage, but he could not himself then read; and the reason seemed to be, that he had forgotten the elements of written language, viz. the names of the letters of the alphabet. In the course of a short time, he became very expert in the use of signs; and his convalescence was marked by his imperceptibly acquiring some general terms which were with him at first of very extensive and *varied* application. In the progress of his recovery, time and space came both under the general appellation of *time*. All future events and objects before him were, as he expressed it, "*next time*;" but past events and objects behind him were designated "*last time*." One day being asked his age, he made me to understand that he could not tell; but, pointing to his wife, uttered the words "*many times*" repeatedly, as much as to say that he had often told

her his age. When she said he was sixty, he answered in the affirmative, and inquired what "*time*" it was; but as I did not comprehend his meaning distinctly, I mentioned to him the hour of the day, when he soon convniced me that I had not given him the proper answer. I then named the day of the week, which was also unsatisfactory; but, upon mentioning the month, and day of the month, he immediately signified that this was what he wanted to know, in order to answer my question respecting his age. Having succeeded in getting the day of the month, he then pointed out the "*time*" or day of the month on which he was born, and thereby gave me to understand that he was sixty years of age, and five days or "*times*," as he expressed it."

In August 1825, this patient died, and I have since heard, that, on dissection, Mr Hood found the organs of Language impaired. He has promised to communicate a full report of the dissection to the Phrenological Journal.

Dr Spurzheim mentions having seen, at Inverness, a case closely resembling the foregoing; and also one of the same nature at Paris. Dr Gall also cites the case of a notary recorded by Pinel, who, after an attack of apoplexy, had forgot his own name, and that of his wife, children and friends, although his tongue preserved all its mobility. He could no longer read nor write, but nevertheless remembered objects which had formerly made an impression on his senses, and which related to his profession. He frequently pointed out with his finger the files which contained documents that could not be found, and indicated, by other signs, that he preserved the former train of his ideas entire *. Dr Gall mentions also the case of a soldier sent to him by Baron Larrey, whom he found to be very nearly in the same condition as the notary mentioned by Pinel. "It was not his tongue," says he, "which was the source of his embarrassment," for he was able to move it with great agility, and to pronounce even a great number of isolated words. It was not his memory either which was in fault, for he shewed evident dissatisfaction with himself upon many subjects which he wished to mention.

* Pinel sur l'Aliénation mentale, 2de édition, p. 105.

The only faculty in him which was impaired, was that of speech. This soldier, like the patient of Mr Pinel, is no longer capable of reading or writing *.

The lower animals appear to have this organ in some degree; for they learn the meaning of arbitrary signs in so far as they possess the feelings and conceptions which they express.

This faculty is by far too extensively cultivated in ordinary education. The notion seems generally to prevail, that knowledge of words necessarily implies comprehension of the ideas which they are intended to signify; but this is a great mistake. A good education must embrace the cultivation of *all* the faculties, by exercising each directly on its own objects, and regulating its manifestations. The mere storing the mind with words never can accomplish these ends.

The organ is large in the companion of Gall, Sir J. E. Smith, Humboldt, Voltaire; and small in the mask of Fraser.—Established.

GENERAL OBSERVATIONS ON INDIVIDUALITY, AND THE OTHER KNOWING OR PERCEPTIVE FACULTIES.

No objection to Phrenology is more frequently repeated than that such and such persons have retreating foreheads, and yet are very clever. A short explanation will serve to remove this difficulty. In the first place, a forehead may *appear* retreating, not because the reflecting organs are *greatly* deficient, but because the knowing organs are very prominently developed, so that if the latter were diminished in size, the former would *appear* relatively larger; but every one must perceive, that, in such an event, the mental powers of the perceptive class would be proportionally diminished, and the talents of the individual lessened, while the unskilful observer might imagine him to possess a better development of forehead. In the mask of Henri Quatre, for example, the forehead appears

* Physiologie du Cerveau, vol. iv. p. 84.

to slope. Where the knowing organs were reduced to the same state of projection beyond the cheek bones, as in the mask of VOLTAIRE, the forehead would appear much more perpendicular. This, however, would clearly detract from his mental power. It would cause the reflecting faculties to predominate only, by diminishing his talent in the department of observation.

But, in the next place, suppose that a head does retreat exceedingly, still Individuality and the other knowing organs may be large; and if we attend for a moment to the *range* of these powers, we shall perceive, that the individual may be deficient in Causality and Comparison and yet be *very clever*. A wide range of sciences, falling under the scope of Individuality chiefly, has already been pointed out, and in which a person so endowed may be very learned. Farther, the details of history, statistics, geography, and trade, all belong to the department of simple knowledge; and in them also he may be eminently skilled; and, finally, in the daily occurrences of life, acuteness of observation, and the power of treasuring up the lessons of experience which he will possess, are important elements in a practical judgment. If, then, to a large endowment of the knowing organs, much Combativeness and Destructiveness be added, the individual will be active and enterprizing; if Cautiousness be also large, he will be prudent, and never venture beyond the scope of his abilities; if Conscientiousness be full, he will enjoy that delicacy of sentiment which tells instinctively where the right lies, and where the path of honour terminates; and with these endowments there is no wonder that he may act creditably and cleverly in the ordinary walks of life. These are not imaginary suppositions; but descriptions drawn from observation of numerous individuals in actual life. Such persons, however, are never distinguished for profound and comprehensive views of abstract principles; which belong to the reflecting faculties not yet treated of.

In the preceding pages, it is stated, that the faculty of Form perceives the forms of objects;—Colouring their colour; Size their dimensions;—and that Individuality takes cognizance of existences and events in general. The question na-

turally occurs, if the minor knowing powers apprehend *all* the separate qualities of external objects, what purpose does Individuality serve in the mental economy? Its function is to form a single intellectual conception out of the different items of information communicated by the other knowing faculties. In perceiving a tree, the object apprehended by the mind is not colour, form, and size, as separate qualities; but a *single thing* or *being* named a tree. The mind having, by means of Individuality, obtained the idea of a tree, as an individual existence, may analyse it, and resolve it into its constituent parts of form, colour, magnitude; but the contemplation of it in this manner is at once felt to be widely different from the conception attached to the word Tree as a whole. The function of Individuality, therefore, is to embody the separate elements furnished by the other knowing faculties into one, and to produce out of them conceptions of aggregate objects as a whole; which objects are afterwards viewed by the mind as individual existences, and are remembered and spoken of as such, without thinking of their constituent parts. Children early use and understand abstract terms, such as tree, man, ship; and the organ of Individuality is very prominently developed in them.

Farther, Form, Colour, and Size, furnish certain elementary conceptions, which Individuality unites and conceives, as the being called a Man. The faculty of Number called into action gives the idea of plurality; that of Order furnishes the idea of gradations of rank and arrangement. Now, Individuality, receiving the intimations of all these separate faculties, *combines* them again, and contemplates the *combination* as an *individual object*, and this is an *army*. After the idea of an army is thus formed, the mind drops the recollection of the constituent parts, and afterwards thinks of the *aggregate only*, or of the combined conception formed by Individuality; and regards it as a single object.

It is interesting to observe the Phrenological System, which at first sight appears rude and unphilosophical, harmonizing thus simply and beautifully with nature. Had it been constructed by imagination or reflection alone, it is more than probable that the objection of the minor knowing faculties

rendering Individuality superfluous, would have appeared so strong and unsurmountable, as to have insured the exclusion of one or other as unnecessary; and yet, until both were discovered and admitted, the formation of such terms as those we have considered was altogether inexplicable.

Genus IV.—REFLECTING FACULTIES.

The intellectual faculties which we have considered, give a knowledge of objects and their qualities; those to which we now proceed, produce ideas of relation, or reflect. They minister to the direction and gratification of all the other powers; and constitute what we call Reason or Reflection.

30. COMPARISON.

Dr Gall often conversed on philosophical subjects with a *savant*, possessing much vivacity of mind. Whenever the latter was put to difficulty in proving rigorously his positions, he had always recourse to a comparison. By this means he in a manner painted his ideas, and his opponents were defeated and carried along with him, effects which he could never produce by simple argument. As soon as Dr Gall perceived that, in him, this was a characteristic trait of mind, he examined his head, and found an eminence of the form of a reversed pyramid in the upper and middle portion of the frontal bone. He confirmed the observation by many subsequent instances. He names it "perspicacity, sagacity, *esprit de comparaison*."

The faculty gives the power of perceiving resemblances, similitudes and analogies. Tune may compare different notes; Colour contrast different shades; but Comparison may compare a Shade and a Note, a Form and a Colour, which the other faculties by themselves could not accomplish.

Comparison thus takes the widest range of nature within its sphere: "It compares," says Mr Scott, "things of the most

opposite kinds, and draws analogies, and perceives resemblances between them, often the most unexpected. It compares a light seen afar in a dark night, to a good deed shining in a naughty world; or it compares the kingdom of Heaven to a grain of mustard seed. It discerns resemblances between things the most distant and the most opposite. It finds analogies between the qualities of matter and mind;" and from these comparisons and analogies, a great part of our language, expressive of the qualities of mind, is drawn; "a great part of it being almost metaphorical, and applied originally in its literal sense to designate qualities of matter." For this reason, the language of every nation proves whether this organ is much or little developed in the greatest number of its individuals. If they have this faculty in a high degree, their language is replete with figure. Dr Murray Patterson mentions that the Hindostanee language abounds in figures, and that Comparison is larger than Causality in the heads of the Hindoos in general. It is the origin of proverbs, which in general convey instruction under figurative expressions.

This faculty attaches us to comparison, without determining its kinds; for every one must choose his analogies from his knowledge, or from the sphere of activity of his other faculties. He who has the faculty of Locality in a high degree, derives thence his examples; while another, in whom Form predominates, will illustrate from it. Dr Chalmers takes his illustrations from mechanics and astronomy; and the organs which take cognizance of these are large in his mask.

This faculty gives a tendency which is frequently called Reasoning, but which is very different from the correct and severe inductions of a sound logic; namely, it endeavours to prove that one thing is of such and such a nature, because it resembles another which is so and so; in short, it reasons by analogy, and is prone to convert an illustration into an argument. The late Mr Logan, the minister of Leith, is an example of this kind of intellect. He is always establishing a proposition, and to those who do not analyse profoundly, appears to be an argumentative preacher; but his argument is not induction, it

is a mere statement of analogies, closed by an inference that the case in point must be as he views it, otherwise it would be an exception to the ordinary arrangements of nature. The tendency of this faculty is to perceive only the resemblances of things, and not the points in which they differ; and, as a difference in one point out of a hundred frequently destroys the whole force of the analogy, no reasoning is so often false and superficial as that of persons in whom Comparison is large, and Causality small. The late Mr PLAYFAIR may be cited as an example in opposition to these. In him Causality was as large as Comparison, and his comparisons, accordingly, are merely illustrations. His argument, in general, stands in the relation of necessary consequence, and his conclusion is in the form of a direct deduction from his premises. This faculty is more rarely deficient than any of the other intellectual powers, and the Scripture is addressed to it in an eminent degree, being replete with analogies and comparisons.

This faculty, from giving readiness in perceiving analogies and resemblances, confers great instantaneous acuteness. The organ is largely developed in a neighbouring nation; and it is correctly observed by a late writer, that "ingenuity in discovering unexpected glimpses and superficial coincidences in the ordinary relations of life, the French possess in an eminent degree *." In schools, the best scholars generally have much Language and Comparison. The faculty is of essential service to orators and popular preachers. It is the largest organ in the forehead of the late Right Honourable WILLIAM PITT. It is large also in the busts of CURRAN, CHALMERS, BURKE, and JEFFREY. Dr GALL correctly observes, that close reasoning and rigid induction, is always disagreeable to a popular audience, because their faculties are not cultivated or exercised to follow abstract conceptions. The great charm of popular speakers, therefore, consists in perspicuity of statement, and copiousness of illustration.

From giving power of illustration and command of figures,

* Edinburgh Review, Nov. 1820, p. 389.

this faculty is of great importance to the poet, and it aids Wit also, by suggesting resemblances. By common observers, indeed, the metaphors, amplifications, allegories, and analogies, which Comparison supplies, are frequently mistaken for the products of Ideality, although they are very different.

Ideality being a sentiment, when greatly excited, infuses passion and enthusiasm into the mind, and prompts it to soar after the splendid, the beautiful, and the sublime, as objects congenial to its constitution *. Comparison, on the other hand, being an intellectual power, produces no passion, no intense feeling or enthusiasm; it coolly and calmly plays off its sparkling fire-works, and takes its direction from the other powers with which it is combined. If united with great Individuality and Causality in any individual, the comparisons employed will be copious, ingenious and appropriate; but if Ideality is not large, they will not be impassioned, elevated and glowing. Add to Comparison, again, a large Ideality, as in Dr Chalmers, and its similes will now twinkle in delicate loveliness like a star, now blaze in meridian splendour like the sun, while intense feeling and elevated enthusiasm will give strength and majesty to all its conceptions.

It is large in Raphael, Roscoe, Edwards, Pitt, Henri Quatre, Burke, Curran, Mr Hume, Hindoos; deficient in Charibs.

The organ is ascertained.

31. CAUSALITY.

It has long been a matter of general observation, that men possessing a profound and comprehensive intellect, such as

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* It is under the influence of Ideality, that

"The poet's eye, in a fine frenzy rolling,
Doth glance from Heaven to Earth, from Earth to Heaven;
And as imagination bodies forth,
The forms of things unknown, the poet's pen
Turns them to shapes, and gives to airy nothing
A local habitation and a name."

Socrates, Bacon, and Galileo, have the upper part of the forehead greatly developed. At Vienna, Dr Gall remarked, that, in the most zealous disciples of Kant, men distinguished for profound, penetrating, metaphysical talent, the parts of the brain lying immediately outwards, and to the sides of the organ of Comparison, were distinctly enlarged. He and Dr Spurzheim subsequently saw a mask of Kant himself, moulded after death, and perceived an extraordinary projection of these parts. At a later period, they became personally acquainted with Fichte, and found a development of that region still larger than in Kant. Innumerable additional observations satisfied them concerning the functions of this organ, and Gall now names it "*Esprit métaphysique, Profondeur d'esprit,*" and Dr Spurzheim "Causality."

Individuality and Comparison take cognizance of things obvious to the senses. Causality looks a little farther than these, and perceives the dependencies of phenomena. It furnishes the idea of causation, as implying something more than mere juxta-position or sequence,—and as forming an invisible bond of connection between cause and effect. It impresses us with an irresistible conviction, that every phenomenon or change in nature is caused by something, and hence, by successive steps, leads us to the First Cause of all. In looking at the actions of men, it leads us to consider the motives, or moving causes, from which they proceed. Individuality judges of direct evidence, or facts; Causality of circumstantial evidence, or that by inference. In a trial, a Juryman, with large Individuality and small Causality, will have great difficulty in convicting on circumstantial evidence. He in whom Causality is large will often feel that kind of proof to be irresistible. It induces us, on all occasions, to ask, Why, and wherefore, is this so? It gives deep penetration, and the perception of logical consequences in argument. It is large in persons who possess a natural genius for metaphysics, political economy, or similar sciences. When greatly larger than Individuality and Comparison, it tends to vague generalities of speculation, altogether inapplicable to the affairs of life; and

hence those in whom it predominates are not calculated to shine in general society. Their sphere of thought is too abstracted to be reached by ordinary minds; they feel this, and remain silent; and hence are reputed dull, heavy, and even stupid. A great defect of the organ renders the intellect superficial; and unfits the individual for forming comprehensive and consecutive views, either in abstract science or business. Coincidence only, and not Causation, is then perceived in events: Such persons are often admirably fitted for common situations, or for executing plans devised by profounder intellects; but, if they are entrusted with the duties of legislators, or directors in any public affair, embracing Causation, it is difficult to make them comprehend the natural dependencies of things, and to act according to them. Blind to remote consequences, they stigmatize as visionary all intellectual perceptions which their own minds cannot reach; they reject principle as vain theory; are captivated by expedients, and represent these as the *beau ideal* of practical wisdom.

Dr Spurzheim observes, "that the faculty of Individuality makes us acquainted with objects and facts; the faculty of Comparison points out their identity, analogy or difference *; and Causality desires to know the causes of all events: consequently, those three faculties together forming systems, drawing conclusions, indications, or corollaries, and pointing out principles and laws, constitute the true philosophical understanding."

It is interesting to trace the effects of this faculty, strong or weak, in the mental character, as it exhibits itself in the occurrences of life. I accompanied two gentlemen to see a great public work, in one of whom Individuality was large and Causality small, and in the other of whom the proportions of these organs were exactly reversed. The former, in surveying the different objects and operations, put question after question to the workmen in rapid and long continued

* It appears probable that it is Wit which points out "difference," as will be mentioned when treating of that faculty.

succession; and nearly all the information which he carried away with him was acquired in answer to specific interrogatories. His mind scarcely supplied a step by its own reflection; and did not appear to survey the operations as a systematic whole. The latter individual looked a long time in silence before he put a question at all; and when he did ask one, it was, What is the use of that? The answer enabled his own mind to supply a multitude of additional ideas; he proceeded in his examination, and it was only on arriving at another incomprehensible part of the apparatus, that he again enquired. At last he got through; then turned back, and, with the most apparent satisfaction, contemplated in silence the operations from beginning to end as an entire system. I heard him afterwards describe what he had seen, and discovered that he had carried off a distinct comprehension of the principles and objects of the work. It is probable that a superficial observer would have regarded the first as the acute, intelligent, and observing man of genius; the person who noticed every thing, and asked about every thing; and the latter as a dull uninteresting person, who put only two or three questions in all, looked heavily, and said nothing.

A gentleman in a boat was unexpectedly desired to steer. He took hold of the helm, hesitated a moment what to do, and then steered with just effect. Being asked why he hesitated, he replied, "I was unacquainted with steering, and required to think how the helm acts." He was requested to explain how thinking led him to the point, and replied, That he knew, from study, the *theory* of the helm's action; that he just run over in his mind the water's action upon it, and its action on the boat, and then he saw the whole plainly before him. He had a full Causality, and not much Individuality. A person with a great Individuality and little Causality, placed in a similar situation, would have *tried the experiment* of the helm's action, to come to a knowledge of the mode of steering: he would have turned it to the right hand, and to the left, and *observed* the effect, then acted accordingly; and he might have steered during his whole life thereafter, without knowing any thing more about the matter.

A question arose in an evening party concerning the cause of the harvest moon. In one gentleman present, Individuality predominated; in another, Causality was the larger intellectual organ. In an instant the former said that the harvest light was owing to the moon's then advancing north to the Tropic of Cancer at the time of her being full. The latter paused for a time, and added, "Yes, Sir, you are quite right." Observing the difference in their heads, and perceiving by their manner that they had arrived at the result, by different mental processes, I asked them to explain how they knew this to be the cause. The first said, "Oh! I recollect Professor PLAYFAIR stated it in his lectures to be so." The other replied, "I had forgot the precise fact, but I recollected the principle on which the Professor mentioned it to depend, and by a moment's reflection I followed it out, and arrived at the conclusion which this gentleman has just announced." "I am not sure," said the former, "that I could now master the principle, but of the result I am quite certain; because I distinctly recollect of its being stated by Mr PLAYFAIR." This is a striking example of the mode of action of these two faculties. Individuality knows only facts; and Causality takes cognizance of principles alone.

Causality is the fountain of resources. Place an individual, in whom it is small, in new circumstances, and he will be helpless and bewildered; place another, in whom it is large, in a similar situation, and he will shew his superiority by the extent of his inventions. A mechanic, with little Causality, will be at a stand if his ordinary tools are wanting, or if employed out of his ordinary line; another, having this faculty powerful, will find a thousand substitutes. If a person, deficient in Causality, is placed in charge of any establishment, comprehending a variety of duties which arise the one out of the other, and all of which cannot be anticipated and specified *à priori*, he will be prone to neglect part of what he ought to attend to. He will probably plead forgetfulness as his excuse, but want of comprehensiveness, and consecutiveness of thinking, will be the real cause of his imperfections.

If a person, possessing little Causality, write a book, he may shine in narrative, provided Individuality and Language are amply developed; but when he endeavours to reason, he will become feeble and confused. One endowed with much Causality, in reading a work, written by an author in whom this organ is deficient, will feel it characterized by lightness and want of depth; it will furnish him with no stimulus to thinking. When, on the other hand, a person possessing only a small Causality, peruses a book composed by an author in whom this organ predominates, such as Locke's Essays, or Brown's Lectures, he will regard it as heavy, abstract, and dry, and be oppressed by it, as if a night-mare were weighing on his mind.

Among metaphysicians, Hume, Dr Adam Smith, and Dr Thomas Brown display great Causality, Dr Reid not so much, and Mr Stewart still less. In the portraits of the first three the organ is represented as decidedly large. It is large, also, in Bacon, Locke, Franklin, and Playfair; and likewise in the masks of Haydon, Burke, Brunel, Wordsworth, and Wilkie. It is moderate in Pitt, Sir J. E. Smith; and very deficient in the Charibs and New Hollanders. A late writer observes, that, "of whatever has been said and written upon the moral and political sciences in France, the general characteristic is a deficiency in extensive views of human nature, in profound investigation of the heart, pourtrayed in all its strongest feelings and multitudinous bearings *." Without subscribing to the accuracy of this observation in its full extent, the fact may be mentioned as certain, that, in the French head in general, the organ of Causality is by no means largely developed.

"The ancient artists," says Dr Spurzheim, "have given to Jupiter a forehead more prominent than to any other antique head; and hence it would seem they had observed, that the development of the forehead has a relation to great understanding." The bust of Socrates (of which the

* Edinburgh Review, Nov. 1820, p. 389.

Phrenological Society possesses a copy), shews a very large development of the reflecting organs. It is either a correct representation of his real appearance, and then it presents an interesting coincidence betwixt his character and development; or it is supposititious, and, in that case, it shews the impression of the ancient artist, that such a mind as that of SOCRATES required such a tenement for its abode.

As already mentioned, when the organ now under consideration is very deficient, the individual has great difficulty in perceiving Causation; and when two events are presented to him following each other or concomitant, he sees only *coincidence*. Illustrations of this observation frequently occur in discussions relative to Phrenology. When Causality is well developed in an observer, and several decided instances of concomitance betwixt particular forms of head and particular powers of mind are presented to him, the feeling of connection between them is irresistible; he is struck with it, and declares that there is something here which ought to be followed out. When the same facts are exhibited to a person in whom Causality is deficient, he smiles surprizedly, and ejaculates "a curious coincidence;" but his mind receives no strong impression of connection between the phenomena; it feels no desire to follow out the ideas to their consequences, and has no wish to prosecute the investigation. It was from this class of minds, ever ready to catch superficial glimpses, that the public received the first accounts of Phrenology; and on them is chargeable the misrepresentations which so long impeded its course.

This faculty is an ingredient in the judgment of the metaphysicians. It is also, to a certain extent, the fountain of abstract ideas, viz. those of the relation of cause and effect, and bears, in this respect, an analogy to their abstraction. It and comparison correspond to the relative suggestion of Dr THOMAS BROWN: "A tendency of the mind," says he, "by which, on perceiving or conceiving objects together, we are instantly impressed with certain feelings of their mutual rela-

tion *." By dispensing with perception, conception, &c. as separate faculties of the mind, and dividing the intellect into the two faculties of simple suggestion and relative suggestion, Dr Brown has made an interesting approach to the results of phrenological discovery, and to a correct analysis of the actual constitution of the human intellect. It was impossible, by means of the old faculties of conception, &c. to point out the distinctive characteristics of a mind which collected only facts in the order in which they were presented to it; and of another, which struck out a multitude of new ideas from every object which it contemplated, and instinctively enquired from what causes all phenomena proceed, and to what results they tend. Dr Brown's simple suggestion denotes the one, his relative suggestion the other; and in Phrenology, the perceptive faculties correspond to the former, and the reflecting powers to the latter.

We are now prepared to consider some points which have occasioned great and animated discussions among the philosophers of the old schools. It has been stated that Individuality takes cognizance of facts and existence only. A tree, a ship, a mountain, are presented to the mind; an idea or conception of them is formed, and this conception is followed by an instinctive belief in their existence. Bishop Berkley objects to the belief in their existence as unphilosophical, because, says he, the conception or idea is a mere mental affection, and no principle or reason can be assigned, by which it follows necessarily that an external object must exist, merely because we experience a mental affection. A smell, for example, is nothing more than a certain impression on the mind, communicated through the olfactory nerves. But no necessary connection can be perceived between this affection and a belief in the existence of a rose: the mind may undergo the affection called a smell, just as it experiences the emotion called joy, and a material object may have as little to do in causing the one as the other. Hence Dr Berk-

* Lectures, vol. iii. p. 14.

LEY concluded, that we have philosophical evidence for the existence only of mind and mental affections, and none for the existence of the material world. HUME carried this farther, and argued, that as we are conscious only of ideas, and as the existence of ideas does not necessarily imply the existence of mind, we have philosophical evidence for the existence of ideas only, and none for that of either matter or mind. Dr REID answered BERKLEY's objection by observing, that the belief in external objects, consequent on perceiving them, is instinctive, and hence requires no reason for its support.

Phrenology enables us to refer these different speculations to their sources, in the different faculties. Individuality, (aided by the other perceptive faculties), in virtue of its constitution, perceives the external world, and produces intuitive belief in its existence. But BERKLEY employed the faculty of Causality to discover *why* it is that this perception is followed by belief; and because Causality could give no account of the matter, and could see no necessary connection between the mental affection, called Perception, and the existence of external nature, he denied the latter. Dr REID's answer, translated into phrenological language, was simply this,—the cognisance of the existence of the outward world belongs to Individuality; and Individuality has received its own constitution, and its own functions, and cannot legitimately be called on to explain, or account for these, to Causality. In virtue of its constitution, it perceives external objects, and belief in them follows; and if Causality cannot see *how* this happens, it is a proof that Causality's powers are limited, but not that Individuality is deceitful in its indications.

Another class of philosophers, by an error of a similar kind, have denied Causation. When *Individuality* contemplates the relation of cause and effect, it discovers only one event following another, in immediate and invariable sequence: For example, if a cannon is fired, and knocks down a wall, Individuality observes only the existence of the powder, the fire applied to it, the explosion, and the fall of the building, as four

events following in succession; but it forms no idea of power or energy in the gun-powder, when ignited, to produce the effect. When Causality, on the other hand, is joined with Individuality in the contemplation of these phenomena, the impression of *power*, or *efficiency* in the gun-powder to produce the explosion, arises spontaneously in the mind, and Causality produces an intuitive belief in the existence of this efficiency, just because it is its constitution to do so; and it is as absurd for Individuality to deny the outward existence of some quality, in the matter which gives rise to this feeling, because only Causality perceives it, as for Causality to deny the existence of the external world, because only Individuality perceives it.

A practical application of much importance follows from these doctrines.

Some men deny the existence of God; and others strenuously maintain, that that existence is demonstrable by a legitimate exercise of reason. The former, who deny God, say, that all we perceive in external nature is the *succession* of phenomena; that we can form no idea of efficiency or power; and that, therefore, all we know philosophically is, that matter exists, and undergoes certain changes; but that, concerning the *cause* of its existence and phenomena, we are entirely in the dark. Now, this is the natural conclusion of *Individuality*, or of men in whose heads this organ is large, when they survey the external world, unaided by *Causality*; and, accordingly, the only Atheists whom I have met with have actually been deficient in the organ of Causality, and shewed its weakness in their general arguments on other topics. If, on the other hand, a mind in which Causality is very powerful, surveys the phenomena of nature, the conviction of a Cause of them arises irresistibly and intuitively from the mere exercise of the faculty. Benevolence and design, in the arrangement of the moral and physical world, are clearly perceived by it; and it therefore instinctively infers, that Benignity and Intelligence are attributes of the Cause which produced them. Hence the fact is phrenologically explained, why all

master spirits are believers in God. SOCRATES, PLATO, and the ancient Philosophers, are represented as endowed with large organs of Causality; and they all admitted a Deity. VOLTAIRE had too large a Causality to doubt of the existence of God; and FRANKLIN continued to reverence the Supreme Being, although he had renounced Christianity.

Another argument resorted to by Atheists finds an answer in the principles now explained. They object that we have no evidence of the *self-existence* of God; and affirm, that, for any thing we know to the contrary, the Maker of the world may himself own a superior, and have been created. Their objection is stated in this form: "You who believe in a God "infer his existence from seeing his works, on the principle "that every effect must have a cause. But," say they, "this "Being himself *is an effect*. You have no evidence from rea- "son of his *self-existence, or self-creation;* and as he does ex- "ist, you must assign *a cause of him*, on the same principle "that you regard him as the cause of the material creation." The Atheists carry this argument the length of a denial of God altogether, in respect that it is only the *first cause* that, according to them, can be entitled to be regarded as Deity; and the first cause, say they, is to us unknown.

This speculation may be answered as follows: Individuality *perceives existence directly*, and Causality *infers* qualities from their manifestations. To be able to judge thoroughly of any object, *both* of these faculties require to be employed on it. When a watch, for example, is presented, Individuality, and the other Knowing Faculties, perceive its wheels, spring, lever, &c. and Causality discerns their object or design. If the question is put, Whence did the watch proceed? From the nature of its materials, as perceived by the knowing faculties, Causality infers that it could not make itself; and from discovering intelligence and design in the adaptation of its parts, this faculty concludes, that its Cause must have possessed these qualities, and therefore assigns its production to an intelligent artificer. Suppose the statement to be next made,—"This artificer himself is an existence, and every ex-

istence must have a cause, Who, then, made the watchmaker?" In this case, if no farther information is presented to Causality, than what it can obtain by contemplating the structure of the watch, the answer would necessarily be, that it cannot tell. But let the artificer, or man, be submitted to the joint observation of Individuality and Causality, and let the question be then put, Who made him?—Individuality and the knowing powers, by examining the structure of his body, would present Causality, with data from which it could unerringly infer, that, although it perceived in him intelligence and power sufficient to make the watch, yet, from the nature of his constitution, he could not possibly make himself. Proceeding in the investigation, Causality, still aided by the knowing faculties, would perceive farther the most striking indications of power, benevolence, and design in the human frame; and from contemplating these, it would arrive at a complete conviction, that the watchmaker is the workmanship of a great, powerful, and intelligent Being. If, however, the question were repeated, "Whence did this Being proceed?" Causality could not answer. It would then be in a situation similar to that in which it would be placed, if required to tell, from seeing the watch alone, who made the watchmaker. Individuality cannot observe the substance of the Maker of the human body; and none of the perceptive faculties can reach him. His existence is the object of Causality alone; and all that it can accomplish is to infer his existence, and his qualities or attributes, from perceiving their manifestations. This faculty, therefore, is silent as to the cause of the Creator of man, and cannot tell whether he is self-existent, or called into being by some higher power; but thus far it can go, and it draws its conclusions unhesitatingly, that he *must exist*, and *must possess the attributes* which it perceives manifested in his works; and these points being certain, it declares that he is God *to us*, that he is *our* creator and preserver; that all his qualities, so far as it can discover, merit our profoundest reverence and admiration; and that, therefore, he is *to man* the highest and most legitimate object of veneration and worship.

The organ is established.

32. WIT.

Every one knows what is meant by Wit, and yet no word presents more difficulties in its definition. Dr Gall observes, that, to convey a just idea of the faculty, he could discover no better method than to describe it as the predominant intellectual feature in Rabelais, Cervantes, Boileau, Racine, Swift, Sterne, Voltaire. In all these authors, and in many other persons who manifest a similar talent, the anterior-superior-lateral parts of the forehead are prominent and rounded. When this development is excessively large, it is attended with a disposition, apparently irresistible, to view objects in a ludicrous light. When joined with Combativeness and Destructiveness large, it leads to satire; and even friends will then be sacrificed for the sake of a joke. It gives the talent also for epigrams. Persons in whom this organ is small regard wit as impertinence, and are offended by it. It is greatly aided by Comparison, which suggests analogies and resemblances.

It has already been stated that Comparison is the faculty which perceives resemblances; and there is reason to think that a separate power discriminates differences. This observation has long since been made by metaphysicians. Malbranche says, "There are geniuses of two sorts. The one remarks easily the *differences* existing between objects, and these are the excellent geniuses. The others imagine and suppose resemblances between things, and these are the *superficial* minds. *" Locke makes the same distinction. After speaking of Wit, as "lying most in the assemblage of ideas wherein any resemblance can be found," he proceeds thus: "Judgment, on the contrary, lies quite on the other side, in *separating carefully, one from another*, ideas wherein can be found *the least difference*, thereby to avoid being misled by *similitude, and by affinity, to take one thing for another* †."

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* Rech. de la Vérité liv. ii. 2d part. c. ix.

† Essay, &c. b. ii. c. xi. sect. 2.

Lord BACON says, that " the chief and (as it were) radical distinction betwixt minds, in regard to philosophy and science, is this,—that some minds may have greater power, and are more fitted for the observation of the *differences*, others for the observation of the *resemblances*, of things."

These ideas will be better understood by an illustration. The objection, for example, is often stated, that Phrenology is no science, because a large organ of Destructiveness and a large organ of Benevolence may be found in the same head, and then they will *neutralize each other, like an acid and an alkali.* This objection would spring from a head in which Comparison was larger than the faculty which perceives differences, and would appear conclusive at first sight to heads similarly constituted. But a person having a large endowment of the faculty for perceiving distinctions, with a less Comparison, would discriminate in a moment the *difference* between two chemical substances, placed in a state of mechanical mixture, and two organs subsisting separately, having distinct functions, and calculated for acting on different occasions; and he would see that the analogy had no force whatever.

The question, then, occurs, Which is the faculty that perceives *differences?* In my early courses of lectures I ascribed this function to Causality, but Mr SCOTT has been led to believe that it depends upon the faculty of Wit; and that the primitive function of this power is to distinguish differences.

In the *first* place, Wit is not the only cause of laughter. Laughing, like crying, may arise from a variety of faculties. I am acquainted with a boy in whom Acquisitiveness is large, and he laughs when one gives him a penny. Another youth, who possesses a large Love of Approbation, laughs when unexpected praise is bestowed upon him. These facts, to which many more might be added, shew that we may smile from any pleasing affection of the sentiments, or even of some of the propensities; and that the cause of a smile is not always the ludicrous. This view is confirmed by the circumstances which occur in hysterical affections. It is not uncommon to see a lady or child laugh and cry alternately and involuntarily,

apparently on account of some varying affection of the whole mental system, rather than from any particular, ludicrous, or distressing idea presenting itself by turns to the fancy. I have noticed farther, that a large development of Hope, Benevolence, and Wonder, producing happy emotions, predisposes the possessor to laugh; while Veneration, Conscientiousness, and Reflection, when predominant, give rise to a natural seriousness and gravity, adverse to laugh, the tone of these faculties being grave and solemn.

In the *second* place, there may be much excellent wit, without exciting us to laugh. Indeed Lord CHESTERFIELD lays it down as a characteristic feature of an accomplished gentleman, that he should never laugh; and although this rule is absurd, yet there may be a high enjoyment of wit without laughter. The following are instances in point. There is a story of a Nottinghamshire publican, *Littlejohn* by name, who put up the figure of *Robin Hood* for a sign, with the following lines below it:

> "All ye that relish Ale that's good,
> Come in and drink with *Robin Hood*;
> If *Robin Hood* is not at home,
> Come in and drink with *Littlejohn*."

This is genuine wit, what even CHESTERFIELD would allow to be so; and yet it does not force us to laugh. Another instance is the following: LOUIS the XV. once heard that an English nobleman (Lord STAIR) at his court was remarkably like himself. Upon his Lordship's going to court, the King, who was very guilty of saying rude things, observed upon seeing him, "A remarkable likeness, upon my word!—My Lord, was your *mother* ever in France?" To which his Lordship replied, with great politeness: "No, please your majesty, but my *father* was." This also is admirably witty; but it does not excite laughter. In PRIOR's song upon a young lady entreating her mother to *come out* (as it is called), there is an allusion which, also, is very fine wit, although it is not laughable. The lady is alluding to the liberty enjoyed, and the conquests made, by her elder sister. The last verse is as follows:

"Dear, dear mamma, for once let me
Like *her* my fortune try,
I'll have an Earl as well as she,
Or know the reason why."
The fair prevailed,—mamma gave way,
And KITTY, at her desire,
OBTAINED THE CHARIOT FOR A DAY,
AND SET THE WORLD ON FIRE."

In all these instances, every one endowed with any portion of the organ now under consideration must *feel* wit, although no vivid emotion of laughter is excited. In the following cases, again, the risible muscles are much more affected, when, in fact, the real point of wit contained in them is infinitely less.

The story of the Nottingham publican, named LITTLEJOHN, who erected the sign of *Robin Hood*, goes on to say, that Mr LITTLEJOHN having died, his successor thought it a pity to lose so capital a sign, and so much excellent poetry, and accordingly retained both, only erasing his predecessor's name, he substituted his own in its place. The lines then ran thus:

"All ye who relish Ale that's good,
Come in and drink with *Robin Hood;*
If *Robin Hood* is not at home,
Come in and drink with SAMUEL JOHNSON."

The whole wit is now gone, and yet the lines are infinitely more laughable than before. In like manner, when a servant let a tongue fall from a plate, and a gentleman at the table said, "Oh, never mind; its a mere *lapsus linguæ;*" there was genuine wit in the remark; but when another servant, who had heard that this was witty, let fall a shoulder of mutton, and thought to get off, by styling this accident, too, a *lapsus linguæ*, the whole wit was extinguished, but laughter would be more irresistibly provoked. Now, in what does the wit of the first instances consist? and what is the cause of the more laughable effect of the second class of cases, in which the wit is actually extinguished?

This leads us to a definition of Wit. LOCKE describes

Wit as "lying most in the assemblage of ideas, and putting these together with quickness and variety, wherein can be found any *resemblance* or *congruity*, *thereby* to make up pleasant pictures, and agreeable visions in the fancy*." Now, it may be demonstrated, that this definition is erroneous. For example, when GOLDSMITH, in his beautiful verses on Hope, compares that great blessing of humanity to the light of a taper, he adds a circumstance of resemblance, which, according to LOCKE's definition, would be the perfection of Wit:

"Hope, like the glimmering taper's light,
Adorns and cheers the way,
And still as darker grows the night
Emits a brighter ray."

But this, in point of fact, is only exquisitely beautiful, and not in the least witty. In like manner, MOORE, in the following verses, introduces comparisons, which also are admirably beautiful, but destitute of every ingredient of Wit. In his song on music's powers to awaken the memory, he says:

"*Like* the gale which sighs along
Beds of oriental flowers,
Is the grateful breath of song
That once was heard in happier hours.
Filled with balm, the gale sighs on,
When the flowers have sunk in death,
So when pleasure's dream is gone,
Its memory lives in music's breath."

Again, in speaking of the pains of memory, he says,

"When I remember all
The friends so link'd together,
I've seen around me fall
Like leaves in wintry weather;
I feel *like* one who treads alone
Some banquet hall deserted;
Whose lights are fled, whose garlands dead,
And all but he departed."

In these instances we have the most unexpected resemblances presented to the mind, beautiful, as I have said, but

* Essay, b. ii. c. xi. § 2.

not witty; and when we analyse the images, we are able to refer them all to Comparison and Ideality as their origins; the suggestion of simple resemblance, adorned with beauty, being their constituent elements.

Wherein, then, do the comparisons which are witty, such as those already cited, or *Hudibras's* famous simile,

> "When, like a lobster boiled, the morn
> From black to red began to turn,"

differ from those which are not witty? This brings us at last to the true definition of Wit, and to the main object of all these remarks, the functions of the organ No. 32. The difference is this: In all the cases where Wit is recognised, there is "a mixture of congruity and incongruity, or incongruity appears where congruity was expected," which in principle is one and the same thing. This is nearly the definition of Wit given by BEATTIE, and it also approaches closely to that given by CAMPBELL and Dr THOMAS BROWN. Its application to the foregoing examples is easy. In the first version of the *Robin Hood* and *Littlejohn* poetry, there is congruity in associating the two names together, and asking the traveller to come in and drink with either who might happen to be at home, for this is in perfect accordance with the known traditions concerning the manner of living of these individuals; but there is incongruity in the circumstance of *Robin Hood* being a mere figure on the sign board, and *Littlejohn* being a veritable man, and the man, moreover, who had the greatest interest in the invitation being accepted. Now, it is imagined by Mr SCOTT, that the proper function of No. 32. is to perceive the *difference* between the two characters, to observe, in short, the *incongruity*, and that it is only when this is done that Wit is at all recognised. In like manner, the wit in Lord STAIR's reply lies in the incongruity between the answer which LOUIS received, and that which he expected. He evidently anticipated that STAIR would say that his mother had been in France; and the King meant it to be inferred, from the likeness between them, that she, the mother, had

been false, and that STAIR was his, LOUIS's, illegitimate brother. His Lordship's reply, on the contrary, completely turned the tables on the King. "No, but my *father* was," implying that LOUIS, by parity of reason, was an illegitimate son of STAIR's father. In like manner, when KITTY

> "*Obtained the chariot for a day*
> *And set the world on fire;*"

we perceive comparison between the young beauty's exploit and that of *Phaeton* with the chariot of the Sun, and the difference or incongruity is so striking, that we feel it as an essential ingredient in the description, and relish it as wit. In the comparison of Hope to the taper, on the other hand,

> "Which still as darker grows the night
> Emits a brighter ray,"

we attend only to the *resemblance*, which is very striking and beautiful, and *not to the points of difference;* and then the image strikes us as a *pure comparison*, and not as implying any incongruity, and, in consequence, it is not felt as witty. The same remark applies to MOOR's comparison of the recollection of pleasure preserved in strains of music, to the gale, "which sighs along beds of oriental flowers;" for here we attend to the resemblance, which is new, unexpected, beautiful, and perfect, but there being no incongruity, no wit is perceived in it. The comparison of the dawn of morn to a lobster, beginning to turn from black to red, is witty, because the two objects *differ* in every point except one, and the incongruity between them, which is at once perceived to be general, takes hold of the mind much more forcibly than the resemblance, which is confined to a single particular.

Wit, therefore, appears to consist chiefly in an *intellectual perception of difference*, of congruity amid incongruity; and hence Wit, like an argument, may be retailed a thousand times, from mind to mind, without losing its intrinsic qualities; while humour, which is ascribed chiefly to Secretive-

ness, is entirely personal, and must be witnessed at the first hand to be at all enjoyed *.

It has already been observed, that objects or ideas frequently excite laughter without being witty, and examples of this are found in the substitution of "SAMUEL JOHNSON" for *Littlejohn* in the sign, and in the servant calling the fall of a shoulder of mutton a *lapsus linguæ*. These instances, when analysed, resolve themselves into *absurdities*; and if the notion be well founded, that we may laugh from an affection of a variety of faculties, they are easily accounted for. Causality or Comparison, for example, would perceive the gross absurdity of the substitution of SAMUEL JOHNSON's name for that of his predecessor. The man, in doing so, indicated a total blindness both to the meaning and Wit of the original inscription. The servant indicated the same stupidity in regard to the meaning of the words which he used. Or a more forcible illustration of this principle may be found in BUTLER's lines:

> "He had been beaten till he knew
> The wood whereof the cudgel grew;
> And kicked until he could tell whether
> The shoe was Spanish or neat's leather."

This is witty, and it is also laughable. It is *witty*, on account of the complete incongruity perceived by 32 between the cause, the beating with a stick, and the result, the knowledge of the wood of which it grew; and it is *laughable*, on account of the utter inadequacy which Causality perceives betwixt the means and the end. Thus we are prompted to laugh at any object which violently contradicts the usual train of perceptions of any of our faculties, whether real incongruity be found in the contradiction or not; but if no incongruity appear, it is simply absurd.

"It occurs to me, then," says Mr SCOTT, (to whose kindness I owe many of the ideas and illustrations here presented,) "that if Comparison perceive resemblances, and Wit differ-

* The theory of Humour is explained on p. 146.

ences, Causality, which perceives adaptation and fitness, seems to be most appropriately placed between them. For, if we see all the resemblances and all the differences between objects, we can by no means be better prepared for seeing their adaptation to one another. These three faculties, supposing them to exist, appear to me fitted to perceive all the relations which can possibly subsist between the different objects of our knowledge.

"If the faculty 32 (Wit) were the sense of the ludicrous, and nothing else," he continues, "how do you account for this, that when Causality and Wit are both large, the individual is not much inclined to view things in a ludicrous light? What purpose does Wit serve in this case? We may rely upon it that it is an important one, and, from the first, I could hardly believe that a separate faculty was given for no other purpose than that of scoffing and making game of all the rest. My theory is this,—that it is only turned to this purpose when it is found without a corresponding endowment of Causality, or of those other superior faculties which are necessary to turn it to its more legitimate uses. When a large Wit is found, with an inferior Causality, and when Conscientiousness and some of the higher sentiments are also deficient, the individual will be disposed to turn every thing to ridicule. He perceives incongruities, or what he supposes such, in every thing. He laughs at every thing that is serious, and every thing that is good; he laughs at science; he laughs at learning; he laughs at religion. He seats himself in the chair of the scorner, and Phrenology cannot expect to be secure from his attacks, when he even dares to assail, with his puny weapons, his Maker and his God. VOLTAIRE abused the propensity even to this extent, and I doubt if we can altogether acquit STERNE. Now, the true object of any power or propensity is never to be seen in its abuse. Ridicule, therefore, universal,—unmeasured, unrestrained ridicule,—can never be the true object of this power. There must be a better object to be served within proper limits. Very superior minds, the excellent spirits of the earth, seldom laugh."

"If Comparison, Causality, and Wit, are *all large*, this gives the greatest possible range of intellect. This seems to be the case in the heads of BACON, of HENRY IV. and of FRANKLIN. In the mask of FRANKLIN, if it be correct, Wit is eminently conspicuous, fully as much so as in STERNE's. Now, What was the function of 32 in FRANKLIN, for I never heard that he was particularly witty?"

Dr SPURZHEIM does not approve of Mr SCOTT's analysis of this faculty. In the Physiognomical System it was treated as an intellectual power; but in his French works, and in his Phrenology, subsequently published, he considers it as a sentiment. He regards it as giving the feeling of the ludicrous, and producing the tendency to represent objects under this aspect, in the same way as Ideality gives a feeling of the beautiful, and also the tendency to elevate and adorn all the conceptions of the mind. Wit, according to this view, would consist in conceptions, formed by the higher intellectual powers, imbued with the sentiment in question. Dr SPURZHEIM, in his Phrenology, states his objections as follows: "As to the view taken by Mr WILLIAM SCOTT, I reply, that, in my opinion, the same power which perceives resemblances perceives differences also. I see no reason for adopting two faculties for the act of discrimination. But even granting Mr WILLIAM SCOTT's supposition of one power for perceiving resemblances, and another for perceiving differences, I still think it necessary to admit a special feeling of ludicrousness or mirth. We may excite laughter, it is true, by making comparisons of things which differ, but we may do so also by comparing things which resemble each other. If, amidst incongruity and difference, we seek for analogies, the faculty of Comparison is active, and, combined with ludicrousness, it will undoubtedly make us laugh. But we may laugh heartily at a single object, without allusion to any difference. Those who are the most disposed to laugh and to be merry, are not always the most intelligent and the most skilful in distinguishing either analogies or difference. The feeling of mirthfulness, therefore, seems to be special. It may be excited by

pointing out differences or resemblances, by the agency of various feelings, by playing tricks, or by inspiring fear. The fundamental power, then, cannot be Wit. This is only one of its applications, and results from its combination with intellect. I propose the name mirthfulness, or gayness, to indicate the peculiar feeling *."

In reply to these observations it may be observed, that, if we laugh, from a peculiar affection of Acquisitiveness, Love of Approbation, Causality, and a variety of other faculties, there is no necessity for admitting a special sentiment of gaiety. Farther, Mr Scott distinctly admits the feeling of the ludicrous to be connected with 32, but he regards this as one of its playful manifestations, rather than its primitive function. Thirdly, One great characteristic of the style of Voltaire, Lord Byron, and other authors remarkable for Wit, is an extreme delicacy in their perceptions of difference, even when writing gravely. The words they employ are distinguished by an exquisite appropriateness, which conveys not only the author's meaning, but the finest and most delicate shades of his ideas; and this high polish appears to me to arise in part from an habitual activity of the faculty now under discussion. At the same time the analysis is attended with very considerable difficulty, and the reader is requested to draw his own conclusion, whether the new view is well founded or not. Thus far our knowledge is certain, that those individuals who manifest great Wit, have the part of the brain in question largely developed, and this is all that is insisted on as ascertained science.

Dr Murray Patterson, in his Phrenology of Hindostan, published in the Society's Transactions, remarks, that the Hindoo language abounds in comparisons, analogies, and metaphorical expressions, while it is poor in words for expressing differences, and he refers the former to the predominance of Comparison, and the latter to the deficiency of Causality in the national development; but, on adverting to the skulls,

* Phrenology, p. 212.

we find Comparison, indeed, the largest of the three organs, but that of Wit is decidedly more deficient than Causality; and on suggesting to him the difficulty of determining to which of the latter faculties the discriminating power really belongs, he stated his inability to solve it.

IMITATION.

Dr Gall gives the following account of the discovery of this faculty and organ. One day, a friend with whom he conversed about the form of the head, assured him that his had something particular, and directed his hand to the superior-anterior region of the skull. This part was elevated in the form of a segment of a circle; and behind the protuberance there was a depression. Before this time Dr Gall had not observed this conformation. This man had a particular talent for imitation. Dr Gall immediately repaired to the institution of the deaf and dumb to examine the head of the pupil Casteigner, who only six weeks before had been received into the establishment, and, from his entrance, had attracted notice by his amazing talent for mimicry. On the *mardi-gras* of the Carnival, when a little play was presented at the institution, he had imitated so perfectly the gestures, gait, &c. of the director, inspector, physician, and surgeon of the establishment, and above all, of some women, that it was impossible to mistake them. This exhibition was the more amusing, as nothing of the kind was expected from this boy, his education having been totally neglected. Dr Gall states, that he quite unexpectedly found the part of the head in question as fully developed in this individual as in his friend Hannibal, just mentioned.

Is the talent for mimicry, then, said Gall, founded on a particular faculty and organ? He sought every opportunity of multiplying observations. He visited private families, schools, &c., and every where examined the heads of individuals who possessed a distinguished talent for mimicry. At

this time, Mons. MARX, secretary to the minister at war, had acquired a great reputation, by several characters which he played in a private theatre. Dr GALL found in his head the same part of the head swelling out as in CASTEIGNER and HANNIBAL. In all the other persons whom he examined, he found the part in question more or less elevated in proportion to the talent for imitation which they possessed. It is told of GARRICK, says Dr GALL, that he possessed such extraordinary talent for mimicry, that, at the court of LOUIS XV., having seen for a moment the King, the Duke D'AUMONT, the Duke D'ORLEANS, and Messrs D'AUMONT, BRISSAC, RICHELIEU, Prince SOUBISE, &c. he carried off the manner of each of them in his recollection. He invited to supper some friends who had accompanied him to court, and said, "I have seen the court only for an instant, but I shall shew you the correctness of my powers of observation, and the extent of my memory;" and placing his friends in two files, he retired from the room, and instantly returning, his friends exclaimed, "Ah! behold the King, LOUIS the XV. to the life." He imitated in succession all the other personages of the court, who were instantly recognised. He imitated not only their walk, gait and figure, but also the expression of their countenances. Dr GALL, therefore, easily understood how greatly the faculty of Imitation would assist in the formation of a talent for acting; and he examined the heads of the best performers at that time on the stage of Vienna. He found the organ large in them all, namely, in MÜLLER, LANGE, BROCKMANN, SCHRÆDER, BAUMAN, KOCH, and his daughter. He got the skull of JÜNGER, a poet and comedian, and he now uses it to demonstrate the organ. Subsequently, he and Dr SPURZHEIM, in their travels, met with many confirmations of the organ; in particular, in the house of correction at Munich, they saw a thief who had this organ large. Dr GALL said he must be an actor: surprised at the observation, he acknowledged that he had for some time belonged to a strolling company of players. This circumstance was not known in the prison when GALL made the observation. On these grounds,

Dr Gall conceived himself justified in admitting a particular talent for imitation; that is to say, a faculty which enables the possessor in some degree to personify the ideas and sentiments of others, and to exhibit them exactly by gestures; and he considers this talent to be connected with the particular organ now pointed out.

This organ contributes to render a poet or author dramatic, such as Shakespeare, Corneille, Moliere, Voltaire, &c. It is large in the portraits of Shakespeare, and also in the bust of Sir W. Scott, whose productions are strongly characterised by their dramatic scenes.

This faculty produces the talent for imitation alone; and Mr Scott has observed, that, in perfect acting, there is more than imitation. There is expression of the propensities and sentiments of the mind in all the truth and warmth of actual and natural excitement; and this power of throwing real expression into the outward representation he conceives to depend upon Secretiveness. Thus, says Mr Scott, a person with much Imitation and little Secretiveness, could represent what he had seen, but he would give the externals only in his representation; add Secretiveness, and he could then enter into any given character as it would appear if existing in actual nature: he could, by means of this latter faculty, call up all the internal feelings which would animate the original, and give not a copy merely, but another of the same,—a second edition, as it were, of the person represented. In this analysis of acting, perhaps, too much influence is ascribed to Secretiveness, and too little to Imitation: My own opinion, as expressed on page 148, is, that Secretiveness produces chiefly a restraining effect, and that Imitation enables its possessor to enter into the spirit of those whom it represents.

While, however, Secretiveness and Imitation together may thus be regarded as general powers, without which no talent for acting can be manifested, it is proper to observe, that the effect with which they can be applied in representing particular characters, will depend on the degree in which other faculties are possessed in combination with them. They confer on the individual only the capacity of applying, in this particular way,

the whole other powers of the mind, so far as he possesses them; but they do not supply the want of these powers. For example; an actor destitute of *tune*, however highly he may be endowed with Secretiveness and Imitation, could not imitate CATALANI, or, what is the same thing, perform her parts on the stage; and neither could an individual possessing little *Combativeness* and *Destructiveness*, represent with just effect the fiery *Coriolanus;* because the natural language of indignation can no more be called up by Secretiveness and Imitation, without Combativeness and Destructiveness, than melody without the aid of Tune. Hence, to constitute an accomplished actor, capable of sustaining a variety of parts, a general full endowment of the mental organs is required. Nature rarely bestows all those in an eminent degree on one individual; and, in consequence, each performer has a range of character in which he excels, and out of which he is nothing; and I have found, by repeated observations, that the lines of success and failure bear a decided reference to the organs fully or imperfectly developed in the brain. Any one may easily put this observation to the test of experiment. Actors incapable of sustaining the dignity of a great character, but who excel in low comedy, will be found deficient in *ideality;* while, on the other hand, those who tread the stage with a native dignity of aspect, and seem as if born to command, will be found to possess it largely developed; and also *firmness*, *self-esteem*, and *love of approbation*. It does not follow, however, from these principles, that an actor, in his personal conduct, must necessarily resemble most closely those characters which he represents to the best advantage. To enable an individual to succeed eminently in acting *Shylock*, for example, *Firmness*, *Acquisitiveness* and *Destructiveness*, are reckoned indispensable; but it is not necessary, merely because *Shylock* is represented as being deficient in Benevolence, Justice, Veneration, and Love of Approbation, that the actor also should be so. The general powers above referred to, although they do not supply the place of deficient faculties, are quite competent for the time to suppress the manifestations of opposite sentiments.

Hence, in his proper character, he may manifest in the highest degree the moral sentiments; and yet, by shading these for the time, by the aid of Secretiveness, and bringing into play only the natural languages of the lower propensities, which also we suppose him to possess, he may represent a scoundrel to the life.

This faculty is indispensable to the portrait painter, the engraver, the sculptor; and, on examining the heads of Mr Douglas, Mr Joseph, Mr Uwins, Mr W. Allan, Mr James Stewart, Mr Selby the ornithologist, I found it large in them all. Indeed in these arts it is as indispensable as Constructiveness. It also aids the musician and linguist, and, in short, all who practise arts in which expression is an object.

Imitation gives the tendency to express by gestures the thoughts and feelings of the mind, and hence is requisite to the accomplished orator. In private life, some individuals accompany their speech with the most forcible and animated expressions of countenance, the nascent thought beams from the eye, and plays upon the features, before it is uttered in words;—This is produced by much Imitation, Secretiveness, and Ideality.

The organ is situated a little farther back in the head than it is marked in the bust. It is possessed by the lower animals, and is regarded as ascertained.

When this organ and that of Benevolence are both large, the anterior portion of the coronal aspect of the head rises high above the eyes, is broad, and presents a level surface, as in Clara Fisher; when Benevolence is large, and Imitation small, there is an elevation in the middle, with a rapid slope on each side.

The organ is large in Raphael and Clara Fisher; small in Jacob Jervis.

MODES OF ACTIVITY OF THE FACULTIES.

All the faculties, when active in a due degree, produce actions good, proper, or necessary. It is excess of activity that occasions abuses; and it is probable that Phrenology has been discovered only in consequence of some individuals, in whom particular organs were very largely developed, yielding to the strongest propensities of their nature. The smallness of a particular organ is not the cause of a faculty producing abuses. Thus, though the organ of Benevolence be small, this does not occasion cruelty; but, as it will be accompanied with indifference to the miseries of others, it may lead to the omission of duties. When, also, one organ is small, abuses may result from another being left without proper restraint. Thus, powerful faculties of Acquisitiveness and Secretiveness, combined with weak faculties of Reflection and Conscientiousness, may, in certain circumstances, lead to theft. Powerful Combativeness and Destructiveness, with weak Benevolence, may produce cruel and ferocious actions.

Every faculty, when in action, from whatever cause, produces the kind of feeling, or forms the kind of ideas, already explained as resulting from its natural constitution.

The faculties of the PROPENSITIES and SENTIMENTS cannot be excited to activity by a mere act of the will. For example, we cannot conjure up the emotions of Fear, Compassion, Veneration, by merely willing to experience them. These faculties, however, may enter into action from an internal excitement of the organs; and then the desire or emotion which each produces is experienced, whether we will to experience it or not. Thus, the cerebellum

being internally active, produces the corresponding feeling; and this cannot be avoided if the organ be excited. We have it in our power to permit or restrain the manifestation of it in action; but we have no option, if the organ be excited, to experience, or not to experience, the feeling itself. The case is the same with the organs of Fear, Hope, Veneration, and the others. There are times when we feel involuntary emotions of fear, or hope, or awe, arising in us, for which we cannot account; and such feelings depend on the internal activity of the organs of these sentiments.

> "We cannot Nature by our wishes rule,
> Nor at her will, her warm emotions cool."
>
> CRABBE.

In the *second* place, these faculties may be called into action independently of the will, by the presentment of the external objects fitted by nature to excite them. When an object in distress is presented, the faculty of Benevolence starts into activity, and produces the feelings which depend upon it. When an object threatening danger is perceived, Cautiousness gives an instantaneous emotion of fear. And when stupendous objects in nature are contemplated, Ideality inspires with a feeling of sublimity. In all these cases, the power of acting, or of not acting, is completely dependent on the will; but the power of feeling, or of not feeling, is not so.

It seems an unaccountable pleasure, says HUME *, which the spectators of a well written Tragedy receive from sorrow, terror, anxiety, and other passions, that are in themselves disagreeable and uneasy. The more they are touched and affected, the more are they delighted with the spectacle. The whole art of the poet is employed in rousing and supporting the compassion and indignation, the anxiety and resentment, of his audience. They are pleased in proportion as they are afflicted, and never are so happy as when they employ tears, sobs and cries, to give vent to their sorrow, and relieve their hearts, swollen with the tenderest sympathy and compassion.

* Essay 22.

Many volumes have been written to solve this problem. Those authors who deny the existence of benevolent and disinterested feelings in man, maintain, that we sympathise with *Cato* or *Othello*, or *King Lear*, because we conceive the possibility of ourselves being placed in a similar situation, and that, then, all the feelings arise in us which we would experience, if we were ourselves suffering under similar calamities. Mr Stewart, who, on the other hand, admits the existence of generous emotions in the human mind, states it as his theory, that we, for an instant, believe the distress to be real, and under this belief feel the compassion which would naturally start up in our bosoms, if the sufferings represented were actually endured. A subsequent act of judgment, he says, dispels, in an almost imperceptible portion of time, the illusion, and restrains the mind from *acting* under the emotion, which, if the belief of reality continued, it would certainly do, by running to the relief of the oppressed hero or heroine; but still he considers that a momentary belief is necessary to call up the emotions which we experience.

The phrenological doctrine just delivered appears to me to furnish the true explanation. Each propensity and sentiment may be called into activity by presentment of its object, and, when active, the corresponding feeling or emotion attends it, in virtue of its constitution. Happiness consists in the harmonious gratification of all the faculties; and the very essence of gratification is activity. "Thus the muscular system," says Dr A. Combe, "is gratified by motion, and pleasure arises; the eye is gratified by looking at external objects; Combativeness, by overcoming opposition; Destructiveness, by the sight of destruction, and the infliction of pain; Benevolence, by the relief of suffering; Hope, by looking forward to a happy futurity; Cautiousness, by a certain degree of uncertainty and anxiety, &c. As the degree of enjoyment corresponds to the number of faculties, simultaneously, active and gratified, it follows, that a tragic scene, which affords a direct stimulus to several of the faculties, at the same moment, *must be agreeable*, whatever these may be: 1*st*, If it does not at the

same time outrage any of the other feelings; *2dly,* If it does not excite any faculty so intensely as to give rise to pain; just as too much light hurts the eyes, and too much exertion fatigues the muscles." In the play of *Pizarro,* for example, when the child is introduced, its aspect and situation instantly excite Philoprogenitiveness, and those possessing this organ largely will feel an intense interest in it;—the representation of danger to which it is exposed rouses Cautiousness, and produces *fear for its safety;* and when *Rolla* saves it, this fear will be allayed, Philoprogenitiveness will be highly delighted, and Benevolence also pleased; and the excitement of these faculties is pleasure. All this internal emotion takes place simply in consequence of the constitution of the faculties, and the relation established by nature betwixt them and their objects, without the understanding requiring to be imposed upon, or to form any theory, whether the scenes are real or fictitious. A picture raises emotions of sublimity or beauty on the same principles. The cloud-capt towers and gorgeous palaces are fitted by nature to excite Ideality, Wonder and Veneration; and these being active, certain emotions of delight are experienced. When a very accurate representation of these towers and palaces is presented on canvas, their appearance in the picture excites the same faculties into action, which their natural lineaments would call up, and the same pleasures kindle in the soul. But what would we think, if Mr Stewart assured us that we required to believe the paint and the canvas to be real stone and lime, and the figures to be real men and women, before we could enjoy the scene? And yet this would be as reasonable as the same doctrine applied to tragedy. We may weep at a tragedy represented on canvas, and know all the while that there are only colours and forms before us. On the same principle we may shed tears at seeing tragedy acted, which is just a representation, by means of words and gestures, of objects calculated to rouse the faculties, and yet suffer no delusion respecting the reality of the piece.

If the propensities and sentiments become excessively ac-

tive from these representations, they may overpower the intellect, and then a temporary belief will follow, and the feeling will be the stronger; but, in this case, it appears to me that the strong emotion does not arise from a *previous illusion in the understanding;* but that misconception is the *consequence*, and not the cause, of the feelings having become overwhelming.

The law of our constitution now explained, accounts also for several of the phenomena of insanity. If the organs of Combativeness and Destructiveness become violently and involuntarily active through disease, madness or fury, which is just an irresistible propensity to violence and outrage, will ensue. If the organs of Cautiousness become involuntarily and permanently active through disease, fear will constantly be felt, and this constitutes melancholy. If Veneration and Hope be excited in a similar way, the result will be involuntary emotions of devotion, and the liveliest joy and anticipations of bliss; and these feelings fixed and immoveable amount to religious insanity. It frequently happens that a patient is insane on a single feeling alone, such as Fear, Hope, or Veneration, and that if the false impression which this feeling produces is admitted as correct, the deductions of the mind from it, and the general conduct of the patient, is rational and consistent. Thus, a person insane in Self-Esteem sometimes imagines himself a King: Grant this to be the case, and he speaks and acts as becomes a King, and shews considerable tact and consecutiveness of judgment. This can be explained by the organs of the intellect being sound, and only the organ of Self-Esteem diseased. Sometimes well meaning individuals, struck with the clearness of the understanding in such patients, set themselves to point out, by means of argument, the erroneous nature of the notions under which they suffer, supposing that, if they could convince their intellect of the mistake, the disease would be cured; but the malady consists in an unhealthy action of the organ of a sentiment or propensity, and as long as the disease lasts, the insane feeling, which is the basis of the whole mental alienation, will remain, and ar-

gument will do as little to remove it, as a speech will accomplish in removing the gout. But to proceed with the doctrine of the modes of activity of the faculties, I observe that,

In the *third* place, The faculties of which we are now speaking may be excited to activity, or repressed, *indirectly*, by an effort of the will. Thus, the Knowing and Reflecting Faculties have the function of forming ideas. Now, if these faculties be employed to conceive internally the objects fitted by nature to excite the propensities and sentiments, the latter will start into activity in the same manner, but not in so powerful a degree, as if their appropriate objects were externally present. The vivacity of the feeling, in such cases, will be in proportion to the strength of the conception, and the energy of the propensities and sentiments together. For example, if we conceive inwardly an object in distress, and Benevolence be powerful, compassion will be felt, and tears will sometimes flow from the emotion produced. In like manner, if we wish to repress the activity of Ideality, we cannot do so merely by willing that the sentiment be quiet; but if we conceive objects fitted to excite Veneration, Fear, Pride, or Benevolence, these faculties will then be excited, and Ideality will sink into inactivity.

Hence he who has any propensity or sentiment predominantly active from internal excitement of the organ, will have his intellect filled with conceptions fitted to gratify it; or, in other words, the habitual subjects of thought in the mind are determined by the faculties which are predominantly active from internal excitement. If the cerebellum is permanently active, the individual will be prone to collect pictures, books and anecdotes, fitted to gratify this feeling; his mind will be much occupied with such ideas, and they will afford him delight. If, in another individual, Constructiveness, Ideality and Imitation are internally active, he will desire to see pictures, busts, and all works of art, in which skill, beauty and expression, are combined. He will know much about such objects, be fond of talking of them, and of possessing them. If, in another individual, Acquisitiveness be internally active,

he will feel a great and natural interest in all matters connected with wealth, and be inspired with an eager curiosity to know the profits of different branches of trade, the wealth possessed by different individuals, &c. If Benevolence be internally active, the mind will habitually run on schemes of philanthropy, such as HOWARD'S, Mr OWEN'S, or Mrs FRY'S. In these cases, the *liking* for the object or pursuit depends upon the particular propensities or sentiments which are active, and the intellectual faculties serve as the ministering instruments of their gratification.

These principles explain at once the great variety of tastes and dispositions among mankind; for in no two individuals is exactly the same combination of organs to be found, and hence every one is inspired with feelings in some degree peculiar to himself, and desires objects fitted for their special gratification.

As the faculties of the Propensities and Sentiments do not form Ideas, and as it is impossible to excite or recall the feelings or emotions produced by them, directly, by an act of the will, it follows that these faculties have not the attributes of Perception, Conception, Memory, Imagination: They have the attribute of Sensation alone; that is to say, when they are active, a sensation or emotion is experienced. Hence Sensation is an accompaniment of the activity of all the faculties which feel, and of the nervous system in general; but sensation is no faculty in itself.

The laws of the KNOWING and REFLECTING faculties are different: These faculties form Ideas, and perceive Relations; they are subject to the will, or rather constitute will themselves; and they minister to the gratification of the other faculties which only feel.

1*st*, These faculties, also, may be active from internal excitement of the organs, and then the kinds of ideas which they are fitted to form are presented involuntarily to the mind. The musician feels the notes flowing on him uncalled for. A man in whom Number is powerful and active, calculates by a natural impulse. He in whom Form is vigorous, conceives

figures by internal inspiration. He in whom Causality is powerful and active, reasons while he thinks without an effort. He in whom Wit is energetic, feels witty conceptions flowing into his mind spontaneously, and even at times and places when he would wish them not to appear.

2dly, These faculties may be excited by the presentation of the external objects fitted to call them into activity; and,

3dly, They may be excited to activity by an act of volition.

When excited by the presentation of external objects, the objects are PERCEIVED, and this act is called PERCEPTION. Perception is the lowest degree of activity of these faculties; and if no idea is formed when the object is presented, the individual is destitute of the power of manifesting the faculty, whose function is to perceive objects of that kind. Thus, when tones are produced, he who cannot perceive the melody of them, is destitute of the power of manifesting the faculty of Tune. When a coloured object is presented, and the individual cannot perceive, so as to distinguish, the shades, he is destitute of the power of manifesting the faculty of colour. When the steps of an argument are logically and distinctly stated, he who cannot perceive the relation betwixt the steps, and the necessity of the conclusion, is destitute of the power of manifesting the faculty of Causality; and so on. Thus Perception is a mode of action of the faculties which form ideas, and implies the lowest degree of activity; but Perception is no separate faculty.

This doctrine is not theoretical, but is clearly indicated by facts. In the case mentioned by Mr HOOD *, a patient having lost the *memory* of words, yet enjoyed *perception* of their meaning. He understood language spoken by others, or, in other words, the organ of language retained so much of its power as to enable him to *perceive* the meaning of words when presented to his mind, but so little of its energy as not to be adequate to the act of recalling words by an act of his will, so as to express his thoughts. The case of Mr FERGUSON †

* See p. 330. † Page 289.

is another in point. He enjoyed so great a degree of the organ of Size as to enable him to perceive distance when natural scenery was presented to his mind, but so little as to be quite unable to recollect it, when the objects were withdrawn. Mr SLOANE * is in a similar situation in regard to colouring. He *perceives* the *differences* of shades when they are presented to his eyes, but has so little of the organ that he does not recollect, so as to be able to name, them separately. Many persons are in a similar condition in regard to music; they perceive melody and enjoy it, when presented to the ear, but have so little of the faculty of Tune as to be unable to recal the notes after they have ceased to be heard. The same holds in regard to the reflecting powers. Many persons possess faculties acute and vigorous enough to perceive an argument, if placed before them, who are quite incapable of inventing it themselves.

According to this view of perception, which regards it as the lowest state of activity of *every* intellectual faculty, an individual may possess acute powers of perception as to one class of objects, and be quite unable to perceive others. Thus Mr MILNE has an acute perception of form, although he cannot perceive the minute shades of colours; other individuals perceive symmetry distinctly who cannot perceive melody. This exposition has the merit of coinciding with nature; for we frequently meet with such examples as I have now cited.

The metaphysicians, on the other hand, treat of perception as a *general faculty*, and when their doctrine is applied to nature, the extraordinary spectacle is presented of their *general power* performing in the same individual half its functions with great effect, while it is wholly inefficient as to the other half; just as if a leg could walk east and be quite incapable of walking west. Dr THOMAS BROWN has abandoned this absurdity; and differs from REID, STEWART, and all his predecessors, in denying perception to be any thing more than an act of the general power of the mind. We call it an act of several special

* Page 300.

faculties of the mind; but with these Dr BROWN was not acquainted.

CONCEPTION. When the Knowing or Reflecting organs are powerfully active from internal excitement, whether by the will or from natural activity, then ideas are vividly and rapidly conceived; and the act of forming them is styled CONCEPTION; and if the act amounts to a very high degree of vivacity, it is called IMAGINATION. Thus perception is the lowest degree of activity of any of these faculties excited by an external object, and conception or imagination are higher degrees of activity depending on internal causes, and without the interference of an external object. Each faculty performs the act of conception in its own sphere. Thus, if one person have a powerful organ of Tune, he is able to conceive, or call up in his own mind, the notes of a tune, when no instrument is sounding in his ears. If his organ of Form be very small, he may not be able to bring shapes before his mind with equal facility. Some persons read music like a book, namely, perceiving the written sign of a note is sufficient to enable them to call up the impression of the note itself in their minds. This is a very high degree of activity of the faculty.

In treating of Colouring, I cited a passage from Mr STEWART, in which, after stating the fact that some men are able to distinguish different shades when presented together, who cannot name them when separate, he attributes this want of discrimination to defect in the power of *conception*, probably arising, he supposes, from early habits of inattention. So far he is correct: an individual may be found, whose organ of Colouring is so powerful as to enable him to distinguish shades when in juxta-position, and yet so weak as not to give him *conception* or memory of them when seen apart, and this would arise from a deficient power of *conception*; but then, the power of conception may be deficient in this faculty alone, and very vigorous in all the others; whereas, on Mr STEWART'S principle, that conception is a general power, we would have the anomaly of its performing one portion of its functions well,

while it was deficient as to another, and the defect is explained by him by supposed early habits of inattention; whereas if a faculty be naturally strong, it eagerly attends to its objects, just as a vigorous and empty stomach desires food.

When any of the Knowing or Reflecting organs is internally active, the mind conceives, or is presented with ideas of, the objects which it is fitted to perceive. Thus Locality, Colouring, and Size, being active, we are able, with our eyes closed, to conceive a landscape in all its details of hill and dale, sunshine and shade. If this internal activity become morbid, through disease of the organs, then ideas become fixed, and remain involuntarily in the mind; and if this is long continued, it constitutes insanity. Many persons have experienced, when in the dark, vivid impressions of figures in every variety of colour and form passing before the mind, sometimes invested in alarming brilliancy and vivacity. I conclude that this arises from an internal excitement of the organs situated at the superciliary ridge, viz. Form, Locality, Colouring, &c. occasioned generally by an unusual accumulation of blood. This affection is, in general, only momentary; but suppose that it were to become fixed and continuous, then the mind would be haunted with permanent and vivid conceptions of innumerable and fantastic beings, invested in more than the forms and hues of reality.

This, then, would be insanity; not a diseased feeling, such as melancholy, or fury, or religious joy, but an intellectual delusion; so that every sentiment might be sound, and yet this aberration of intellect remain fixed and immoveable by the will. If we suppose this disease of several Knowing organs to take place, leaving the organs of Reflection entire, it is quite possible to imagine that the individual may have diseased perceptions on some points, and not only be sane on all others, but be able, by means of the faculties that remain unaffected, to distinguish the erroneous impressions.

The phenomena of apparitions, or spectral illusions, may be accounted for by the principles now explained. If several organs become active through internal excitement, they pro-

duce involuntary conceptions of outward objects, invested in all the attributes of Form, Colour, Size, &c. which usually distinguish reality. Several interesting examples of this affection are given in the Phrenological Journal *.

The Knowing organs, and the organ of Wonder, seem to be the chief seats of these diseased perceptions, which appears obvious from the descriptions of the apparitions themselves. Thus NICOLAI, the Berlin bookseller, saw the *form* as of a deceased person within eight steps of him—*vast numbers* of human and other forms equally in the day and night—crowds of both sexes—people on horseback, birds and dogs—of natural size, and distinct as if alive—of natural colour, but paler than reality. He then *began to hear them talk*. On being blooded with leeches, the room was crowded with spectres—in a few hours their *colour* began to fade, but in a few more they were white. They dissolved in air, and *fragments* of them were visible for some time. Dr ALDERSON of Hull furnishes two other cases. Mr R. left his wife and family in America, but saw them and conversed with them in this country—saw *trains* of living and dead persons—in *a bright brass lock* again saw his transatlantic friends, and always in that lock—had violent headach. A pothouse-keeper in Hull saw a soldier in his cellar whom he endeavoured to seize, but found an illusion—attempted to take up oysters from the ground, which were equally unreal—saw *crowds* of the living and dead—scarcely knew real from spectral customers—suffered repeated flogging from a waggoner with a whip, who was an illusion. In No. V. of the Journal, page 111., is given the case of a man in the west of Scotland, with a large organ of *Wonder*, who sees inanimate things and persons in visions—had a *spotted carpet* for a long time before his eyes—a funeral—a log of wood on wheels. His son has the same tendency—he followed a beggar, who glided and vanished into a wall. All these perceptions are clearly referable to the Knowing organs.

* Vol. i. p. 541, and vol. ii. pp. 111, 293, 362.

Mr Simpson has communicated to the Phrenological Journal the following case, which is particularly interesting and instructive. Concomitance of pain in the precise seats of the organs, with disorder of their functions, forms a striking feature in it; and the author states, that he is ready to afford the means of verification of the facts to any philosophical inquirer.

"Miss S. L.," says Mr Simpson, "a young lady, under twenty years of age, of good family, well educated, free from any superstitious fears, and in perfect general health of body and soundness of mind, has, nevertheless, been for some years occasionally troubled, both in the night and in the day, with visions of persons and inanimate objects, in almost all the modes and forms which we have already related. She was early subject to such illusions occasionally, and the first she remembers was that of a *carpet* spread out in the air, which descended near her, and vanished away.

"After an interval of some years, she began to see human figures in her room as she lay wide awake in bed, even in the daylight of the morning. These figures were *whitish*, or rather *grey* and *transparent* like *cobweb*, and generally above the *size* of life. At this time she had acute headachs, very singularly confined to one small spot of the head; on being asked to point out the spot, the utmost care being taken not to lead her to the answer, our readers may judge of our feelings as phrenologists, when she touched with her forefinger and thumb, *each side of the root of the nose, the commencement of the eyebrows, and the spot immediately over the top of the nose, the ascertained seats of the organs of Form, Size, and Lower Individuality!* Here, particularly on each side of the root of the nose, she said the sensation could only be compared to that of running sharp knives into the part. The pain increased when she held her head down, and was much relieved by holding her face upwards *. Miss S. L. on being asked if the pain was confined to that spot, answered, that some time afterwards *the pain extended to right and left along*

* *Quere*,—Does not this look like a pressure of blood on that region of the brain?

the eyebrows, and a little above them, and completely round the eyes, which felt often as if they would have burst from their sockets. When this happened, her visions were varied precisely as the phrenologist would have anticipated, and she detailed the progress without a single leading question. *Weight*, *Colouring*, *Order*, *Number*, *Locality*, all became affected; and let us observe what happened. The whitish or cob-web spectres assumed the natural *colour* of the objects, but they continued often to present themselves, though not always, above the *size* of life. She saw a beggar one day out of doors, natural in size and colour, who vanished as she came up to the spot. *Colouring*, being over-excited, began to occasion its specific and fantastical illusions. Bright spots, like stars on a black ground, filled the room in the dark, and even in daylight, and sudden and sometimes gradual illumination of the room during the night often took place, so that the furniture in it became visible. Innumerable balls of fire seemed one day to pour like a torrent out of one of the rooms of the house down the staircase. On one occasion, the pain between the eyes, and along the lower ridge of the brow, struck her suddenly with great violence,—when, *instantly*, the room filled with stars and bright spots. On attempting, on that occasion, to go to bed, she said she was conscious of *an inability to balance herself, as if she had been tipsy*, and she fell, having made repeated efforts to seize the bedpost; which, in the most unaccountable manner, eluded her grasp, *by shifting its place*, and also by presenting her with *a number of bedposts instead of one.* If the organ of *Weight*, situated between *Size* and *Colouring*, be the organ of the instinct to preserve, and power of preserving equilibrium, it must be the necessary consequence of the derangement of that organ to overset the balance of the person. Over-excited *Number*, we should expect to produce multiplication of objects, and the first experience she had of this illusion was the multiplication of the bedposts, and subsequently of any inanimate object she looked at--that object being in itself real and single;—a book, a footstool, a work-box, would in-

crease to twenty, or fifty, sometimes without *order* or arrangement, and at other times piled regularly one above another. Such objects deluded her in another way, by increasing in *size*, as she looked at them, to the most amazing excess,—again resuming their natural size—less than which they never seemed to become,—and again swelling out. *Locality*, over-excited, gave her the illusion of objects, which she had been accustomed to regard as fixed, being out of their places; and she thinks, *but is not sure*, that, on one occasion, a door and window in one apartment seemed to have changed places,—but, as she added, she might have been deceived by a mirror. This qualification gave us the more confidence in her accuracy, when, as she did with regard to all her other illusions, she spoke more positively. She had not hitherto observed a great and painful confusion in the visions which visited her, so as to entitle us to infer the derangement of *Order*. *Individuality*, *Form*, *Size*, *Weight*, *Colouring*, *Locality*, and *Number* only, seemed hitherto affected.

"For nearly two years, Miss S. L. was free from her frontal headachs, and—mark the coincidence—untroubled by visions, or any other illusive perceptions. Some months ago, however, all her distressing symptoms returned in great aggravation, when she was conscious of a want of health *. The pain was more acute than before along the frontal bone, and round and in the eyeballs; and all the organs there situated recommenced their game of illusion. Single figures of absent and deceased friends were terribly real to her, both in the day and the night, sometimes *cobweb*, but generally coloured. She sometimes saw friends on the street, who proved phantoms when she approached to speak to them; and instances occurred where, from not having thus satisfied herself of the illusion, she affirmed to such friends, that she had seen them in certain places, at certain times, when they proved to her the clearest *alibi*. The *confusion* of her spectral forms now distressed her.—(*Order* affected). The oppression and per-

* Constitutional irregularity would, it is very probable, explain the whole disorder.

plexity was intolerable when figures presented themselves before her in inextricable disorder, and still more when they changed—as with NICOLAI—from whole figures to parts of figures—faces, and half-faces, and limbs,—sometimes of inordinate size and dreadful deformity. One instance of illusive *Disorder*, which she mentioned, is curious; and has the farther effect of exhibiting (what cannot be put in terms except those of) the derangement of the just perception of gravitation or equilibrium *(Weight)*. One night as she sat in her bedroom, and was about to go to bed, a *stream* of spectres, persons' faces, limbs, in the most shocking confusion, seemed to her to pour into her room from the window, in the manner of a cascade! Although the cascade continued apparently in rapid descending motion, there was no accumulation of figures in the room, the supply unaccountably vanishing after having formed the cascade. *Colossal* figures are her frequent visitors. *(Size.)*

"Real but inanimate objects have assumed to her the form of animals; and she has often attempted to lift articles from the ground, which, like the oysters in the pot-house cellar, eluded her grasp.

"More recently she has experienced a great aggravation of her alarms; for, like NICOLAI, she *began* to hear her spectral visitors speak!—With Mr R. of Hull, the spectres always spoke. At first her crowds kept up a buzzing and indescribable *gibbering*, and occasionally joined in a loud and terribly disagreeable *laugh*, which she could only impute to fiends. These unwelcome sounds were generally followed by a rapid and always alarming advance of the figures, which often on those occasions presented very large and fearful faces, with insufferable glaring eyes close to her own. All self-possession then failed her, and the cold sweat of terror stood on her brow. Her single figures of the deceased and absent then began to gibber, and soon more distinctly to address her; but terror has hitherto prevented her from understanding what they said *.

* We may here mention, that the phrenological explanations of her distressing affection, which have been given Miss S. L., have had the happy effect of

"Of the other illusive perceptions of Miss S. L. we may mention *the sensation of being lifted up*, and of *sinking down* and *falling forward*, with the puzzling perception of objects off their perpendicular; for example, *the room, floor and all, sloping to one side. (Weight.)*"

Mr Simpson concludes, by remarking "how curiously the old-established phenomena of ghosts are *seriatim* explained by this case. White or grey ghosts—the *grey bodach* of *M'Ivor* in Waverley,—result from excited *Form*, with quiescent *Colouring*, the transparent cobweb effect being colourless. Pale spectres and shadowy yet coloured forms, are the effect of partially excited *Colouring*. Tall ghosts and dwarf goblins are the illusions of over-excited *Size*. *Creusa* appeared to *Æneas*, colossal in her size:—

> "Infelix simulacrum atque ipsius umbra Creusæ
> Visa mihi ante oculos et nota *major imago*."

"The ghosts of *Ossian* are often colossal. Gibbering and speaking ghosts, with an unearthly confusion of tongues and fiend-like peals of laughter, as if the demons revelled, are illusions which many have experienced."

There are persons who imagine themselves to be made of glass, and who refuse to sit down, or assume any position, in which glass would not be safe, lest they should break their bodies in pieces; others have conceived, that some object was attached to their nose, or that some figure was impressed upon their forehead; and in every other respect were sound in mind. Such aberrations appear to be fixed and permanent conceptions of a diseased nature, resulting from a morbid and involuntary activity of the organs of the Knowing Faculties. The cure will be accomplished by removing the organic cause, and not by a logical demonstration that the object does not exist, fitted perhaps to convince a sound understanding, but altogether inapplicable to the removal of illusions from a diseased mind.

Another form of mental derangement, arising from internal

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affording her much more composure when visited by her phantoms than she thought possible. She is still terrified with their speaking; but her mind, on the whole, is greatly eased on the subject.

excitement of the organs, is the tendency to involuntary and sometimes unconscious manifestations of the faculties. Some insane patients talk night and day to themselves; and in hysterical affections the patient often alternately laughs and cries involuntarily. The last phenomena are explicable by the supposition of different organs becoming active and quiescent in turns, in consequence of spasmodic or some other irregular action in the brain. Dr A. Combe saw a lady in Paris, who, when just emerging from insensibility, occasioned by a fit of apoplexy, manifested the faculties of Wit and Imitation quite unconsciously, but with so admirable an effect, that her relations were forced into fits of laughter, mingled with floods of tears for her unhappy situation: on her recovery she did not know of the exhibitions she had made. The organs of Wit and Imitation were large. Phrenology accounts for such facts, in a simple and natural manner, by the effects of diseased activity of the organs.

DREAMING may now be analysed, after the statement of these principles. If the greater number of the organs remain inactive, buried in sleep, and two or three, from some internal excitement confined to themselves, become active, these organs will present the mind with corresponding conceptions, and being separated in their action from the other organs, which, in the waking state, generally co-operate with them, the result will be the creation of disjointed and fantastic impressions of objects, circumstances, and events; in short, all the various phenomena of dreaming. Hence every circumstance which disturbs the organisation of the body may become the cause of dreams: a heavy supper, by encumbering the digestive powers, affects the brain painfully by sympathy; and thence the spectres and hydras dire which then affect the sleeping fancy. Fever, by keeping up a morbid excitement in the whole system, sustains the brain in a state of uninterrupted activity; and hence the sleeplessness which attends the higher, and the disturbed dreams which accompany the lower, degrees of that disease. Hence, also, is explained another familiar fact

relative to the mind. If, during day, we have been excessively engaged in any particular train of study, it haunts us in our dreams. During day the organs of the faculties chiefly employed were maintained in a state of action, intense and sustained, in proportion to the mental application. By a general law of the constitution, excessive action does not subside suddenly, but abates by insensible degrees. Hence, on going to sleep, so much activity continues to stimulate the organ, that the train of ideas goes on; till, after long action, it at last entirely ceases.

On enquiring I find, what indeed might have been anticipated *à priori*, that dreams in different individuals have most frequently relation to the faculties whose organs are largest in the brain. A friend, in whom Tune is large, and Language deficient, tells me that he has occasionally dreamt of hearing and making music, but never of composing discourses, written or oral. Another gentleman, in whom Language is full, and Tune deficient, states that he never in his life dreamt of hearing a musical note, while many a laborious page he has imagined himself writing, reading, and speaking in his dreams; nay, he has repeatedly dreamt of conversing with foreigners in their own tongue, with a degree of fluency which he could never command while awake. In the same way, a person in whom Locality is large assured me, that he had very frequently dreamt of travelling in foreign countries, and enjoyed most vivid impressions of the scenery; while another, in whom that organ is small, never dreamt upon such a subject. One friend, in whom Combativeness is large, told me that many a tough and long contested battle he had fought in his dreams; while another, in whom that organ is moderate, stated that he never dreamt of fighting but once, and that was when his imagination placed him in the hands of murderers, whose heads he attempted to break with a poker, and wakened in terror at his own combative effort.

A curious illustration of the principle now under elucidation occurs in Scott, who was executed in 1823, at Jedburgh, for murder. It is stated in his life, that some years

before the fatal event, he had dreamt that he had committed a murder, and was greatly impressed with the idea. He frequently spoke of it, and recurred to it as something ominous, till at last it was realized. The organ of Destructiveness was large in his head, and so active that he was an enthusiast in poaching, and prone to outrage and violence in his habitual conduct. This activity of the organ might take place during sleep, and then it would inspire the mind with destructive feelings, and the dream of murder would be the consequence. From the great natural strength of the propensity, he probably may have felt, when awake, an inward tendency to this crime, and joining this and the dream together, we can easily account for the strong impression left by the latter on his mind.

I presume, although I do not know it as a fact, that persons in whom Cautiousness is small, and Hope and Benevolence large, will, when in health, generally enjoy brilliant and happy dreams; while others, in whom Cautiousness is very large, and Hope small, will be wading in difficulties and woe.

Mr Andrew Carmichael of Dublin, in a pamphlet on Dreaming, which he wrote some years ago, suggests the idea that sleep may be the occasion, when the waste of substance in the brain is repaired by the deposition of new particles of matter. There is no direct evidence of the truth of this conjecture; but the brain, like every other part of the animal structure, is furnished with bloodvessels and absorbents, and it is known to waste like them. That the waste should be repaired, therefore, is a fact of necessary inference; and that the period of sleep, when the mental functions are suspended, would be particularly suitable to this operation, is also matter of very plausible conjecture; but here the point at present rests, and I mention it merely as a suggestion.

This view of the phenomena of dreaming gives a death-blow to the superstitious notion of warnings and supernatural communications being now made to the mind in sleep; while it explains naturally the occasional fulfilment of dreams, as in the case of Scott.

Thus the internal excitement of the organs of intellect produces conception; the ideas conceived bearing relation always to the particular organ or organs called into action. This excitement, when morbid and involuntary, produces fixed conceptions or ideas, which is a species of insanity; and the same excitement taking place in some organs during sleep, while others remain in a state of inactivity, produces dreams. Hence these phenomena are all connected in their cause, however dissimilar they may appear to the mere superficial observer.

I proceed next to IMAGINATION. The metaphysicians frequently employ the words Imagination and Fancy, but neither of them are synonimous with the phrenological term Ideality. *Imagination* is defined to be, "The power of forming ideal pictures; the power of representing things absent to one's self or others." In this sense, which I hold to be the primitive and most correct, there is scarcely a shade of difference betwixt Conception and Imagination. Locality, Size, Colouring, and Individuality, being active by command of the will, a person may call up in his own mind the features of a landscape, and then he will be said to *conceive* it. If to this act the word *imagine* were applied, and he were said to *imagine* a landscape, it would not be felt as inappropriately used. Mr STEWART, therefore, if he had confined Imagination to the limits here pointed out, viz. "of representing things absent to one's self or others," would not be blameable for doubting if it were a faculty distinct from Conception, which he has ranked as such. At the same time, his notion, that "Imagination is not the gift of nature," but formed "by particular habits of study or of business," is even on this supposition erroneous; for there is no mode of activity of the mind which is not the gift of nature, however much it may be improved by judicious exercise. There is, however, a difference between Conception and Imagination; the former is the cool and methodical representation of things absent to one's self, or to others. Imagination is the *impassioned representation* of the same things, and not

merely in the forms and arrangements of nature, but in new combinations formed by the mind itself. In Phrenology, therefore, Conception is viewed as the *second* degree of activity of the Knowing and Reflecting Faculties, and Imagination as the *third*. Imagination is thus just intense, glowing, forcible, conceptions, proceeding from a great activity of the intellectual faculties, and these not confined to real circumstances, but embracing as many new combinations as the faculties are capable of commanding. In this way, Imagination may be manifested without ornament, or illustration; and this is the case when such faculties as Form, Locality, Order, Colouring, or Causality act by themselves, unaided by Ideality and Comparison. Hence, the assertion of D'Alembert *, that "metaphysics and geometry are of all the sciences belonging to reason those in which Imagination has the greatest share," is quite intelligible, and may have been seriously said. If in this individual, Form, Size, Locality, Order, Number, and Causality, in short, the faculties which go to constitute a genius for mathematics and metaphysics, were very active, he would be conscious of imagining, with great interest and vivacity, many new relations of space, magnitude, and causation, and looking to the usual definitions of Imagination, he was entitled to designate these acts as exercises of that faculty.

The metaphysicians attach a different and more extensive meaning to the word "Fancy;" and, according to my understanding of the functions ascribed by them to this supposed power, it embraces a wider range than Imagination, and necessarily implies ornament and illustration. Hence, Comparison and probably Ideality require to be combined with the Activity of the Knowing and Reflecting Faculties to constitute Fancy. The latter faculties will call up ideas of objects as they exist in nature, Ideality will invest them with beauty, and Comparison will cull similes and trace analogies throughout the boundless fields of space, and the intellectual compound may be designated as the Creation of Fancy. The

* Stewart, Prelim. Dissert. to Sup. Encylop. Brit. Part I. p. 6.

significations commonly attached to the words Imagination and Fancy, are, however, by no means precise. The conceptions of the Knowing and Reflecting Faculties, illustrated and diversified by Comparison alone, are frequently designated Fancy; and in this sense an author or orator may be said to possess a brilliant fancy, although Ideality is by no means a predominant organ in his head. On the other hand, many passages of MILTON are the result merely of the Knowing and Reflecting Faculties imbued with intense Ideality, and in them Comparison supplies but few illustrations; nevertheless these are said to be highly imaginative, and certainly are so. Thus, in judging of genius, Phrenology teaches us to be discriminating and minute in our analysis, and to avoid the error of inferring the presence of *all* the powers of the mind in an eminent degree, because one great talent is possessed.

Improvisatori are able, without study or premeditation, to pour out thousands of verses *impromptu*, often of no despicable quality, upon any subject which the spectators choose to suggest. I have not seen any of these individuals, but Phrenology enables us to conjecture the constituent elements of their genius. In the first place we may infer, that their organs possess great internal activity, so that they spontaneously, rapidly, and vigorously, present multitudes of ideas and emotions. This quality being present, they would require, in the next place, to possess the combination of Language, Individuality, Comparison, Tune, and Ideality, all large, and then we can easily conceive their peculiar talents accounted for. The great and uncommon activity supposed, would produce the readiness of conception and warmth of feeling which are the first requisites; large endowment of Individuality would supply facts and incidents necessary to give body and substance to the composition; Comparison would afford similes, metaphors and illustrations; Ideality would contribute elevation; Tune give rhythm, and Language afford expression to the whole ideas so formed and combined. Observation only can determine whether these conjectures be correct, but the

causes here assigned appear to be adequate to the effects, and this, in a hypothesis, is all that can be expected.

MEMORY is the next mode of Activity which falls under our notice. The mind has no power of calling up, into fresh existence, the emotions experienced by means of the propensities and sentiments, by merely willing them to be felt, and hence we hold these faculties not to possess Memory. The ideas, however, formed by the Knowing and Reflecting Faculties, can be recalled by an act of recollection, and they are therefore said to have Memory. Memory is thus merely a degree of activity of the Knowing and Reflecting Organs. I have said that Conception and Imagination also result from the internal activity of the organs; and the question naturally arises, in what respect does Memory differ from them? The difference appears to be this,—in Conception and Imagination, entirely new combinations of ideas are formed; and the ideas themselves are recalled, not only without regard to the time or order in which they had previously existed, but even without any direct reference to their having at all existed before. Memory, on the other hand, implies a new conception of impressions previously received, attended with the idea of past time, and consciousness of their former existence; and it follows the order of the events as they happened in nature. Each organ will enable the mind to recall the impressions which it served at first to receive. Thus, the organ of Tune will recall notes formerly heard, and give the memory of music. Form will recall figures formerly observed, and give the memory of persons, of pictures, or of crystals, and produce a talent for becoming learned in matters connected with such objects. Individuality will give the memory for facts, and render a person skilled in history, both natural and civil. A person in whom Causality is powerful, will possess a natural memory for metaphysics. Hence there may be as many kinds of memory as there are Knowing and Reflecting Organs. As the recollection of facts and occurrences is what is commonly meant, in popular language, by a great memory, individuals so gifted will generally be found to possess a good de-

velopment of Individuality, and probably of Language to express them.

Dr Watts seems to have anticipated, by a very acute conjecture, the real philosophy of Memory. He says, "It is most probable that these very fibres of the brain which assist at the first idea or perception of an object, are the same which assist also at the recollection of it; and then it will follow that the memory has no special part of the brain devoted to its own service, but uses all those in general which subserve our sensation, as well as our thinking and reasoning powers*." This conjecture coincides exactly with Mr Hood's case of the person in Kilmarnock, who, although able to articulate, lost all power of recollecting arbitrary signs, and, with a sound judgment and clear understanding, forgot, through disease, his own name and the name of every person and thing with which previously he was most familiar. This could be accounted for only on the principle that the organ of Language had lost the power of internal activity at command of the will, while the organs of the reflecting powers remained entire. The fact, also, of the memory failing in old age, before the judgment is impaired, is accounted for on the same principles. Age diminishes the *activity* of the organs; and hence they are unable, rapidly and spontaneously, to reproduce former impressions with their wonted vivacity. Judgment is an exercise of the faculties on present objects, and does not require the same portion of internal and spontaneous excitement for its execution. It is known, that, after the mind has become dead to the recollection of recent occurrences, it recalls, with great vivacity, the impressions of youth and boyish years. These impressions, at first vivid, were imprinted at a time when the whole system was extremely susceptible, they have since been frequently recalled; and hence, perhaps, the organs are capable of resuming the state corresponding to them, after they have ceased to be capable of retaining impressions from events happening when their vigour has decayed.

* Page 18.

The doctrine that memory is only a degree of activity of the faculties, is illustrated by the phenomena of diseases which particularly excite the brain. Sometimes, under the influence of disease, the most lively recollections of things will take place, which had entirely escaped from the memory in a state of health. "A most remarkable example of this kind occurred some years ago at St Thomas's Hospital *. A man was brought in, who had received a considerable injury of the head, but from which he ultimately recovered. When he became convalescent, he spoke a language which no one about him could comprehend. However, a Welsh milk-woman came one day into the ward, and immediately understood what he said. It appeared that this poor fellow was a Welshman, and had been from his native country about thirty years. In the course of that period he had entirely forgotten his native tongue, and acquired the English language. But when he recovered from his accident, he forgot the language he had been so recently in the habit of speaking, and acquired the knowledge of that which he had originally acquired and lost!" Such a fact as this is totally inexplicable on any principle except that of the existence of organs by which the faculties are manifested; for it could not be the mind itself which was affected, and its faculties impaired by the fever, or which recovered long lost knowledge, by the influence of this disease.

JUDGMENT, in the metaphysical sense, belongs to the REFLECTING Faculties alone. The Knowing Faculties may be said, in one sense, to judge, as, for example, the faculty of Tune may be agreeably or disagreeably affected, and in this way may judge of sounds; but Judgment, in the proper sense of the word, is a perception of relation, or of fitness, or of the connection betwixt means and an end, and belongs entirely to the reflecting powers. These faculties have Perception, Memory, and Imagination, as well as the Knowing Faculties. Causality, for example, *perceives* the relation of cause and

* TUPPER's Inquiry into GALL's System, p. 33.

effect, and also *remembers* or *imagines* that relation, just as Locality perceives, remembers, or imagines the relative position of objects. Hence Judgment is the decision or inference of the Reflecting Faculties upon the feelings furnished by the Propensities and Sentiments, and upon the ideas furnished by the Knowing Faculties. This I conceive to be the strictly phrenological analysis of Judgment; but this term, in the popular sense, has a more extensive signification. It is common to observe of an individual, that he possesses an acute or even profound intellect, but that he is destitute of judgment. This apparent paradox may be explained in two ways: *First*, By "an acute or profound intellect," is frequently meant a great but limited talent, which we would refer to some of the Knowing Faculties. Thus, a person may be distinguished for ability in mathematics or painting, and not be eminent for reflection or judgment, in the stricter sense. There is, however, a second explanation, which is preferable. To judge of the proper line of conduct to be followed in the affairs of life, it is necessary to *feel* correctly, as well as to reason deeply, or rather, it is *more* necessary to feel rightly than to reflect. Hence, if an individual possess very powerful reflecting organs, such as Lord Bacon's, and be deficient in Conscientiousness, as his Lordship seems to have been, he is like a fine ship wanting a helm, liable to be carried from her course by every wind and current. The reflecting organs give the power of thinking, but Conscientiousness, and the other sentiments, are necessary to furnish correct feeling, by which practical conduct may be directed. Indeed, Lord Bacon is a striking example how poor an endowment intellect, even the most transcendant, is, when not accompanied by amiable and upright sentiments. That mind which took in at one comprehensive grasp the whole circle of sciences, and pointed out, with a surprizing sagacity, the modes in which they might best be cultivated, that mind, in short, which anticipated the progress of the human understanding by a century and a half, possessed so little *judgment*, so little of sound and practical sense, as to be-

come the accuser, and even defamer of Essex, his early patron and friend; to pollute the seat of justice by corruption and bribery; and to stoop to the basest flattery of a weak king, all for the gratification of a contemptible ambition. Never was delusion more complete. He fell into an abyss of degradation from which he never recovered; and to this day the bright picture of his intellectual greatness, forms a lamentable contrast to the dreary desolation of his moral reputation. There was here the most evident defect of *judgment*; and with such reflecting powers as he possessed, the seat of his errors could lie only in the sentiments which prevented him from *feeling* right, and of course withheld from his understanding the data from which sound conclusions respecting conduct could be drawn.

In common life, the effect of the feelings in directing judgment, and in constituting the ultimate data on which it proceeds, is by far too little attended to; and we frequently see persons carrying on angry disputations, with a view to convince each other's understandings; when, in fact, the cause of their difference lies in a feeling, so that if *it* could be made the same in both, no disagreement would exist. It is common in such cases to say, "my sentiments are entirely different from yours;" a form of expression which is strictly philosophical, and harmonizes with the explanation now given; but the parties do not perceive that a "sentiment," in the strict sense, or in popular language a "feeling," cannot be communicated by *argument;* and hence maintain the controversy, by an address to the understanding alone, and generally with no satisfactory result. If, on the other hand, two persons meet, whose propensities and sentiments harmonize, then their "sentiments," in the popular sense, generally coincide, although, in the depth of their intellectual powers, there may be considerable disparity. In estimating, therefore, the degree of sound and practical judgment, for the affairs of life, the good sense, or mother wit, of any individual, we ought not to confine our attention to the forehead alone, under the notion that it is exclusively the seat of Judgment. A person

was pointed out to me as possessing the forehead of an idiot, who yet had conducted himself with remarkable prudence and success in trade, and, by his estimable qualities, had gained the esteem of the little circle in which he moved. On examination, I found a forehead greatly retreating indeed; but with a full development of the knowing organs; and, on turning to the region of the propensities and sentiments, the former were found in fair proportion, with an excellent development of the latter. Conscientiousness, Veneration, Benevolence, Love of Approbation, Adhesiveness, and Cautiousness, were all large; and the sources of his prudence, good sense, and amiable qualities, were at once apparent. To shew that Phrenology and the head were not at variance, I enquired into his powers of logical or profound argumentation; when his friend said, that, although he was fond of reading, his acquaintances were surprised at such a sensible man never learning the meaning of a great many plain words; and on asking what these were, he stated several abstract terms and expressions, all referable for their signification to Causality and Comparison; and mentioned that the individual in question not only could not reason consecutively, but in ordinary discourse misapplied, and seemed not to understand, the terms now adverted to. This was exactly what a phrenologist would have predicted.

In describing, therefore, the effect of the Reflecting Faculties in ordinary life, I would say that the propensities and sentiments shed the light through which the occurrences of the world reach the mind, and that reflection perceives the objects as they appear under this illumination; taking in an extent of view, greater or less, in proportion to the size of the intellectual organs. For example, if Cautiousness be excessively large, and Hope small, this combination will shed dismal and desponding rays over the impressions which reach the mind; and the understanding cannot alter the light, so as to render cheery and brilliant, scenes which the feelings tinge with melancholy and gloom. If, on the other hand, Hope be very large, and Cautiousness very small, then the most delusive glare

of felicity will invest all impressions entering the mind, and the understanding will see objects under this impression. If, on the other hand, both Cautiousness and Hope are large, each sheds its own light on the objects of contemplation; and the understanding now having two views, possesses elements for judging, and is able, by comparing the one with the other, to come to a sound determination between them. Hence, to constitute a *solid practical judgment*, a favourable combination of all the organs of the propensities and sentiments is indispensable, so that there may be no false, no exaggerated, and also no defective, lights thrown upon the mind; and then the *scope* or *extent* of the understanding will bear a proportion to the development of the forehead.

If these principles be correct, they enable us to explain why, among lawyers, a bad pleader sometimes makes a good judge, and *vice versa*. To a pleader, intellect and propensity are more essentially necessary than Conscientiousness; to a judge, on the other hand, great moral organs are indispensable; for without an ample development of them, his intellect is liable to be led astray by subtleties and false views, and in his decisions the grand element of justice will be wanting. I have noticed, that, where Conscientiousness is large in a lawyer, and he is pleading a bad cause, he betrays instinctively, by his natural manner, his impression that he is in the wrong. Another individual, in whom this organ is deficient, views all cases chiefly as questions of opinion, and contends for victory with that ardent spirit which the former can display, only when advocating the cause of truth.

The same principles enable us to judge of the propriety of a very important regulation in one of the institutions of the country,—I mean the requisite of *unanimity* in juries in civil causes. If two individuals were constituted judges on a claim of damages for defamation, and if one of them possessed from nature an immense Love of Approbation, judging, from his own feelings, he would rather suffer death than live defamed; if the other was extremely deficient by natural constitution in this sentiment, he could pass his days unmoved

by the censures or applauses of the world, and the two could not, by any efforts of their understandings, come to view the injury sustained by the plaintiff in the same light, nor agree about the amount of damages which would constitute a just compensation for the slander. The one must either surrender his conscience to the other, or allow a third party to decide between them ; for real unanimity is excluded by the very constitution of their minds. No exercise of the *understanding* will produce it. It is difficult to admire the wisdom of that legislature which is so ignorant of the human mind as to imagine that men can by argument, if they will, arrive at one conclusion in such cases ; or which, if it knows that they cannot in nature agree, nevertheless conceives it profound and beneficial to set up a rule in direct opposition to the constitution of the mind, and to produce an *appearance* of unanimity, when the *substance* is unattainable. Many voluminous arguments have been brought forward on the opposite sides of this question ; but it appears to me, that the mode of judging of it afforded by Phrenology carries us to the ultimate principles at once. If it be naturally in the power of men, by honest efforts, to see questions of conduct, such as occur before Jury Courts, in the same light, then unanimity ought to be required ; but if this perfect harmony of sentiment is excluded by nature, it is mere littleness and imbecility, to pretend to produce it by an act of Parliament ; and accordingly, nature prevails here as in every other case, and all sensible jurors arrange, before commencing their deliberations, that the minority shall yield to the majority ; so that the only effects of the law are to put it in the power of some very obstinate or very wicked individual either to concuss his fellow jurors into his opinion—which, on the ordinary chances, from his standing alone, will be placed at an extreme point in the scale of absurdity,—or else to defeat the object of the parties, by depriving them altogether of a verdict.

It has been said, that the requisite of unanimity produces attention in the jury to the case, and discussion of the subject

among themselves. This I have no doubt may be true, but even with every degree of attention and discussion, unanimity in general is morally impossible. Obvious questions of evidence or right, in which all men may agree, are not those that come most frequently before courts of justice; but difficult cases, in which the most conscientious and enlightened men may differ in opinion. Out of twelve or fifteen persons there is almost a certainty that two or more will stand in the antipodes of moral and intellectual constitution to each other. Under the present system such individuals must yield unconvinced. It appears to me, that, by leaving out the extremes, and requiring a majority of three-fourths, or some such proportion, the advantages of discussion would be gained, and the evil of the great body of a jury being concussed into a verdict, by one obstinate individual, might be avoided. A proposition to which nine men out of twelve would *voluntarily* assent, would be nearer truth than one modified by mutual concessions to conciliate *(but not to satisfy)* the whole.

Having now discussed the metaphysical faculties of Perception, Conception, Imagination, Memory and Judgment, and shewn them to be merely modes of activity of the phrenological faculties, with which the metaphysicians were unacquainted, I proceed to notice several other mental operations and affections, which make a figure in the common systems of mental philosophy, and to refer them also to their principles in this science.

CONSCIOUSNESS means the knowledge which the mind has of its own operations. It gives us no intimation of the existence of the organs, and reveals to us only the operations of our own minds, leaving us entirely in the dark regarding the mental affections of others, where they differ from our own. Hence, by reflecting on consciousness, which the metaphysicians chiefly did, as their means of studying the mind, we can discover nothing concerning the organs by which the faculties act, and run great danger of forming erroneous views of human nature, by supposing mankind in general constituted exactly like ourselves.

It is extremely difficult to determine whether the consciousness of personal Identity is connected with a particular organ, or the result of the general action of the whole. The reader is referred to what is said on this subject on p. 52 and 282; and I add here the following abstract of a case, communicated by Dr DEWAR to the Royal Society, as a recorded fact, without, however, pretending to be able to give a satisfactory theory of it.

In a "Report on a communication from Dr DYCE of Aberdeen, on Uterine Irritation, and its effects on the female constitution *," Dr DEWAR states, that "It is a case of mental disease, attended with some advantageous manifestations of the intellectual powers; and these manifestations disappearing in the same individual in the healthy state. It is an instance of a phenomenon which is sometimes called *double consciousness*, but is more properly a *divided consciousness*, or *double personality*, exhibiting in some measure two separate and independent trains of thought, and two independent mental capabilities, in the same individual; each train of thought, and each capability, being wholly dissevered from the other, and the two states in which they respectively predominate subject to frequent interchanges and alternations."

The patient was a girl of sixteen, the affection appeared immediately before puberty, and disappeared when that state was fully established. It lasted from 2d March to 11th June 1815, under the eye of Dr DYCE. "The first symptom was an uncommon propensity to fall asleep in the evenings. This was followed by the habit of *talking* in her sleep on these occasions. One evening she fell asleep in this manner, imagined herself an Episcopal clergyman, went through the ceremony of baptizing three children, and gave an appropriate *extempore* prayer. Her mistress shook her by the shoulders, on which she awoke, and appeared unconscious of every thing, except that she had fallen asleep, of which she shewed herself ashamed. She sometimes dressed herself and the children while in this state, or, as Mrs L. called it, "dead asleep;"

* Read to the Royal Society in February 1822.

answered questions put to her, in such a manner as to shew that she understood the question ; but the answers were often, though not always, incongruous." One day, in this state, she " set the breakfast with perfect correctness, with her eyes shut. She afterwards awoke with the child on her knee, and wondered how she got on her clothes." Sometimes the cold air wakened her, at other times she was seized with the affection while walking out with the children. " She sang a hymn delightfully in this state, and from a comparison which Dr Dyce had an opportunity of making, it appeared incomparably better done than she could accomplish when well.

" In the mean time, a still more singular and interesting symptom began to make its appearance. *The circumstances which occurred during the paroxysm were completely forgotten by her when the paroxysm was over, but were perfectly remembered during subsequent paroxysms ;*" and it is on this account that I have introduced the case under the head of Consciousness. " Her mistress said, that when in this stupor on subsequent occasions, she told her what was said to her on the evening on which she baptized the children." Other instances of this kind are given. A depraved fellow-servant, understanding that she wholly forgot every transaction that occurred during the fit, clandestinely introduced a young man into the house, who treated her with the utmost rudeness, while her fellow-servant stopped her mouth with the bedclothes, and otherwise overpowered a vigorous resistance which was made by her even during the influence of her complaint. Next day she had not the slightest recollection even of that transaction, nor did any person interested in her welfare know of it for several days, till she was in one of her paroxysms, when she related the whole facts to her mother. Next Sunday she was taken to the Church by her mistress, while the paroxysm was on her. She shed tears during the sermon, particularly during the account given of the execution of three young men at Edinburgh, who had described in their dying declarations the dangerous steps with which their career of vice and infamy

took its commencement. When she returned home she recovered in a quarter of an hour, was quite amazed at the questions put to her about the Church sermon, and denied that she had been in any such place; but next night, on being taken ill, she mentioned that she had been at Church, repeated the words of the text, and, in Dr Dyce's hearing, gave an accurate account of the tragical narrative of the three young men, by which her feelings had been so powerfully affected. On this occasion, though in Mrs L——'s house, she asserted that she was in her mother's."

Drs Dyce and Dewar do not give any theory to account for these very extraordinary phenomena. They mention that the girl complained of confusion and oppression in her head at the coming on of the fits; and that after the flowing of the menses had been fairly established, the whole symptoms disappeared. We are unable phrenologically to throw more light on the case than these gentlemen have done; and the only conclusion which seems to arise from it is, that, before memory can exist, the organs require to be affected in the same manner, or to be in the same state, as they were in when the impression was first received. This inference is supported by several other facts. Dr Abel informed me of an Irish porter to a warehouse, who forgot, when sober, what he had done when drunk; but being drunk, again recollected the transactions of his former state of intoxication. On one occasion, being drunk, he had lost a parcel of some value, and in his sober moments could give no account of it. Next time he was intoxicated he recollected that he had left the parcel at a certain house, and there being no address on it, it had remained there safely, and was got on his calling for it. The same phenomena present themselves in the state of somnambulism, produced by animal magnetism. In the works on this subject, it is mentioned, and the fact has been confirmed to me by a very intelligent friend who has observed it in Paris, that a person who is magnetized so as to produce the kind of magnetic sleep termed Somnambulism, acquires, like the girl in Aberdeen, a new consciousness and memory; he does not re-

collect the transactions of his ordinary state of existence, but acquires the power of speaking and of thinking in his induced state of abstraction from the external world. When this state has subsided, all that passed in it is obliterated from the memory, while the recollection of ordinary events is restored. If the magnetic state is again recalled, memory of the circumstances which formerly happened in that state is restored; and thus the individuals may be said to live in a state of double existence. In this country, the doctrines of animal magnetism are treated with the same contempt which has been poured upon Phrenology. I am wholly unacquainted with their merits; but the circumstance now stated, of alternating memory and forgetfulness, is mentioned in the books on the subject which I have consulted, and has been certified to me as true, by a gentleman whose understanding is too acute to allow me to believe that he was deceived, and his honour too high to admit of the possibility of his deceiving others. These facts cannot be accounted for in a satisfactory way; but by communicating a knowledge of their existence, attention will be drawn to them, and future observations and reflection may ultimately throw light upon the subject.

ATTENTION is not a faculty of the mind, but consists merely in the application of the Knowing or Reflecting Faculties to their objects. Thus the faculty of Tune, excited by melody, *attends* to the notes; the faculty of Causality, addressed by a demonstration, *attends* to the steps of the argument; and the other faculties of the intellect, in like manner, attend to their various objects. Concentrativeness combines the faculties, and directs them to an object, and Firmness maintains them in a state of application, and these greatly aid Attention; but still attention, in itself, is a mere act of the different intellectual faculties, and not the attribute of any particular power, established exclusively for its production.

ASSOCIATION. The metaphysicians have endeavoured, by reflecting on their own consciousness, to discover uni-

versal laws, by which the succession of ideas in mankind in general will be regulated. They imagine our thoughts to follow each other in an established order of succession, and have attempted to find out the circumstances which determine the order, and the causes, in virtue of which one idea introduces another into the mind. Such an attempt appears to me to be futile, and incapable of success. Suppose that we wished to ascertain the laws by which the succession of notes emitted by an Æolian harp is regulated, we should first endeavour to discover the causes which produced them. Similar causes, acting in similar circumstances, produce similar effects; but vary one circumstance out of a thousand, and we cannot calculate on the result. Now, the causes which determine the succession of notes from an Æolian harp are, the structure of the harp, the impetus of the air, and the order in which it excites the various strings. Render all these circumstances the same in the case of every harp, and the same succession of notes may be assuredly predicted. But if the air, that emblem of inconstancy, does not breathe twice with the same force on the same spot in a year, or does not excite the same strings twice in the same order in a lifetime; and if no two Æolian harps could be made in every particular of string, form, and substance, alike,—who would attempt, by observing the notes arising from one harp, to lay down the laws by which the succession of notes from Æolian harps in general might be determined, whatever was their size, structure, and number of strings, and whatever the circumstances in which they were placed? This illustration is completely applicable to the case of the human faculties. Ideas are affections of *these*, just as notes are affections of the strings of the harp. Ideas arise from impressions on the various faculties of the mind; and there is as little regularity in the order in which they are received, as in the breathing of the air on the strings of the harp. And, lastly, if harps *may* vary in structure, human beings do positively differ in the relative strength of their faculties, so that one possesses several strong, which in another are weak, and *vice versa;* or, in one, all the powers are ac-

tive, and in another are sluggish. Hence the same impression must produce very different effects, or introduce very different ideas into minds so dissimilarly constituted; and how, amid such a countless variety of causes, can similarity of effects be expected? This doctrine, in itself abstruse, will be rendered simple and intelligible, by a few illustrations.

Ideas must be possessed before they can be associated. Let us attend, therefore, to the manner in which they are first excited in the minds of different individuals. If, for example, we place a number of persons on a hill-top, say Arthur Seat, overlooking a champaign country, and the sea, and bid each declare his thoughts;—we shall find that one, with Ideality predominant, will think of the magnificence of nature, the boundless extent of the ocean, the vastness of the mountains; and on recalling the scene, these ideas and emotions will be associated with it in his mind: another, with great Causality and Constructiveness, and little Ideality, will admire the skill which he sees displayed in laying out the fields, and in constructing the houses and the ships: one, with Benevolence large, will think of the happiness enjoyed by the people who inhabit the plain: another, with Acquisitiveness active, will think how the various branches of industry will pay; and one, with a strong Veneration, will probably take occasion to admire the greatness and goodness of God. Now, the metaphysician expects to find out laws, by which, on Arthur Seat being afterwards mentioned, in the presence of these individuals, we may be able to tell the train of thoughts which it will introduce into their several minds; and he hopes to arrive at this result, by studying the train which arises in his own mind, on the hill being referred to as an object of thought. Such an expectation must necessarily be futile. Each of the individuals supposed would, on the mention of the hill, experience a train of ideas corresponding to the first impressions which he received on the top, and nothing can be more dissimilar than these. As well, therefore, to use the words of an ingenious phrenologist, may we expect, by studying the forms and hues of the clouds, which flit along the sky to-day, to be able to discover laws, by which their succession will be regulated to-

morrow ; as, by reflecting on the ideas which pass in one mind, to discover links of association, by which ideas in the minds of mankind in general will be uniformly connected, and introduced in a determinate succession.

Although, however, it is in vain to expect to find any law or principle regulating the association of one idea with another, the mutual influence of organs by association is determinate. There are also natural associations betwixt certain external objects and the internal faculties ; and, lastly, artificial associations may be formed betwixt objects and the feelings of the mind ; and the laws which regulate these constitute certain knowledge, and are interesting to be known. Let us, therefore, inquire briefly into these laws of association.

In the *first* place, we are able to perform anew, when we wish to do so, any voluntary motion which we have performed before. This shews that the nerves of motion are so associated or connected with the organs of the mind, as to be completely at the command of the will.

In the *second* place, by conceiving an object in distress we can raise the emotion of pity in the mind ; by conceiving a splendid scene in nature, we can excite the emotion of sublimity and beauty produced by Ideality ; by reading a terrific story, we are able to experience the chilling emotions of fear creeping along the nerves. These facts point out a close connection betwixt the organs of intellect and the organs of the different propensities and sentiments. Indeed, in the dissection of the brain, the closest relation betwixt its different parts is perceived, combined with arrangements for separate functions ; but this is connection rather than association.

Farther, Mr Scott, in his " Observations on Phrenology," has pointed out, in a very ingenious manner, the beautiful association, in point of arrangement, of the organs, for the purposes of mutual assistance in their action. " When I began," says he, " to consider the schedule or map presented to us by Drs Gall and Spurzheim, I could at first see none of this beauty in it. In looking over their list of powers, I could observe no order or connexion between them. The whole presented to me a rude appearance, quite different, as I then

thought, from what is commonly found in nature. After a more attentive consideration, however, light began to dawn upon me, and, beginning to consider the faculties in a certain way, and to group them after a certain order, the whole gradually formed themselves before me into a system of surprising symmetry; and, like the disjointed parts of an anamorphosis, when seen from the proper point of view, collecting themselves into one elegant design, delighted me with the appearance of that very order and beauty which I would beforehand have expected to find in them. In a scheme such as this, where we find powers which are analogous, which resemble one another in their nature and uses, or which act upon and co-operate with one another, or mutually aid and assist, or control and balance, each other, we should naturally expect the organs of these powers to be situated near to one another, and in such a way as either to adjoin, or at least to admit of an easy communication. Accordingly we find this to be the case." Immediately above Amativeness, for example, we see in the bust Philoprogenitiveness, giving the love of offspring, and Adhesiveness, producing the propensity to attachment, the three together constituting the group of the domestic feelings. Next to them we find Combativeness, as if there were no dearer objects than these for which the various powers could be exerted. Adjoining to Combativeness is Destructiveness; the former giving courage to meet the enemy, the latter putting peril in the onset, and threatening him with destruction.

Amid the difficulties of life, it is necessary to use not only caution but also so much of secrecy regarding our own purposes, as not to carry "our hearts on our sleeves for daws to peck at," and we find Secretiveness surmounted by and in juxtaposition with Cautiousness.

Turning to the region of the Sentiments, we find Veneration, which produces the tendency to religion, surrounded by Benevolence, Hope, Perseverance, and Justice; or the fountains of the whole charities and duties of life associated in a group, and beautifully arranged for reciprocal aid and combined action.

We find Ideality approaching these, but a little below them, yet so near to and above Constructiveness as to elevate its designs. Ideality also adjoins to Wit and Tune, as if to give soul and fancy to poetry.

In like manner, we find the organs which simply perceive, or the Knowing Organs, arranged together, along the superciliary ridge, and those of Reflection occupying the summit of the forehead, like the powers which govern and direct the whole.

Mr Scott, after exhibiting these views, observes, that such an arrangement is more beautiful, systematic, and appropriate, than human ingenuity could have devised; and, taken in connection with the fact, that the organs were discovered at different times, and in different situations, and that Order and Beauty appeared only after the ultimate filling up of the greater part of the brain had taken place, it affords a strong argument *à priori*, that the organs were *discovered*, not *invented*, and that the system is the work of *nature*, and not of Drs Gall and Spurzheim.

In treating of the organ of Language, I have explained the association of ideas with signs. I may here add, that the doctrines of Mnemonics are founded on this power of the mind to associate ideas with arbitrary signs. In devising means for aiding the memory, it ought constantly to be kept in view, that every individual will associate, with greatest ease, Ideas with such external objects as he has the greatest natural facility in perceiving. For example, sometimes space is used as the medium of recalling the ideas wished to be remembered. The room is divided, in imagination, into compartments, and the first topic of the discourse is placed in the first compartment, the second into the second, and so on; so that, by going over the spaces, the different heads of the discourse with which they were associated will be recalled. It is obvious, however, that it is only if Locality be large that such a device can be serviceable; because if this faculty be weak, it will be as difficult to imagine and recollect the compartments, as the dis-

course itself. If, in like manner, numbers are resorted to as the connecting medium, so that on hearing one idea, which we wish to recollect, we shall associate it with the number one, and on hearing another which we wish to recollect, we shall associate it with the number two, it is obvious, that, unless the faculty of number be active, this will be a more difficult process than that of simple recollection. Hence, different modes of recollection should be used for different individuals. He who has Number most powerful, will associate words most easily with numbers; he who has Form most powerful, will associate words most easily with figures; he who has Locality most powerful, will associate words most easily with space; and he who has Tune most powerful, will associate words most easily with musical notes. And hence, also, the influence of associations on our judgment is easily accounted for. He in whom Veneration is powerful, and to whom the image of a saint has been from infancy presented as an object to be venerated, experiences an instantaneous and involuntary emotion of Veneration, every time the image is presented to him, or a conception of it formed; because it is now the sign which excites in him that emotion, and which excludes the Reflecting Faculties from performing their functions. Until we can break this association, and prevent the conception of the image from operating as a sign to excite the faculty of Veneration into activity, we shall never succeed in bringing his understanding to examine the real attributes of the object itself, and to perceive its want of every quality that ought justly to be venerated. In the same way, when a person is in love, the perception or conception of the object beloved stirs up the faculties which feel into such vivid emotion; and that emotion is so delightful, and the Reflecting Faculties have so little Consciousness, that the real source of the fascination is in the faculties which feel, that it is impossible to make the lover see the object with the eyes of a disinterested spectator. If we could once break the association betwixt the object and the faculties which feel, the Reflecting Faculties would then perform their functions faithfully, and the object would be seen in its true colours. But, while we are unable to break this

link, and to prevent this fascination, we may reason *ad sempiternum*, and our conclusions will never appear to be sound, because the premises, that is, the appearance of the object, will never be the same to the party most interested in the argument, and to us.

Thus, the associations which mislead the judgment, and perpetuate prejudices, are those of words or things with *feelings* or *sentiments*, and not associations of conceptions with conceptions, or merely of ideas with ideas. The whole classes of ideas formed by the Knowing and Reflecting Faculties may be associated *ad infinitum*, if these ideas do not become linked with the propensities and sentiments, and no moral prejudices will arise.

In studying the laws of association, therefore, we must go beyond the ideas themselves, and consider the faculties which form them. If the faculties be kept in view, the whole phenomena of association will appear lucid and intelligible; and we shall find nature confirming our principles, because they will be founded on nature. We shall find the individual who has the *Reflecting* Faculties most powerful, associating ideas according to the relation of necessary consequence; we shall find him who has the *Knowing* Faculties most powerful, associating ideas according to the relations of time, place, and circumstances; and, in every case, we shall find each individual associating those ideas with most facility, and recollecting those ideas most perfectly, which minister to the gratification of his most powerful propensities or sentiments. If we seek only for relations among individual ideas themselves, or for general laws, according to which ideas are associated in all individuals, our researches will never be crowned with success. No stronger proof of this fact could be found, than the circumstance, that, although different individuals will use the same process of reasoning to produce the same conviction, yet no two will state their arguments in the same words, or make use of the same illustrations. The general identity of the reasoning process depends on the identity of the constitution of the faculties which reason; but difference in words and illustra-

tion arises from the particular combination of organs belonging to the individual, and from the circumstances in which he has been placed, and which have afforded his faculties the particular materials which he uses.

PASSION is the highest degree of activity of every faculty; and the passions are as different as the faculties: Thus, a passion for glory is the result of a high activity of the Love of Approbation; a passion for money, of Acquisitiveness; a passion for music, of the faculty of Tune; a passion for metaphysics, of Causality. Hence there can be no such thing as *factitious* passions, although such are spoken of in various books. Man cannot alter his nature; and every object that he can desire must be desired in consequence of its tending to gratify some natural faculty.

"Locke, and many modern writers," says Dr Spurzheim, "maintain that children are destitute of passions; and it is true that there is, in adults, one passion which is not observed in children, the passion of love. There have been, however, some individuals, who, at three or four years of age, have felt passionately this propensity; and, in general, the greater number of inclinations manifest themselves with energetic activity in children. The opponents of Phrenology, for the most part, confound the objects upon which the particular faculties act at different ages, with the inclinations themselves. Children, it is true, have no inclination to defraud the orphan of his inheritance, or to conquer kingdoms; but they sometimes deceive one another for a bird's nest; they fight for playthings, and they are proud to occupy the first place at school;" and the same faculties which give the desires for these objects, when differently directed in after-life, produce the various passions which characterise our maturer years. The boy who is extremely mortified at losing a place, and burns with a desire to stand at the top of his class, will not be destitute of ambition when a man.

PLEASURE and PAIN are affections of every faculty. Every faculty, when indulged in its natural action, feels plea-

sure; "when disagreeably affected feels pain: consequently, the kinds of pain and pleasure are as numerous as the faculties. Hence one individual delights in generously pardoning offences, and another in taking revenge; one is happy in the possession of riches, and another glories in disdaining the vanity of mankind." Thus "pain and pleasure are the result, and not the cause, of the particular faculties *."

JOY and GRIEF. Mr HUME enters into a very acute and refined analysis, to shew that grief and joy are merely *mixtures* of *hope and fear*. After treating of several passions, he continues thus: "None of these passions seem to contain any thing curious or remarkable, except *hope* and *fear*, which, being derived from the probability of any good or evil, are mixed passions, that merit our attention."

"Probability," says he, "arises from an opposition of contrary chances or causes, by which the mind is not allowed to fix on either side; but is incessantly tossed from one to another, and is determined one moment to consider an object as existent, and another moment as the contrary."

"Suppose, then, that the object concerning which we are doubtful produces either desire or aversion, it is evident that, according as the mind turns itself to one side or the other, it must feel a momentary impression of joy or sorrow."

"The passions of fear and hope may arise, when the chances are equal on both sides, and no superiority can be discovered in one above the other. Nay, in this situation, the passions are rather the strongest, as the mind has then the least foundation to rest upon, and is tossed with the greatest uncertainty. Throw in a superior degree of probability to the side of grief, you immediately see that passion diffuse itself over the composition, and tincture it with fear. Encrease the probability, and by that means the grief; the fear prevails still more, till at last it runs insensibly, as the joy continually diminishes, into pure grief. After you have brought it to this situation,

* Dr SPURZHEIM's New Physiognomical System.

diminish the grief by a contrary operation to that which increased it, to-wit, by diminishing the probability on the melancholy side, and you will see the passion clear every moment, till it changes insensibly into hope; which again runs, by slow degrees, into joy, as you increase that part of the composition by the increase of the probability." Mr Hume concludes by this question: "Are not these as plain proofs that the passions of Fear and Hope are mixtures of Grief and Joy, as in optics it is a proof that a coloured ray of the sun, passing through a prism, is a composition of two others, when, as you diminish or increase the quantity of either, you find it prevail proportionally, more or less, in the composition? *"

These views are exceedingly ingenious, and, to a certain extent, sound; but Phrenology presents us with still more distinct and accurate elucidations of the nature of grief and joy. Each propensity desires to attain its object, and the attainment affords to the mind a feeling of gratification. Acquisitiveness, for example, desires wealth; Love of Approbation longs for praise and distinction, and Self-Esteem pants for authority. The *obtaining of* wealth gratifies Acquisitiveness; this is attended with pleasing emotions, and these emotions constitute Joy. The *losing of wealth* robs Acquisitiveness of its object; this, again, is accompanied with painful sensations, and these make up grief. The same remarks may be applied to Love of Approbation, Self-Esteem, or to Philoprogenitiveness. For example, a lovely child is born, and the delight experienced by the parents, will be in proportion to the ardour of their desire for offspring; or, in other words, their *joy* will be great in proportion to the gratification of their Philoprogenitiveness. If they lose a darling boy, their *grief* will be in proportion to the intensity of this feeling, now lacerated by the removal of its object. In all these instances we find *joy* and *grief* existing without involving either *hope* or *fear*.

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* Hume's Dissertation on the Passions, sect. 1.

Let us now advert to Mr HUME's analysis. Cautiousness and Hope are both primitive sentiments, the former producing fear, and the latter an emotion *sui generis*, attended with delight. Both have relation to *future* objects, and in this respect differ from the other faculties, the gratification of which relates to *present* time; but this circumstance does not change the laws of their operation. If the prospect of future evil be presented to the mind, this excites Cautiousness, and fear is produced; this emotion is painful, but fear is not grief. It is to be observed, however, that there must be the *fear* of *something*; and as *evil* is a disagreeable affection of some primitive faculty, of Acquisitiveness or Philoprogenitiveness for example, Cautiousness is never affected *alone*, but always in conjunction with some other power. Thus, if a son is sick, Cautiousness fears that he will die, and Philoprogenitiveness is painfully affected by the prospect of that event, and this painful emotion is grief. Here we have fear and grief conjoined; but they arise from different sources, and although the *fear* cannot exist without the *grief*, in some degree or other, yet the *grief* might exist without the *fear*; and would do so, if the child were carried in a corpse without a moment's warning. In the same way, if a person hopes, he must *hope for something*. If for gaining L. 1000, the prospect gratifies Acquisitiveness, and this is joy. Here the active Hope and gratified Acquisitiveness mingle in producing Joy, but still their sources are separate; and if the L. 1000 were realised, Joy would exist without the Hope, although Hope can scarcely be active without Joy. The principles here unfolded will be found to elucidate every instance of the operation of Hope and Fear, and Joy and Grief, which can be supposed, and this is a strong proof that we have found the truth. They explain beautifully, for instance, how, with many individuals, the *anticipation* of good is more delightful than the enjoyment of it. If *Acquisitiveness* and *Hope* be both strong, the *prospect* of gain excites and gratifies *both faculties at once;* whereas, the *actual attainment* pleases *only Acquisitiveness*, and leaves Hope out of the question. But Hope being one of the higher

sentiments, and Acquisitiveness only a lower propensity, the delights attending the activity of the former are greatly more elevated and excellent than those accompanying the latter; and it is easy to conceive, therefore, that the *exercise of both* must be *more delightful* than that of either separately, and that when Hope is dropped from the combination, the better half of the pleasure is gone.

The converse of this holds equally good. The prospect of distant evil is more painful than the experience of it when actually present. For example, suppose the evil dreaded to be the loss of a child;—while the calamity is contemplated at a distance, Cautiousness adds its melancholy and heartsinking fears to the pains of a wounded Philoprogenitiveness; but when the event happens, the influence of Cautiousness is withdrawn, Philoprogenitiveness alone suffers, and the actual distress is less grievous than the anticipation of it.

Great wisdom and benevolence on the part of the CREATOR is displayed in this constitution of our minds; for we are thereby prompted, with double ardour, to avoid evil and pursue good, while yet at a distance, and subject to controul from our efforts.

SYMPATHY * may be defined to be a fellow-feeling in one person, with emotions experienced by another. By attending to the laws which regulate the activity of the mental faculties, we shall discover the true nature of this affection, and the circumstances most favourable for its occurrence.

Every internal faculty, like each of the external senses, is most powerfully and most agreeably roused to activity by the direct presentment of its own objects; Cautiousness, for instance, by the aspect of danger; Benevolence, by that of suffering; and so on, as already explained. Hence, if two individuals of a nearly similar constitution of mind are exposed to the operation of the same external causes, the same faculties

* I am indebted to the kindness of Dr A. COMBE for the following observations on Sympathy.

being thereby called into activity in both, will give rise to similar emotions; and they may then be said to *sympathise* with each other. This is one kind of sympathy, but it is not the state of mind to which that term is most correctly applied.

The next source of stimulus to the faculties, is that afforded by Natural Language. When any faculty is predominantly active, it gives a peculiar expression to the features, and certain determinate attitudes to the body, the import of which is instinctively understood by all who possess the same faculty even in a moderate degree. Thus, Self-Esteem being predominantly active, communicates to the body a cold, formal, erect, and haughty air. This air is recognised instinctively by those who see it as indicating excessive pride in the individual who exhibits it; and it is called the natural language of Self-Esteem *. Now, by a law of our constitution, the natural language of any active faculty invariably excites the same faculty to activity, and, consequently, gives rise to the same emotions in the minds of those who witness it. The forbidding strut of great Self-Esteem, for instance, in a person whom we never saw before, addresses itself directly to our Self-Esteem; we instinctively *draw up*, and feel moved to support our own consequence by a coldness proportioned to his. In like manner, when we meet for the first time with a person whose countenance and gestures express kindness, candour, and open-hearted friendship, the natural language of active Benevolence, Conscientiousness, and Adhesiveness, the same emotions are excited in ourselves, and we instinctively return his advances with a kindness corresponding to his own. Or, let us imagine that we hurry to meet a friend, whom we expect to find all happiness and gaiety, and that, instead of this,

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* Drs Gall and Spurzheim have investigated the laws which determine the natural language of each faculty, and their exposition of them is highly interesting and instructive. The leading principle is, that the motions are always in the direction of the seat of the organs; Self-Esteem, for instance, carries the head and body upward and backward; Cautiousness, backward and to the side; Veneration, upward and forward; and so on.

seriousness, anxiety, and grief, are depicted on his countenance, and indicated by his gestures, these being the natural language of Cautiousness and other faculties painfully affected, will call up a corresponding affection of the same faculties in our minds, and, without knowing what has distressed him, our features and attitudes will instantly assume an expression consonant with his own. It is to this involuntary and almost unconscious communication of feelings and emotions from the mind of one individual to that of another, through the medium of natural language, that the term Sympathy is most properly applied.

An excellent illustration of this kind of sympathy is to be found in the effects of a panic, or excessively excited Cautiousness, in one individual, exciting the same feeling in all who behold it. The very sight of a panic-stricken person, when we do not know the cause which has given rise to the alarm, excites a general uneasiness about our own safety; and if a great number of persons together, and at the same instant, perceive the terrified expression, it instantly rouses the faculty of Cautiousness to its highest pitch of activity in all of them, and produces the most intense feelings of dread and alarm. Such are the causes and origin of panics in battles and in mobs; and hence the electric rapidity with which passions of every kind pervade and agitate the minds of assembled multitudes.

Another and very familiar example of this kind of sympathy may be seen in a crowded city. Let any one in passing along London Bridge, for instance, stop short, and turn up his face, with his mouth half open, as if stupified with wonder and amazement, and immediately the same expression, being the natural language of Individuality and Wonder, will be transferred to the countenances of nine-tenths of the passengers, not one of whom, of course, will be able to assign any *direct* cause for the emotion with which his mind will be filled. As the propensities and sentiments employ the intellect to minister to their gratification, if the wag happens to say that it is something vastly surprising in the heavens which attracts his gaze, the majority of the *curious* in wonders will soon, by

a stretch of intellectual conception, come to perceive *something* where nothing actually exists.

True sympathy, then, arises from the natural language of any active feeling in one individual exciting the same feeling in another, "*antecedent to any knowledge of what excited it in the person principally concerned;*" and, therefore, as the stimulus of natural language is secondary or inferior in power to that derived from the direct presentment of the objects of any faculty, it is easy to explain why the person who feels sympathetically, feels less deeply than the person with whom he sympathises. The same principle explains, also, why all men do not sympathise in the same degree, and why, in some cases, the spectator does not sympathise at all. If the objects presented are such as to afford a *direct* stimulus to a different faculty in us, from that exhibited in activity by another, it follows, that, in virtue of the stronger influence of the direct excitement, the particular faculty which it addresses will be roused into higher activity than the one which has only the less powerful stimulus of natural language, and thus a totally dissimilar emotion will be experienced. For example, let us suppose, that a man with a good endowment of Combativeness is attacked on the highway. The menacing looks and gestures (the natural language of Combativeness) displayed by the aggressor, instantly rouse the same faculty into energetic action in the defender, and force is repelled by force. But, suppose that the attack is made upon a woman or an individual, in whom Combativeness is only moderate, and in whom Cautiousness predominates, the attack then becomes a *direct* stimulus to Cautiousness, which, being excited, produces *fear*; and the direct stimulus of Cautiousness overpowering the indirect stimulus of Combativeness, submission or flight is resorted to, rather than defence.

Dr Adam Smith * supposes, that there are emotions with which we have no sympathy. "The furious behaviour of an angry man," says he, "is more likely to exasperate us against himself than against his enemies." According to the

* Theory of Moral Sentiments, p. 32.

real theory, however, of sympathy, that it excites in us the same emotion which others feel, this opinion seems to be untenable. If Combativeness in one excites, by sympathy, Combativeness in another, which I hold it to do, it follows, that, as the function of Combativeness is to attack or to repel attack, when that faculty is roused, it must, from its very constitution, exert itself against something or somebody. If we know the cause of the anger and approve of it, and direct our Combativeness against the angry man's enemies, this is clearly sympathy in every sense of the term. But if we disapprove of the cause, then he himself becomes the object of our combativeness; and in popular language it may be said, that, in this case, we do not sympathise with him; but it must be observed, 1*st*, That the activity of Combativeness in him is the cause of rousing the same faculty in us; and, *2dly*, That the reason of its being directed against himself is to be found in his having outraged, by his conduct, our moral sentiments, and presented us with an object (an unreasonably furious man) which stimulates them *directly;* and they being excited, determine the direction which Combativeness shall take. The same reasoning applies to the sympathy of Self-Esteem and of other faculties, hitherto supposed not to sympathise.

The proof that we do sympathise with anger, when properly directed, as well as with grief or pity, is to be found in the cordiality with which we approve of and indeed encourage a just degree of it. Fortunately in the case of Combativeness, as well as of all the other propensities, our sympathy, beyond certain limits, is soon arrested by the direct stimulus which the moral sentiments receive from the conduct of the angry person, and by the deep sense of their inherent supremacy which is then felt. In consequence we sympathise with or approve of the actions produced by the lower faculties of others, only when these are guided by the faculties proper to man. For example, we never sympathise with Combativeness when indulged for the mere pleasure of fighting; nor of Destructiveness, when gratified for the mere delight of being ferocious; nor of Acquisitiveness, when directed to the sole

purpose of accumulating wealth. But we sympathise with the action of all of these faculties, when directed by justice and understanding. Such, however, is the beautiful constitution of our nature, that we sympathise with the action of the sentiments proper to man, even when unmingled with any other motive; for example, we sympathise with Benevolence, from the mere glow of charity; with Veneration, from the mere inward feeling of devotion; with Justice, from the pure dictates of Conscientiousness; and actions done, apparently from the impulses of these faculties, lose their character of purity and excellence in our estimation, in exact proportion to the alloy of the inferior faculties which we perceive to be mingled with them. Kindness, in which we perceive Interest, is always less valued than when pure and unadulterated. Activity, in the service of the public, loses its merits in our eyes, in exact proportion as we perceive the motive to be the Love of Approbation, unmingled with Conscientiousness and true Benevolence. These facts prove the accuracy of the phrenological doctrine, that the higher faculties are made to govern the lower; and it proves the curious circumstance, that man is conscious of possessing feelings, necessary, no doubt, in themselves, but of the gratification of which, when undirected by the superior powers, he himself disapproves. Even the higher sentiments, however, must act conformably to the understanding to be approved of; and excess of veneration, of benevolence, or of scrupulosity, is always regarded as weakness, just as excess of any lower propensity is regarded as vice.

The doctrine of sympathy leads to valuable practical results. The natural language of any faculty is intelligible to and excites the same faculty in another, and this simple principle explains why harshness is much less powerful than mildness in commanding the services of others. Harshness is the natural language of active Self-Esteem, Combativeness, and Firmness; and in virtue of the above rule, it naturally excites the same faculties in those against whom it is directed, and an instinctive tendency to resistance or disobedience is the re-

sult. Among the uneducated classes this process is exhibited every day. A parent, in a harsh and angry tone, commands a child to do, or to abstain from doing, something; the child instinctively resists; loud threatenings and at last violence ensue. These last are *direct* stimulants to Cautiousness; and overpower the faculties excited only by the indirect stimulus of harshness, and obedience at last takes place. This is the uniform effect of imperious commands, and obedience never ensues till consequences alarming to Cautiousness are perceived, and then it is attended with a grudge. Veneration, Conscientiousness, Love of Approbation and Benevolence, on the other hand, are the faculties which lead to willing submission and obedience, and to which, therefore, we ought to address ourselves. If we stimulate them, compliance will be agreeable to the individual, and doubly beneficial to the person who commands.

This principle also explains the force of example in training to good conduct, and it affords instructive rules for the proper education of the propensities and sentiments. Where the parents and seniors act habitually under the influence of the higher sentiments, the same sentiments in the children not only receive a *direct* cultivation, but they are kept in a perpetual glow by the natural expression of their activity in the parents. Children having the organs of the sentiments early developed, can judge of what is right and wrong long before they can reason, and hence the importance of always exhibiting before them the supremacy of the sentiments alone. Much of the effect of example upon future character has been ascribed in them to Imitation; but although this has an influence, I am persuaded that it is small compared with the effect of the kind of sympathy now discussed. Many other illustrations might be given, but they are not required. The principle is obvious, and its application easy.

There is a state of mind which has been confounded with Sympathy, but which arises from the direct excitement of the faculties, by their own objects. When we see a stroke aimed and just ready to fall upon the leg or arm of another person.

we naturally shrink and draw back our own leg or arm, and when it does fall, we feel it in some measure, and are hurt by it as well as the sufferer. Dr Adam Smith proceeds to explain this by saying, that our fellow feeling here arises from our changing places in fancy with the sufferer. Thus, if our brother is upon the rack, says he, "By the imagination we place ourselves in his situation, we conceive ourselves enduring all the same torments, we enter as it were into his body, and become in some measure the same person with him, and thence form some idea of his sensations, and even feel something, which, though weaker in degree, is not altogether unlike them. His agonies thus brought home to ourselves, when we have thus adopted, and made them our own, begin at least to affect us, and we then tremble and shudder at the thought of what he feels *."

This theory, however, appears to be incorrect, for we often feel intensely for another's misery, without, even in idea, changing places with him. In beholding suffering, we feel deep commiseration with its object, simply because the faculty of Benevolence, the function of which is to manifest this emotion, is a primitive mental power, having the same relation to external misery or pain, as light has to the eye, and as such it is as instantly and irresistibly roused by presentment of a suffering object, as the eye is by the admission of light, or the ear by the percussion of sounds. In witnessing another's misery, we, in virtue of this constitution of mind, first feel the emotion of pity, and in proportion to its strength we fancy to ourselves the pain which he endures. The pity always precedes, and the effort to conceive the pain is the *effect*, and not the cause of the pity. Hence those who are remarkable for a moderate endowment of Benevolence, although having superior intellect or *conceiving* powers, never even try to fancy themselves in the situation of the sufferer, because they feel no motive impelling them to the attempt. The benevolent idiot, on the other hand, with scarcely any power of conception, feels the most poignant distress.

* Theory of Moral Sentiments, p. 30.

The same principle explains our shrinking from a blow impending over another. The feeling then experienced is a compound of Fear and Pity, Cautiousness and Benevolence. Fear sees the danger, and Pity looks to the consequent pain. Danger is the direct stimulant of Cautiousness, and Suffering that of Benevolence; and, therefore, when these objects are presented to the mind, we can no more help feeling the corresponding emotions, than we can help seeing or hearing. The direct end or function of Cautiousness is the care and preservation of *self*; therefore, when it is excited by the aspect of danger, we look exclusively to *self*, and necessarily draw in our own leg or arm as parts of *ourselves*; but this results directly from the constitution of the faculty, and not from putting ourselves in the place of another. The direct end or function of Benevolence, again, is the good and happiness of *others*, and therefore, when it is excited by the misery of another, it necessarily, from its very constitution, feels for *them*, and not for us.

HABIT. Next to Association, Habit makes the most conspicuous figure in the philosophy of Mr Stewart. He refers the incapacity of some individuals to discriminate shades of colour to habits of inattention. The powers, also, of wit, fancy, and invention in the arts and sciences, he informs us, are not the original gifts of nature, "but the result of acquired habits *." "The power of taste, and a genius for poetry, painting, music and mathematics," he states, "are gradually formed by particular *habits* of study or of business." And not only does Habit execute these magnificent functions in the system of Mr Stewart, but, in the estimation of individuals in private life, it appears to be viewed as almost omnipotent. On reading to a friend the account of the boy Gibson's early atrocities, he attributed them all to *bad habits* formed in the Charity Work-house of Glasgow; on exhibiting an individual whose mental character was directly opposite,

* Elements, vol. i. chap. v. p. 1. sect. 4.

he attributed the difference to *good habits*, formed by him under the tuition of his parents. Thus, there are no talents so transcendant, and no dispositions so excellent or so depraved, but habit is supposed by many, at once, to account for them in such a manner, as to supersede the necessity of all further investigation. What, then, *is* HABIT, and what place does it hold in the Phrenological System?

Every voluntary action is a manifestation of some one or more faculties of the mind. "Habit" is defined to be "a power in a man of doing any thing acquired by frequent doing it." Now, before it can be done at all, the faculty on which it depends must be possessed; and the stronger the faculty, the greater will be the facility with which the individual will do the thing at first, and with which he will learn to repeat it. GEORGE BIDDER, for example, the celebrated mental calculator, has acquired the habit of solving, in an incredible short time, the most extensive and intricate arithmetical questions in his mind, without the aid of notation. Before he could begin to do such a thing, he required to possess a large organ of Number; and actually possessing it, he made great and rapid improvement in the art; and at seven years of age established the *habit* which strikes us with so much surprise. Other individuals are to be found possessed of small organs of Number, who, although forced by circumstances to practise the use of figures, never succeed in acquiring a habit of performing even the simplest arithmetical questions with facility and success. This illustration may be applied to painting, poetry, music and mathematics. Before the habit of practising these branches of art and science can be acquired, the organs on which they depend must be largely possessed; and being so, the habits result spontaneously from exercising the powers. In the same way, if a boy at school acquire a habit of quarrelling and fighting, these acts are manifestations of Combativeness, Destructiveness, and probably of Self-Esteem, which renders him prone to take offence; and it is obvious that he will acquire the habit the more readily the larger these organs are, and the less controlled by others. If

these organs are small, or if the higher organs decidedly predominate over them, the boy will be naturally indisposed to acquire the habit of quarrelling, and he will assume it with great difficulty, wherever he may be placed. He may repel unjust aggressions made upon him, but he will not be the promoter of mischief, nor the leader in the broils of his companions.

Exercise, however, causes the *organs* to act with greater facility, and it is in this way that the *real* effects of habit on the mind, which are important, can be accounted for; but still the organ must possess a certain, and even a considerable, degree of natural power and activity, to render it susceptible of the exercise by which habit is formed. The practice of debate, exercised by advocates at the bar, gives them great facility in delivering an *extempore* harangue, compared with that possessed by persons whose avocations never lead them to make speeches; and this facility may be said to be acquired by the habit of speaking; but we find, that, while habit gives to one individual great fluency and copiousness of diction, it often leaves another in much poverty and embarrassment of utterance. The powers of both will be greatly superior to what they would have been without the practice of speaking; but difference, in point of eloquence, may continue to characterise them, owing to differences in their original endowment of the faculties. The one who starts at first from the highest point, will be susceptible also of the greatest improvement.

The metaphysicians, as we have seen, attribute many important mental phenomena to the effects of habit, and yet they altogether neglect the influence of organization on the mind: According to our views, it is the organ which acquires activity and superior facility in performing its functions, by being properly exercised, just as the fingers of the musician acquire rapidity and facility of motion by the practice of playing; and hence the effects of habit in giving ease are accounted for, in a manner that is at least intelligible and supported by analogy. The metaphysicians, on the other hand, must imagine that it is the immaterial principle itself which improves by exercise, and gains strength by habit,—a notion which is altogether in-

conceivable, and in opposition to the attributes of a purely spiritual Being. The doctrine of a plurality of organs also, explains why, by practising music, we do not acquire the habit of speaking or writing with facility, or why, by studying mathematics, we do not acquire the habit of reasoning deeply in moral or political science. It shews that the organ of Tune is distinct from that of Language; and the organs of Size, Order, Locality, Individuality and Comparison, on which mathematical talent depends, are distinct from the organ of Causality, by which general reasoning is performed; so that it is quite possible to exercise one organ, and leave another in inactivity. Those physiologists, however, who hold the brain to be a single organ, and every part of it to be employed in every act of the mind, require to explain how it happens, that exercising it in one way does not improve it in all; or, in short, to use an illustration applied by Dr JOHNSON to genius, they ought to inform us why the man who can walk east is unable to walk west: If the organs by means of which he walks east be *different* from those by which he walks west, no difficulty occurs; but if they be *the same*, the question certainly will require some portion of ingenuity on the part of the disciples of the old school for its satisfactory solution.

TASTE. Mr STEWART speaks of Taste as a power or faculty, and, as already mentioned, supposes it to be acquired by habit. I am not aware that any other metaphysician coincides with him in these views; but a great deal has been written upon the subject, and no satisfactory theory of it yet exists. I shall point out the manner in which it might be treated phrenologically, but the subject is too extensive to allow me to enter into all its branches in detail.

In the *first* place, then, every act of the mind must be a manifestation of some faculty or other; and every act must be characterized either by good or bad taste, or be wholly indifferent in this respect. Let us inquire into the origin of bad taste, and this will lead us to distinguish its opposite, or correct taste. Bad taste, then, appears to arise from an exces-

sive or inappropriate manifestation of any of the faculties. Lord Byron is guilty of very bad taste in some passages of *Don Juan*, in which he exhibits the passion of love in all the grossness of an animal feeling: this arises from an excessive manifestation of Amativeness, not purified and dignified by the moral sentiments and reflection. In the same work, there is a scene in a boat, in which *Don Juan* and his companions are made to devour his tutor. To a being under the sole dominion of Destructiveness, such a representation may perhaps be gratifying; but unless this propensity were very powerful, it would be impossible for any mind deliberately to invent and enjoy such a picture of human misery. No thoughtlessness, levity, freak of fancy, or other folly, could produce it, without a predominant Destructiveness. This great defect of taste, therefore, may be ascribed to an excessive manifestation of this faculty, unrelieved by Benevolence, or other higher feelings. Moore, also, in his earlier verses, was guilty of sins against taste, from excessive manifestations of the amative propensity; but this error he has greatly corrected in his later productions.

Faults in taste, however, arise not only from unbecoming manifestations of the lower propensities, but also from an inordinate expression of the sentiments and intellectual faculties. In *Peter Bell* and *Christabell*, and in the productions of the Lake School of Poetry in general, much bad taste springs from mawkish and infantine manifestations of Benevolence, Philoprogenitiveness and Adhesiveness. Even Ideality itself may be abused. It is undoubtedly the fountain of beauty, but in excess it degenerates into bombast, rant and exaggeration; or that species of composition which a cotemporary critic has appropriately designated by the epithets of "drunken sublimity." Wordsworth affords examples of errors in taste, arising from an abuse of Causality; he introduces abstruse and unintelligible metaphysical disquisitions into his poetry, and mistifies, in place of rendering it profound.

In like manner, the expression of any sentiment or propensity in an undue degree in conversation or conduct, is es-

sentially characteristic of bad taste. An excess of vanity, and the tendency to engross conversation, is one form of it which occurs in society, and arises from over active Love of Approbation and Self-Esteem. The tendency to wrangle, dispute and contradict, is another fault, which springs from an excessive manifestation of Combativeness. The disposition to flatter, and utter a profusion of agreeable things to persons whom we do not esteem, but wish to please, is also characterised by bad taste, and arises from an improper manifestation of Secretiveness and Love of Approbation.

The question naturally occurs, What is the distinction betwixt bad taste and bad morality? I would answer, that bad morality always implies bad taste, for it springs from an improper manifestation of some lower feeling to the outrage of the sentiments of Justice, Benevolence and Veneration. Bad taste, however, may occur without moral turpitude, and this arises from an undue activity of any of the faculties, without offence against justice. The effeminacies of *Peter Bell*, for example, stand low enough in the scale of taste; but as the greatest tenderness for asses does not necessarily imply any breach of justice to other beings, the taste only is bad, and not the morality. In like manner, when an unfortunate individual, under the influence of an excessive Self-Esteem and Love of Approbation, constitutes himself the bore of a party, as his offence does not amount to an attack upon such rights as we guard by the sentiment of justice, we set him down as ill bred, but not as immoral.

Chesterfield, and some dictators in manners, deliberately recommend slight offences against candour, not only as not liable to the imputation of bad taste, but as essential to good taste. Thus, Chesterfield admits a great deal of deceitful compliance into his characteristics of a gentleman; but, with great deference to his Lordship's authority, I cannot subscribe to the doctrine that bad morality and good taste are in any degree compatible in the same action. An individual may act very improperly in many parts of his conduct, and shew considerable refinement on other and distinct occasions; and this is

easily understood; for the higher sentiments may co-exist with great animal propensities, and one occasion may call forth an abuse of the latter, and another occasion excite only the former into activity, and the conduct may thus assume different aspects at different times; but the question is, Whether the *same* action can be characterised both as immoral and as possessed of the attribute of good taste? In my opinion it cannot. It is good taste to restrain the expression of our opinions or views in society, where an opposite conduct would cause only dissensions and broils; but this is good morality also. CHESTERFIELD, however, goes farther, and allows an expression of sentiments, which we do not entertain, if they be pleasing to those to whom they are addressed, as perfectly compatible with good manners; and this is a breach of candour. This practice is an insult to the person who is the object of it; and if he saw the real motives he would feel it to be such; and nothing which, when examined in all its lights, and in its true colours, is essentially rude, can possibly be correct in point of taste; so that it has only the appearance, and not the true qualities, of politeness. In short, purity in the motive is equally requisite to good taste as to sound morality; for the motive constitutes the essence of the action.

The sources of good taste may now be adverted to. The most exquisite mental manifestations are those which proceed from a favourable combination of the whole faculties, and in which each contributes a share of its own good qualities, and is restrained by the others from running into excess or abuse. Thus, I conceive the very admirable taste of CAMPBELL the poet, to arise from a great endowment of the higher sentiments, Reflection and Concentrativeness; so that, on any feeling or image occurring to his mind, these faculties judge by an intuitive tact of its appropriateness, and modify it to the point at which it pleases them all. If a favourable development of this kind is possessed, the higher that Ideality rises, not to run into excess, the more perfect will be the taste. At the same time, and for the same reason, there may be much

good taste, of a simple kind, with moderate Ideality, if the other faculties are favourably balanced.

As Taste arises from a favourable combination of faculties, the explanation is simple, how it may be possessed without genius. Genius arises from great activity and vigour in the mind; but these are higher endowments than equability, and an individual may be unable to rise into the regions of inspiration, and yet be so favourably constituted, with respect *to the balance of the powers*, as to feel acutely the excellencies or the faults of genius manifested by others. Hence many persons are really excellent critics, who could not themselves produce original works of value; hence also, many original authors, of great reputation, are very indifferent judges in questions of taste.

In applying these principles to actual cases, I find them borne out by numerous facts. Dr CHALMERS occasionally sins against taste, and in his head Ideality and Comparison are out of due proportion to Causality, and some other organs. In Mr JEFFREY's bust, on the contrary, there is a very beautiful and regular development of Individuality, Comparison and Causality, with a fair balance between the propensities and sentiments; and his taste is generally admirable.

As good taste is the result of the harmonious action of the faculties, we are able to perceive why Taste is susceptible of so great improvement by cultivation. An author will frequently reason as profoundly, or soar as loftily, in his first essay, as after practice in writing for twenty years; but he rarely manifests the same tact at the outset of his career as he attains by subsequent study, and the admonitions of a discriminating criticism. This is the case, because reasoning depends on Causality and Comparison, and lofty flights on Ideality; and if these faculties be eminently possessed, they execute their functions intuitively, and carry the author forward, from the first, on a bold and powerful wing; but as taste depends on the balancing and adjusting, the suppressing and elevating, the ordering and arranging, of our thoughts, feel-

ings and emotions, so as to produce a general harmony in the manifestations; it is only practice, reflection, and comparison with higher standards, that can enable us successfully to approximate to excellence, and even this can be gained only when the organs are by nature equably combined; for if the balance preponderate greatly in any particular direction, no effort will produce an exquisite taste.

Much has been written about a *standard* of Taste; and in considering this question, a distinction requires to be made. If, by fixing a standard, it is meant to determine particular objects, or qualities of objects, which all men shall regard as beautiful, the attempt must necessarily be vain. A person possessing Form, Size, Constructiveness, and Ideality, may experience the most exquisite emotions of beauty from contemplating a Grecian Temple, in which another individual, in whom these organs are very deficient, may perceive nothing but stone and lime. One individual may discover great beauty in an arrangement of colours, which is quite imperceptible to a person deficient in the organ of colouring. Or one may be delighted with music, in which another, through imperfection in the organ of Tune, may perceive no melody. Thus no object, and no qualities of objects, can be fixed upon, which *all mankind*, whatever be their original constitution, will acknowledge to be beautiful, and in this sense no standard of Taste exists.

But *degrees of Beauty* may be estimated, and in this sense a scale at least, if not a standard, of Taste may be framed. The more favourable the original constitution of an individual is, and the greater the cultivation bestowed on his powers, he becomes the higher authority in questions of elegance and beauty. The existence of a sentiment of Justice has been denied, because individuals are found in whom it is so weak as scarcely to influence their conduct; but Phrenology, by pointing out their defect, shews that these persons form exceptions to the general rule, and then no one thinks of appealing to them, to determine whether an action is just or unjust in any particular case. In like manner, men

deficient in the faculties which give the perception of Beauty, are not authorities in Taste; but that individual is the highest judge in whom large Ideality is combined with the most favourable development of the other organs of propensity, sentiment, and intellect, and who has exercised the faculties with the greatest assiduity. His determinations in regard to degrees of beauty in objects, will form the best standards of Taste which our imperfect nature is capable of obtaining.

EFFECTS OF SIZE IN THE ORGANS ON THE MANIFESTATIONS OF THE FACULTIES.

THE reader is referred to the distinction between POWER and ACTIVITY in the mind, as stated on page 36 of the present work. It is there mentioned, that size in the organs is, *cæteris paribus*, the measure of power in the manifestations of the faculties. The practical application of this doctrine remains to be stated; and it will be understood now, after the functions and modes of activity of the primitive faculties have been elucidated.

As size in the organs is an indispensable requisite to power in the mind, no instance ought to occur of an individual who, with a small brain, has manifested clearly and unequivocally great force of character, animal, moral, and intellectual, such as belonged to BRUCE, BUONAPARTE, or FOX; and such accordingly phrenologists affirm to be the fact. The Phrenological Society possesses casts of the skulls of BRUCE, RAPHAEL, and LA FONTAINE, and they are all large. The busts and portraits of Lord BACON, SHAKESPEARE, BUONAPARTE, indicate large heads; and among living characters no individual has occurred to my observation who leaves a vivid impression of his own greatness upon the public mind, and who yet presents to their eyes only a small brain.

The European head is distinguished from the Asiatic and native American, not more by difference of form than of size; the European is much the larger, and the superior energy of

this variety of mankind is known. The heads of men are larger than those of women, and the latter obey; or to bring the point to the clearest demonstration, we require only to compare the head of an idiot with that of BURKE, or of a child with that of a full grown man. If, then, size is so clearly a concomitant of power in extreme cases, we are not to presume that it ceases to exert an influence where the differences are so minute that the eye is scarcely able to detect them. The rule, *Extremis probatis media præsumuntur*, is completely applicable here.

The doctrine, that power is a characteristic of mind, distinguishable at once from mere intellectual acumen, and also from activity, is one of great practical importance: and it explains a variety of phenomena of which we previously possessed no theory. In society we meet with persons whose whole manner is little, whom we instinctively feel to be unfit for any great enterprize or arduous duty, and who are, nevertheless, distinguished for amiable feeling and good sense. This springs from a small brain but favourably proportioned in its parts. Other individuals, again, with far less polish, inferior information, and fewer amiable qualities, impress us with a sentiment of their power, force, energy, or greatness; we instinctively feel that they have weight, and that, if acting against us, they would prove formidable opponents. This arises from great size. BUONAPARTE, who had an admirable tact in judging of human nature, distinguishes between mere cleverness and force of character, and almost always prefers the latter. In his Memoirs, he speaks of some of his generals as possessing talents, intellect, book-learning, but as still being nobody, as wanting that weight and comprehensiveness which fit a man for great enterprizes; while he adverts to others as possessing limited intellect and little judgment, but prodigious force of character; and characterizes them as admirably adapted by this qualification to lead soldiers through peril and difficulty, provided they be put on the right path by minds superior to their own. MURAT was such a man; and BUONAPARTE appears on the whole to have liked such offi-

cers, for they did not trouble him with thinking for themselves, while they possessed energy adequate to the execution of his most gigantic designs. The leader of a popular party who has risen to that rank by election, or assumed it with acquiescence, will be found to have a large brain. The leaders of an army or a fleet also require a similar endowment, for otherwise they would possess authority without natural power, and would never inspire confidence in their followers. BUONAPARTE had a large head; and officers and soldiers, citizens and statesmen, bowed before his mental greatness, however much they might detest the use he made of his power. In him, all the organs, animal, moral, and intellectual (Conscientiousness and, perhaps, Firmness, excepted), seem to have been large; great activity was added; and hence arose commanding energy, combined with profound and comprehensive intellectual capacity.

The Society possesses casts of the heads of Captains FRANKLIN and PARRY; and both are decidedly large, with an excellent proportion in the different orders of organs. These commanders displayed great force of character in their respective expeditions in quest of a North-west Passage. No tendency to mutiny, or insubordination, occurred even in the most trying circumstances; and this would be the case, because the men under their command would instinctively feel natural superiority coinciding with artificial rank.

The men who are able to attend to their private duties, and at the same time carry a load of public business on their minds, without feeling encumbered, owe this quality to great size in the brain, combined with large Knowing Organs. Those who, having small brains, find their whole powers absorbed and exhausted by their particular occupations, wonder at such men, and cannot comprehend either their motives or the means by which they accomplish so much. It is power which distinguishes them, so that duties which to others are oppressive, press lightly on them, or afford them only amusement or relaxation. Mr JOSEPH HUME, M. P. is a beautiful illustration of this doctrine. He posses-

ses moderate organs of Causality, little Wit, less Ideality, with no great endowment of Language; and yet even his opponents allow him to possess great force of character, with a power of application and perseverance which to ordinary minds is incomprehensible. If we look at the large brain indicated in his cast, we perceive the source of his weight; and his immense organ of Firmness, combined with this mental power, accords with his determination. THURTELL also possessed great force of character, and his brain is large. This quality in THURTELL was the source of the intense and long enduring interest which he created and supported in the public mind. He made deep impressions on those individuals who came in contact with him, they wrote and printed their impressions, and the public caught the feeling.

In examining the heads of criminals in jail, I have found the most daring, desperate and energetic to possess large brains. When great size and an unfavourable combination occur together, the officers of justice are reduced to despair of correcting the offender. They feel a strength of character which they cannot subdue, and an evil bent which they cannot direct;—the result generally is a report from the police that the individual is incorrigible; the first capital offence is prosecuted to extremity, and he is hanged to protect society from farther mischief. In professional pursuits, also, the men who are indisputably paramount to their fellows not only in cleverness, but in depth and force of character, have large heads; and this holds not only in the learned professions, but in mercantile avocations. I have observed, that individuals who, born in indigence, have risen to wealth, by conducting great and extensive establishments, have uniformly brains above an average size; and mercantile travellers who succeed in procuring orders, and pushing a trade amidst a keen and arduous competition, are distinguished by the same quality. Such men make an impression, and act with a confidence of power, which gives effect to all they say or do. In a school, if the children care nothing for the master, treat him with disrespect, and he fail, after using every severity, to maintain discipline and subor-

dination, he will be found to have a small head. In the domestic circle, if the mistress of a family (while in good health), is easily overcome, annoyed and oppressed with the cares and duties of her household, the origin of the evil will be found in too small a head.

In the Church, the effects of size are equally conspicuous. A preacher with a large brain is felt by his flock to possess weight, and they submit willingly to be led and taught by him, while they treat with indifference the feebleness that accompanies a little head. If, as occasionally happens, a preacher possess an excellent combination, that is, the organs of the sentiments and intellect large in proportion to those of the animal propensities, he will be acute, amiable, sensible, and interesting; but if the general size of his brain be under an average he will not be impressive and commanding.

The principle that Size gives power of manifestation, forms the key to the following criticism on Dr CHALMERS. "His manner, so far from being graceful," says a contemporary writer, "is very nearly uncouth; his tones are neither musical, nor under strict subordination; in the selection of words, and management of figures, his taste, so far from being pure, is sometimes very much the reverse; his pronunciation, though vigorous and distinct, is beset with provincialisms, which time and a city audience have done very little to correct; and as to gesture, wherever we have heard him, he appeared to be totally unconscious that he had got such a thing as hands and arms to manage. In what, then, it may be asked, consists the secret of the Doctor's eloquence? Simply, as we take it, in this,—that, *while his arguments* and *illustrations* are for *the most part striking and original*, he possesses *prodigious enthusiasm* and *energy* in enforcing them; that the defects of his rhetoric are completely lost in the force of his ratiocination; that while he has *mathematics* or *logic* enough *to make his reasoning acute, grasping*, and *irresistible*, he has *poetry* enough to prevent it *from being dull;* thus evincing the very highest species of intellect, the union of a *sound and comprehensive judgment*, with a *fertile and*

brilliant imagination. We have said he possesses *energy*, and this we take to be the great and redeeming quality of his manner, compared to which the tiny graces sink into insignificance. Whether we are facile or fastidious, whether we like or dislike the preacher's doctrine, one thing is certain, he *forces us to attend to him. A man might easily get his pocket picked while listening to Dr* CHALMERS, *but we defy him to fall asleep.*" The bust of Dr CHALMERS indicates a large brain.

In authorship, the same law holds good. Critics, for example, have been puzzled to account for the high rank which Dr S. JOHNSON holds in English literature, and to discover the qualities of mind on which his eminence is founded. He has made no discoveries in morals or in science to captivate the mind. His style is stately and sonorous, and his arrangement in general good; but equal or superior graces may be found in GOLDSMITH, THOMSON, and other authors, whom nobody would compare with him in genius. His great characteristic is force and weight; and these are the concomitants of great size in the organs. MILTON's writings are highly characteristic of power, as are also those of LOCKE. ADISON, on the other hand, is a specimen of genius produced by a felicitous combination of sentiment and intellect, without any preponderating energy from great size. Power is the leading charm of SWIFT's writings; he is not graceful, far from elegant, his reasoning is frequently superficial, and his conclusions questionable; but he is never feeble. Strength, energy, and determination mark every page.

Activity in the organs, on the other hand, gives liveliness, quickness, and rapidity; and is a more frequent concomitant of a moderate sized brain than of a large one. Dr SPURZHEIM thinks that long fibres contribute to activity. Moderate size of brain, with favourable combination, and much activity, will constitute what is commonly understood by a *clever* man in ordinary life; such an individual will form ideas rapidly, do a great deal of work, shew tact and discrimination, and prove himself really a valuable and useful member of society; but then he must not be over-loaded with difficulties, or encum-

bered with obstacles, nor must the field in which he is called on to labour be too extensive.

Mankind at large have an instinctive tact by which they recognise power or feebleness of mental character, and modify their conduct accordingly. Those in whom moral and religious principles do not constitute the habitual rule of conduct, treat individuals in the most different manner, according to the impression they receive from their manner, and the estimate they form from it of their strength or weakness of mind. There are men who carry in their very eye and look the intimation of greatness, whose manner at once proclaims, "*Nemo me impune lacesset;*" and the world reads this notice, and holds it safest to allow them to follow their own course without obstruction, while they avoid offending others. Contrasted with them, are the weak, the feeble, and vacillating; men as unstable as water, unsteady as the wind. The wicked seize upon them, and make them their prey. The treatment received from society by different persons is thus widely different; and it may truly be said, that a large portion of mankind cannot conceive the miseries inflicted on the remainder, by the powerful and unprincipled taking advantage of their weakness.

When Size and Activity unite in an individual, they constitute the perfection of genius. This I conceive to have been the case in HOMER, and in SHAKESPEARE. Vivacious buoyancy, ease, and fertility, arising from activity, joined with depth, strength, comprehensiveness, and masculine energy of mind, the result of great Size, place these authors above all others whom the world has ever seen. To these gifts must have been added a happy combination of particular organs, conferring the peculiar talents of authorship, which they possessed; and when we consider that all these rare and splendid gifts must again be united in one individual, before their equal can reappear, we shall have no difficulty in perceiving why so few HOMERS and SHAKESPEARES are given by nature to the world.

In these observations, I have treated of the effects of Size in the brain in general, on the general manifestations of the

mind, to bring the doctrine clearly and forcibly before the reader; but I beg of him not to fall into the mistake of taking *general* size as an indication of *particular* power, for then difficulties without end will be encountered. For example, it has often been objected, that a particular individual wears a large hat, indicating a large brain, and yet that he has no scope of *intellect*, and no ability, in the general sense of the term. The answer is, that we must look for the *power* in the *direction of the Size*, as explained on p. 44. If the large hat is requisite, on account of a great development of the animal organs, we must expect the individual to be only a powerful *animal*, and he may be this, and at the same time a weak *man*. If the size lay in the region of the sentiments, we may then look for greatness in moral worth; but it is only when great size pervades the whole three classes of organs, Propensities, Sentiments, and Intellect, that Phrenology authorises us to expect a general character, vigorous, comprehensive and profound.

The circumstances which *modify the effects of Size* have already been stated (p. 47.), when treating of the principles of the science, to which the reader is respectfully referred.

COMBINATIONS IN SIZE, OR EFFECTS OF THE ORGANS WHEN COMBINED IN DIFFERENT RELATIVE PROPORTIONS *.

The primitive functions of each organ were *discovered*, by

* Having been solicited to state, in methodical order, the results of the combinations so far as observed, I tried to do this in the MS. of the present work; but found the result to be a tedious enumeration of propositions, adapted to Individuality alone, difficult to be remembered, and withal extremely incomplete. I have therefore preferred stating principles chiefly, accompanied with illustrations, to render them intelligible and shew their application. This method was adopted in the Elements for the sake of brevity, and, on mature examination, it appears to be preferable in itself. The reader in whom the Reflecting Organs and Concentrativeness are amply developed, will not only easily comprehend the rules here laid down, but be able greatly to enlarge the sphere of their application.

observing cases in which it decidedly predominated over, or fell short of, other organs, in point of Size, and by similar observations each must still be verified. After the discovery is established, its practical application deserves attention. Every individual possesses all the organs, but they are combined in different degrees of relative size in different persons; and the manifestations of each are modified in some degree by the influence of those with which it is combined. The effect of combination, however, is not to change the proper functions of the different organs, but only to modify the *manner* in which they are manifested; or the acts in which they seek gratification.

Three rules may be laid down for estimating the effects of differences in relative size, occurring in the organs of the same brain.

Rule first.—Every faculty desires gratification with a degree of energy proportionate to the size of its organ *; and those faculties will be habitually indulged, the organs of which are largest in the individual.

Examples.—If all the animal organs are large, and all the organs of the moral sentiments and intellect small, the individual will be naturally prone to animal indulgence in the highest degree, and disposed to seek gratification in the directest way, and in the lowest pursuits. The Charibs, Mary Macinnes, and Bellingham, are illustrations of this combination, and their manifestations corresponded.

If, on the other hand, the organs of the moral sentiments and intellect greatly predominate, the individual will be naturally prone to moral and intellectual pursuits; such persons are "a law unto themselves." The casts of Dr Hette, and the Reverend Mr M., are examples of this combination, and they may be contrasted with the casts last mentioned.

Rule second.—As there are three kinds of faculties, Ani-

* The condition, *cæteris paribus*, is always understood, and therefore need not be repeated, in treating of the effects of Size.

mal, Moral and Intellectual, which are not homogeneous in their nature, it may happen that several large animal organs are combined in the same individual, with several moral and intellectual organs highly developed. The rule, then, will be, that the lower propensities will take their *direction* from the higher powers; and such a course of action will be habitually followed as will be calculated to gratify the whole faculties whose organs are large.

Examples.—If the organs of Acquisitiveness and Conscientiousness be both large, stealing might gratify Acquisitiveness, but it would offend Conscientiousness. According to the rule, the individual would endeavour to gratify both, by acquiring property by lawful industry. If both Combativeness and Destructiveness are large, and Benevolence and Conscientiousness also fully developed, wanton outrage and indiscriminate attack might gratify the first two faculties, but they would outrage the last two; and hence the individual would seek for situations calculated to gratify all four, and these may be found in the ranks of an army embodied for the defence of his country; or the same object may be obtained by moral and intellectual warfare against the patrons of corruption and abuse in Church and State. Luther, Knox, and many other benefactors of mankind, were probably actuated by such a combination of faculties.

If, in an individual, the cerebellum is very large, and Philoprogenitiveness, Adhesiveness, and Conscientiousness deficient, he will be prone to the directest gratifications of the animal appetite; if the latter organs are large, he will perceive that wedlock affords the only means of satisfying the whole group of faculties.

If Benevolence, Self-Esteem, and Acquisitiveness are all large, giving charity may gratify the first; but unless the individual be very rich, the act of parting with property may be disagreeable to the two last faculties: he would therefore prefer to gratify Benevolence by personal kindness; he would sacrifice time, trouble, influence and advice, to the welfare of others, but not property. If Benevolence were *small*, with

the same combination, he would not give either money or personal service.

If Love of Approbation large, is combined with large Ideality and moderate Reflecting Faculties, the individual will be ambitious to excel in the splendour of his equipage, style of living, dress, and rank. If, to the same combination, be added a powerful intellect and large Conscientiousness, moral and intellectual excellence will be preferred, as the means of obtaining the respect of the world.

If Self-Esteem large, is combined with deficient Love of Approbation and Conscientiousness, the individual will be prone to gratify his selfish feelings, with little regard to the good opinion, or the just claims of society. If Self-Esteem large, is combined with large Love of Approbation and Conscientiousness, the former will produce only that degree of self-respect which is essential to dignity of character, and that degree of independence of sentiment, without which even virtue cannot be maintained.

If Cautiousness large is combined with deficient Combativeness, the individual will be extremely timid. If Combativeness be large, and Cautiousness small, reckless intrepidity will be the result. If Combativeness be equally large with Cautiousness, the individual will display courage regulated by prudence. If Cautiousness, Conscientiousness, Self-Esteem, Secretiveness, and Love of Approbation, are all large, and Combativeness moderate, bashfulness or *mauvaise honte* will be the consequence. This feeling is the result of the fear of not acquitting one's-self to advantage, and thereby compromising one's personal dignity.

If Veneration and Hope are large, and Conscientiousness and Benevolence small, the individual will be naturally fond of the act of religious worship, but averse to the practice of charity and justice. If the proportions are reversed, the result will be a natural disposition to charity and justice, with no great tendency to the exercise of devotion. If all the four organs are large, the individual will be naturally inclined to render homage to God, and discharge his duties to men. If

Veneration large, is combined with large Acquisitiveness and Love of Approbation, the former sentiment may be directed to superiors in rank and power, as the means of gratifying the desires for wealth and influence depending on the latter faculties. If Veneration small be combined with Self-Esteem and Firmness large, the individual will not naturally look up to superiors in rank.

The intellectual faculties will naturally tend to such employments as are calculated to gratify the predominant propensities and sentiments. If the organs which constitute a genius for painting are combined with large Acquisitiveness, the individual would paint to become rich; if combined with Acquisitiveness small, and Love of Approbation large, he would probably labour for fame, and starve while attaining it.

Talents for different intellectual pursuits depend upon the combinations of the Knowing and Reflecting Organs in certain proportions. Form, Size, Colouring, Individuality, Ideality, Imitation and Secretiveness large, with Locality small, will constitute a portrait, but not a landscape, painter. Diminish Form and Imitation, and increase Locality, and the result will be a talent for landscape, but not for portrait, painting. Constructiveness and Weight combined with Tune large, may produce a talent for *musical* instrument making: Without a large Tune the other faculties could not take this direction. Constructiveness combined with Size and Number large, may lead to *mathematical* instrument making. Causality, combined with large Secretiveness, Ideality and Imitation, will seek to discover the philosophy of the fine arts; the same organ combined with Benevolence, Conscientiousness and Concentrativeness, large, will delight in moral and political investigations. If to Individuality, Comparison, and Causality, all large, an equally well developed organ of Language is added, the result will be a talent for authorship or public debate; if Language be small, the other faculties will be more prone to seek gratification in the business of life, or in abstract philosophy.

One great difficulty frequently experienced, is to compre-

hend the effect of the Reflecting Powers, added in a high degree of endowment to the Knowing Faculties, when the latter are exercised in particular branches of art, for which they appear to be of themselves altogether sufficient. It is stated, for example, that Constructiveness, Secretiveness, Form, Size, Ideality, Individuality, Colouring and Imitation, constitute a genius for painting; and it may reasonably be inquired, What effect will the Reflecting Organs, large or small, produce on this combination? This question is easily answered. When the Reflecting Organs are small, *Form*, *Colour*, *Beauty*, constitute the *leading* objects of the painter's productions. There is no story, no event, no comprehensiveness of intellect about his subjects. They require to be examined in detail, and as single objects, unconnected with others by any of the relations perceived by the higher powers. Add the Reflecting Organs, however, and then Outline, Form, Colouring, Perspective, all sink into the rank of *means*, which the intellect employs to accomplish a higher object; and this is the expression of some great action or event, some story, which speaks to the judgment, and interests the feelings.

These ideas are beautifully illustrated in an Essay on the genius of RAPHAEL, compared with his cerebral development, by Mr SCOTT *. In the cast of RAPHAEL's skull, the organs here enumerated as essential to a painter, are all large, and those of Causality, Comparison and Wit, are likewise far above an ordinary size. Now, a critic on the productions of RAPHAEL † says, "In *composition* RAFFAELLO stands pre-eminent. His invention is the refined emanation of a dramatic mind, and whatever can most interest the feelings, or satisfy the judgment, he selected from nature, and made his own. The point of time, in his historical subjects, is invariably well chosen; and subordinate incidents, while they create a secondary interest, *essentially contribute to the principal event.* Contrast or combination of lines makes no part of his

* Phrenological Journal, vol. ii. p. 327.

† Life of RAPHAEL, London 1816, anonymous.

works as an artificial principle of composition ; the *nature and character of the event create the forms* best calculated to express them. The individual expression of particular figures corresponds with their character and employment; and whether calm or agitated, they are at all times equally remote from affectation or insipidity. The *general interest* of his subject is *kept up throughout the whole composition ;* the *present action implies the past, and anticipates the future.* If, in sublimity of thought, RAFFAELLO has been surpassed by his great contemporary MICHAEL ANGELO,—if, in purity of outline and form, by the antique,—and in colouring and chiaro-oscuro by the Lombard and Venetian schools ; yet in *historical compositions* he has no rival ; and for *invention, expression*, and *the power of telling a story*, he has never been approached."

M. FUSELI, speaking of the qualities of RAPHAEL's style as a painter, says, that " perfect human beauty he has not represented. No face of RAPHAEL's is perfectly beautiful ; no figure of his, in the abstract, possesses the proportions that could raise it to a standard of imitation. *Form to him was only a vehicle of character or pathos ;* and to these he adapted it in a mode, and with a truth, which leaves all attempts at emendation hopeless. His composition always hastens *to the most necessary point as its centre ;* and *from* that disseminates, *to* that leads back, its rays, all secondary ones. Group, form, and contrast, are subordinate to the event ; and common-place is ever excluded. His expression is unmixed and pure, in strict unison with, and decided by, character, whether calm, animated, agitated, convulsed, or absorbed, by the inspiring passion ; it *never contradicts its cause*, and is equally remote from tameness and grimace. The moment of his choice never suffers the action to stagnate or to expire. It is *the moment of transition*, the *crisis big with the past, and pregnant with the future.* His invention connects the utmost stretch of possibility with the most plausible degree of probability, in a manner that equally surprises our fancy, persuades our judgment, and affects our hearts."

In all this criticism we have the most exact description of the manifestations of Causality, Comparison, and Wit, which give scope, depth, and force of intellectual conception, the power of combining means to attain an end, and the natural tendency to keep the means in their appropriate place, as accessaries merely to the main design.

RAPHAEL'S genius, accordingly, can be fully appreciated only after the exercise of the higher intellectual faculties *on his* works. Sir JOSHUA REYNOLDS acknowledges that it was only after repeated visits, and *deep reflection*, that he discovered their merits, his first impression having been that of mortification and disappointment, from not seeing *at once* all their greatness. The excellence of RAPHAEL'S style, says he, is not on the surface, " *but lies deep*, and at the first view is seen but mistily. It is the florid style which strikes at once, and captivates the eye for a time, without ever satisfying the judgment." If, on the other hand, the Knowing and Constructive Organs alone had predominated in RAPHAEL, all these accessaries would have become principals; and the critic who possessed intellect, would have felt a decided deficiency of design, story, interest, and object in his paintings. Hence high Reflecting Organs are indispensable to historical painting; and HAYDON, who has manifested great power of conception in this line, possesses these in an eminent degree. The late Sir H. RAEBURN, whose style of portrait painting, in point of dignity and force, approaches the historical, possessed also a full development of the upper part of the forehead, as well as the pictorial organs. In sculpture the same rule holds. The artist who has Form, Size, Constructiveness and Ideality large, without high Reflecting Organs, may chisel a vase, or cut out a wreath of flowers; but he will never reach grandeur of conception, or confer thought, dignity, and power, upon his productions.

It follows from these principles, that a sculptor or painter will represent one class of objects with greater truth and fidelity than another, according to the particular combination of organs which predominates in his head. Thus, to model the

exquisite softness, delicacy, and symmetry of the female form, the constructive organs, Ideality, and the moral sentiments, may suffice, without much depth and power of reflection. To represent, on the other hand, whether on canvas or in marble, the man of genius, profound in thought, and elevated and intense in emotion, the artist himself must possess great organs of sentiment and reflection, in addition to the organs of art before described, otherwise he will never be able adequately to conceive or to express these modes of mind, when they occur in his subjects. If an artist, then, possess only large Knowing Organs, he must confine himself to beauty in detail. If he is endowed, also, with those of reflection, he may aspire to the highest region of invention.

The same rules hold in architecture and music. The architect possessing only the Knowing Organs large, may produce the plan of a house, or a particular object, with perfect success; but he ought never to attempt a work in which design, combination, and thought, are the leading objects. From not attending to this law of nature, many abortions in architectural designs occur in this country. An artist, with a constructive and knowing head, may produce a plan which will look beautifully on paper, and which, in fact, is beautiful as an individual object; but if the Reflecting Organs are deficient, he will be incapable of considering it in its relations to surrounding objects, and be unable to divine how it will affect the mind, when presented with all its relations; and hence, when executed, it may turn out a deformity. Add, however, the Reflecting Organs, and the effects of collateral objects will be anticipated and provided for.

The musician, in like manner, who shall be able to express thought, feeling, and emotion, with exquisite effect, with whom sound is subordinate to sense, design and expression, must always possess the higher powers in addition to the merely musical faculties.

In oratory, too, a person with Individuality, Comparison, Ideality and Language, may be erudite, fluent, brilliant, and, if propensity and sentiment be added, he may be vehement,

pathetic, or sublime; but, if great comprehensiveness, deep sagacity, and profound elucidation of principle are required, then Causality and Wit must be added to the combination.

Taste in every branch of the fine arts is distinguishable from power and comprehensiveness, and it depends, as already explained *, on a *harmonious combination*, and due cultivation, of the organs in general. In Raphael these requisites occurred; and it is because nature rarely unites the particular organs which constitute a painter,—high reflecting organs, large general size, harmonious proportion, and natural activity,—all in one individual, that so few Raphaels appear.

In no instance is it a matter of indifference to the talents and dispositions of the individual, whether any particular organ be large or small. If it be large, although its *abuses* may be prevented by restraint and direction imposed by the other faculties; still its presence will operate on the mind. If, for instance, large Combativeness and Destructiveness are combined with a large development of the moral and intellectual organs, the whole life may be passed without the occurrence of any outrage; and it may be asked, What effect, in this case, do the former organs produce? We shall find the answer, by supposing all the other organs to remain large, while those are diminished in size, and tracing the effect of this change. The result would be an undue preponderance of moral and intellectual qualities, degenerating into effeminacy. Large Combativeness and Destructiveness, would add the elements of repulsion and aggression to such an extent as to permit the manifestation of manly enterprise and courage. Hence, in the case supposed, these organs would be duly performing their functions, when the superficial observer would imagine them to be entirely superfluous.

In like manner, if an organ be greatly deficient, its influence cannot be compensated by that of the other organs, however large. Suppose, for example, that, in an individual, Be-

* Page 428.

nevolence, Veneration, Love of Approbation, and Intellect, are all large, and Conscientiousness very deficient, it may be thought that the absence of Conscientiousness will be of small importance, as its influence will be compensated by that of those other faculties. This, however, will not be exactly the case. The sentiment of *duty* originates from Conscientiousness. Hence the individual supposed would be benevolent, when Benevolence predominated; religious, when Veneration was paramountly active; obliging, when Love of Approbation glowed with unwonted fervour; but if all or any of these were on any occasion counteracted by the solicitations of the inferior propensities, he would not, if the organ of Conscientiousness were small, feel the *obligation of duty enforcing* the dictates of these other sentiments, and encreasing their restraining power; in short, he would be deficient in the sentiment of justice, duty, and incumbency; he would obey all the impulses of the higher faculties *when inclined*, but if not inclined, he would not experience so strong a sense of demerit in neglecting their solicitations, as if the organ of Conscientiousness were large. Farther, the sentiments which we have supposed him to possess, would themselves, if not directed by Conscientiousness, be continually prone to run into abuse. Benevolence to one would tend to trench on the justice due to another; devotion might occasionally be substituted for charity, or *vice versa*.

If we take the opposite case, and suppose that an individual possesses great Intellect and Conscientiousness, with deficient Benevolence, Veneration, and Love of Approbation; then, if the propensities were strong, his conduct might be the reverse of amiable, notwithstanding his Conscientiousness. With this combination he would be actuated by vigorous selfish feelings, which probably might overpower the single sentiment of duty, unaided by Benevolence, Veneration, and Love of Approbation; and he might act wrong in opposition to the clear dictates of his own conscientiousness. *Video meliora proboque, deteriora sequor*, would be his motto. If his propensities, on the other hand, were moderate, he would be strictly just; he would give

every one his due, but he would probably not be actively benevolent and pious. The faculty of Benevolence inspires with the feeling of charity, and Conscientiousness enforces its dictates; but if (to suppose an extreme case) the feeling of charity were not inspired at all, Conscientiousness could not produce it, nor act upon it; it would strongly impress the command, Do not injure another, because this duty emanates from itself; but it would not inspire with the desire to do him good, this being beyond its limits.

Occasionally, very unusual combinations of particular organs present themselves, the effects of which cannot, by ordinary sagacity, be divined; and in such cases, the phrenologist ought not to predicate any thing, but ask for information. As, however, nature is constant, he may speak with confidence the next time he meets with a similar case. Before it was ascertained that Secretiveness and Imitation confer the talent for acting, I met with an instance of this combination, and predicated something from it, which was entirely erroneous. This occurrence was loudly and extensively proclaimed as subversive of Phrenology; but to me it was a valuable lesson, and a discovery of some importance; ever since I have found that talent accompany that combination.

Rule Third.—Where all the organs appear in nearly equal proportions to each other, the individual, if left to himself, will exhibit opposite phases of character, according as the animal propensities or moral sentiments predominate for the time. He will pass his life in alternate sinning and repenting. If external influence is brought to operate upon him, his conduct will be greatly modified by it; if placed, for instance, under severe discipline, and moral restraint, these will cast the balance, for the time, in favour of the higher sentiments; if exposed to the solicitation of profligate associates, the animal propensities will probably obtain triumphant sway. Maxwell, who was executed for housebreaking and theft, is an example of this combination. In him the three orders of organs are amply developed, and, while subjected to the discipline of the army, he preserved a fair reputation; but when

he fell into the company of thieves, he adopted their practices, and was hanged.

The principles now laid down remove an objection that has frequently been stated, viz. that, as different combinations modify the manner in which the faculties are manifested, and as the functions of some parts at the base of the brain are still undiscovered, no certainty can be obtained regarding the functions even of the higher organs; because, say the objectors, all the manifestations actually perceived may be the result of the joint action of the known and unknown parts, and hence it is impossible to determine the specific functions of each. The answer to this objection is, that the function of each organ remains invariable, whatever direction the manifestations may take, in consequence of its acting in combination with other organs. Hence, if we suppose the unknown convolutions at the base of the brain to be the organs of Hunger and Thirst, as several facts indicate, then Tune combined with these parts large, would be directed to Bachanalian songs; if combined with these small, and Veneration large, hymns would become the objects of its manifestation; but, in either case, Tune would perform only its primitive function of producing melody.

COMBINATIONS IN ACTIVITY.

WHERE several organs are large in the same individual, they have a natural tendency to combine in activity, and to prompt him to a line of conduct calculated to gratify them all. Where, however, all or the greater part of the organs are possessed in nearly equal proportions, important practical effects may be produced, by establishing Combinations in activity among particular organs, or groups of organs. For example, if Individuality, Causality, Comparison and Language, be all large, they will naturally tend to act together, and the result of their combined activity will be a natural talent for public speaking, or literary composition. If Language be small, it will be extremely difficult to establish such a combination in

activity, and the natural talent will be deficient; but if we take two individuals, in both of whom this group of organs *is of an average size*, and if we train one of them to a mechanical employment, and the other to the Bar; in the latter, the Reflecting Organs and that of Language will be trained to act together, and the result will be an acquired facility in writing and debate; whereas, in the former individual, in consequence of the organ of Language never being accustomed to act in combination with those of Intellect, this facility would be wanting. On the same principle, if a person having an excellent endowment of the organs of Propensity, Sentiment and Intellect, were introduced for the first time into higher society than that with which he had been accustomed, it might happen that he would lose for a moment the command of his faculties, and exhibit an unhappy specimen of awkwardness and embarrassment. This would arise from irregular and unharmonious action in the different faculties and organs; Veneration powerfully excited would prompt him to manifest profound respect; Love of Approbation would inspire him with a strong desire to exhibit a pleasing and becoming appearance; Cautiousness would produce alarm, lest he should fail in any essential of breeding; Self-Esteem would feel compromised by embarrassment stealing on the mind; and the intellect, distracted by these vivacious and conflicting emotions, would be unable to regulate the conduct, according to the rules of propriety. When familiarised with the situation, the sentiments would subside into a state of less energetic and more harmonious action; the intellect would assume the supremacy, and regulate and direct the feelings which previously had overpowered it; and then the individual might become the idol and ornament of the circle, in which he at first made so awkward a *debut*.

It is in virtue of this principle that education produces its most important effects. If, for instance, we take two individuals, in each of whom all the organs are developed in an average degree; and if the one of them has been educated among persons of sordid and mercenary dispositions, Acquisi-

tiveness and Self-Esteem would then be cultivated in him into a high degree of activity, and self-interest and personal aggrandisement would be viewed as the great objects of life. If the Love of Approbation were trained into combined activity with these faculties, it would desire distinction in wealth or power; if Veneration were trained to act in concert with them, it would take the direction of admiring the rich and great; and, Conscientiousness not being predominantly vigorous, would only intimate that such pursuits were unworthy, without possessing the power by itself, of overcoming or controlling the whole combination against it. If another individual, possessing the same development, were trained amidst moral and religious society, in whose habitual conduct the practice of benevolence and justice towards men, and veneration towards GOD, was represented as the leading objects of human existence, the Love of Approbation, acting with this combination, would desire esteem for honourable and virtuous actions; and Acquisitiveness would be viewed as the means of procuring gratification to these higher powers, but not as itself an object of paramount importance. The practical conduct of the two individuals might be very different, in consequence of this difference of training.

The principle now under discussion is not inconsistent with the influence of size; because it is only in individuals in whom the organs are nearly on an equality in point of size, that so great effects can be produced by combinations in activity. In such cases the Phrenologist, in estimating the effects of size, always inquires into the education bestowed.

The doctrine of combinations in activity explains several other mental phenomena of an interesting nature. In viewing the heads of the higher and lower classes of society, we do not perceive the animal organs preponderating in point of size in the latter, and those of the moral sentiments in the former, in any very palpable degree. The high polish, therefore, which characterises the upper ranks, is the result of sustained harmony in the action of the different faculties, and especially in those of the moral sentiments, induced by long cultivation;

while the rudeness observable in some of the lower orders results from a predominating combination in activity among the lower propensities; and the awkwardness that frequently characterises them, arises from the propensities, sentiments, and intellect, not being habituated to act together. If, however, an individual is very deficient in the higher organs, he will remain vulgar, in consequence of this defect, although born and educated in the best society, and in spite of every effort to communicate refinement by training; while, on the other hand, if a very favourable development of the organs of the higher sentiments and intellect is possessed, the individual, in whatever rank he moves, will have the stamp of nature's nobility.

Several moral phenomena, which were complete enigmas to the older metaphysicians, are explained by this principle. Dr Adam Smith, in his Theory of Moral Sentiments, Chapter II., "On the influence of fortune upon the sentiments of mankind, with regard to the merit and demerit of actions," states the following case: A person throws a large stone over a wall into the public street, without giving warning to those who may be passing, and without regarding where it may fall; if it light upon a person's head, and knock out his brains, we would punish the offender pretty severely; but if it fall upon the ground, and hurt nobody, we would be offended with the same measure of punishment, which, in the former event, we would reckon just, and yet the demerit in both cases is the same. Dr Smith gives no theory to account for these differences of moral determination. Phrenology explains them. If the stone fall upon an unhappy passenger, Benevolence in the spectator is outraged;—if the sufferer had a wife and family, Philoprogenitiveness and Adhesiveness are offended. Self-Esteem and Cautiousness also are excited, by the idea that we might have shared the same fate; all these rouse Destructiveness, and the whole together loudly demand a smart infliction on the transgressor. In the other event, when the stone falls to the ground, and hurts nobody, the only faculties excited are Intellect and Conscientiousness, and probably Cautiousness,

and these calmly look at the motive of the offender, which probably was mere thoughtless levity, and enact a slight punishment against him. The proper sentence, in such a case, is that which would be pronounced by Intellect, and the moral sentiments acting in combination, uninfluenced by the lower propensities.

Dr Smith states another case. One friend solicits a place for another, and after using the greatest efforts is unsuccessful. Gratitude in this case is less warm than if the place had been obtained; and yet the merit is the same. In the event of success, Self-Esteem, Acquisitiveness, and the other animal organs, are gratified, and excite Conscientiousness, and Benevolence to gratitude. In the opposite result, the repressing influence of these faculties, *disappointed and grieved*, chills the glow of Benevolence and Conscientiousness, and feeble gratitude is felt.

When a person becomes judge in his own cause, his intellect may present to him the facts exactly as they happened, but then these excite in his mind, not simply the sentiment of Conscientiousness, but also his Self-Love, Acquisitiveness, and, if he has been grievously injured, Destructiveness. Hence the decision of his own mind, on his own case, proceeds from Intellect, influenced and directed by all these lower feelings acting along with Conscientiousness. Present the same case to an impartial spectator, favourably constituted, and his decision will be the result of Conscientiousness and Intellect, unalloyed by the intermixture of the selfish emotions.

Pure or abstract justice, then, in the proper sense of the term, is the result of combined activity of Intellect and Conscientiousness, uninfluenced by the animal propensities. For example, if we are called on to judge of the conduct of a person accused, in order to arrive at an absolutely just decision, the intellect must present to us a clear perception of his real motives, and the tendency of his action; if either of these is wanting, the sentiment of Conscientiousness acts not on a real, but on an imperfect or imaginary case;— in the next place, all the animal propensities must be

quiescent; because, if offended Selfishness or anger, or Acquisitiveness or ambition, or Adhesiveness, mingle with Conscientiousness, the fountain is polluted, and the stream cannot be pure. It is an interesting fact, that the dictates of Conscientiousness, when perfectly enlightened, and not misled by the lower feelings, will be found always to harmonize with the enlightened dictates of Benevolence and Veneration; because the moral sentiments have been so constituted as to coincide in their results; and hence, wherever any action or opinion is felt to stand in opposition to any of these sentiments, we may, without hesitation, suspect either that it is wrong, or that the intellect is not completely informed concerning its nature and legitimate consequences.

In party-politics, Adhesiveness, Love of Approbation, and Benevolence, not to mention Combativeness and Destructiveness, are extremely apt to enter into vivid activity, in surveying the conduct of an individual who has distinguished himself by zealous efforts upon our own side; and our judgment of his conduct will, in consequence, be the determination of Intellect and Conscientiousness, disturbed and led astray by these inferior feelings.

The doctrine of the primitive functions of the faculties, explained in the first part of this work, and of the Combinations now laid down, shews *why* Phrenology does not enable us to predict *actions*. Destructiveness, for example, is not a tendency to kill a man or a beast as a specific act, but a mere general propensity, capable of leading to destruction as its ultimate result, but which may be manifested in a great variety of ways (many of them justifiable, others unjustifiable), according as it is directed by the other faculties, which, in each particular instance, act along with it; thus, acting along with large Acquisitiveness, and in the absence of Conscientiousness, it may prompt to murder; while acting along with large Conscientiousness and Benevolence, it may prove the orphan's help, and the widow's stay, by hurling vengeance on the oppressor.

ON THE COINCIDENCE BETWEEN THE NATURAL TALENTS AND DISPOSITIONS OF NATIONS, AND THE DEVELOPMENT OF THEIR BRAINS.

The mental character of an individual, at any given time, is the result of his natural endowment of faculties, modified by the circumstances in which he has been placed. The first element, or natural constitution, is admitted, by most thinking men, to form the basis of, and prescribe the limits to, the operation of the second. If a child is by nature extremely combative, and very little cautious, highly prone to covetousness, and very insensible to justice, a reflecting guardian will adopt a different method of education, and expect different consequences, than if his natural dispositions were exactly the reverse.

A nation is composed of individuals, and what is true of all the parts (which in a nation preserve their individuality), must hold good of the whole;—nevertheless the fashionable doctrine is, that national character depends altogether on external circumstances; and that the *native* stock of animal, moral, and intellectual powers on which these operate, is the same in New Holland and in England, in Hindostan and in France. Mr Stewart informs us, "That the capacities of the human mind have been, in all ages, the same; and that the diversity of phenomena exhibited by our species is the result merely of the different circumstances in which men are placed." "This," says he, "has long been received as an incontrovertible logical maxim; or rather, such is the influence of early instruction, that we are apt to regard it as one of the most obvious suggestions of common sense. And yet, till about the time of Montesquieu, it was by no means so generally recognised by the learned as to have a sensible influence on the fashionable tone of thinking over Europe *."

* Dissertation, p. 53.

There is some ambiguity in this passage.—The proposition, that "the capacities of the human mind have been, *in all* AGES, the same," does not necessarily imply that they have been alike *in all* NATIONS. The Hindoo mind may have been the same in the year 100 as in the year 1800, and so may the English and all other national minds; but it does not follow that either in the year 100 or 1800 the English and Hindoo minds were constituted by nature alike; and yet this is what I understand Mr STEWART to mean; for he adds, "that the diversity of phenomena exhibited by our *species* is the result *merely* of the different circumstances in which men are placed;" embracing in this proposition men of every nation as equally gifted in natural powers. Now, there is reason to question this doctrine, and to regard it as not merely speculatively erroneous, but as laying the foundation of a great deal of most hurtful practice.

When we regard the different quarters of the globe, we are struck with the extreme dissimilarity in the attainments of the varieties of men who inhabit them. If we glance over the history of Europe, Asia, Africa, and America, we shall find distinct and permanent features of character which strongly indicate natural differences in their mental constitutions. The inhabitants of Europe have manifested, in all ages, a strong tendency towards moral and intellectual improvement. As far back as history reaches, we find society instituted, arts practised, and literature taking root, not only in intervals of tranquillity, but amidst the alarms of war. Before the foundation of Rome, the Etruscans had established civilization and the arts in Italy. Under the Greek and Roman empires, philosophy, literature, and the fine arts, were sedulously and successfully cultivated; and that portion of the people whose wealth enabled them to pay for education, attained a high degree of intelligence and refinement. By the irruption of the northern hordes, these countries were subsequently involved in a chaos of ignorance;—but again the sun of science rose, the clouds of Gothic darkness were dispelled, and Europe took the lead of the world in science,

philosophy, and morals. In the inhabitants of this portion of the globe, there appears an elasticity of mind incapable of being permanently repressed. Borne down for a time by external violence, their mental energies seem to gather strength under the restraint, and, after a season, to burst their fetters, and overcome every obstacle opposed to their expansion.

When, on the other hand, we turn our attention to Asia, we perceive manners and institutions which belong to a period too remote to be ascertained, and yet far inferior to the European standard. The people of Asia early arrived at a point comparatively low in the scale of improvement, which they have never passed.

The history of Africa, so far as Africa can be said to have a history, presents similar phenomena. The annals of the races who have inhabited that Continent, with few exceptions, exhibit one unbroken scene of moral and intellectual desolation; and in a quarter of the globe embracing the greatest varieties of soil and climate, no nation is at this day to be found whose institutions indicate even moderate civilization *.

The aspect of native America is still more deplorable. Surrounded for centuries by European knowledge, enterprise, and energy, and incited to improvement by the example of European institutions, they remain, at the present time, the same miserable, wandering, houseless, and lawless savages as their ancestors were, when COLUMBUS first set foot upon their soil. Partial exceptions to this description may, perhaps, be found in some of the southern districts of North America; but the numbers who have even attempted to adopt the modes of civilized life are so small, and the progress made by them so limited, that, speaking of the race, we do not

* Since the observation in the text was written, accounts have appeared in the newspapers of a people discovered by Major CLAPPERTON in the interior of Africa, in a state of high civilization. It is said, that, although they are jet black, they are not negroes, and it is conjectured that they are the descendants of the Numidians of ancient history. If the representations of their attainments be correct, I anticipate in them a brain developed like the European.

exaggerate in saying, that they remain to the present hour enveloped in all their primitive barbarity, and that they have profited nothing by the introduction amongst them of arts, sciences, and philosophy. The same observations have occurred to a writer in the Edinburgh Review. The following remarks, on the native American character, appeared in that work in an article on "HOWISON's Upper Canada," June 1822:—"From all that we learn," says the Reviewer, "of the state of the aborigines of this great continent from this volume, and from every other source of information, it is evident that they are making no advances towards civilization. It is certainly a striking and mysterious fact, that a race of men should thus have continued for ages stationary in a state of the rudest barbarism. That tendency to improvement, a principle that has been thought more than perhaps any other to distinguish man from the lower animals, would seem to be totally wanting in them. Generation after generation passes away, and no traces of advancement distinguish the last from the first. The mighty wilderness they inhabit may be traversed from end to end, and hardly a vestige be discovered that marks the hand of man. It might naturally have been expected, that, in the course of ages, some superior genius would have arisen among them to inspire his countrymen with a desire to cultivate the arts of peace, and establish some durable civil institution; or that, at least, during the long period since the Europeans have been settled amongst them, and taught them, by such striking examples, the benefits of industry and social order, they would have been tempted to endeavour to participate in blessings thus providentially brought within their reach. But all has been unavailing; and it now seems certain that the North American Indians, like the bears and wolves, are destined to fly at the approach of civilized man, and to fall before his renovating hand, and disappear from the face of the earth, along with those ancient forests which alone afford them sustenance and shelter."

The theory usually advanced to account for these differences of national character is, that they are produced by di-

versities of soil and climate. But, although these may reasonably be supposed to exert a certain influence, they are altogether inadequate to explain the whole phenomena. We ought ever to bear in mind, that Nature is constant in her operations, and that the same causes invariably produce the same effects. Hence, when we find exceptions in result, without being able to assign differences in cause, we may rest assured that we have not found the true or the only cause, and our diligence ought to be quickened to obtain new light, and not employed in maintaining the sufficiency of that which we possess.

If we survey a map of the world, we shall find nations whose soil is fertile and climate temperate, in a lower degree of improvement than others who are less favoured. In Van Dieman's Land and New South Wales a few natives have existed in the most wretched poverty, ignorance, and degradation, in a country which enriches Europeans as fast as they possess it. In America, too, Europeans and native Indians have lived for centuries under the influence of the same physical causes, and the former have kept pace in their advances with their brethren in the Old Continent, while the latter, as we have seen, remain stationary in savage ignorance and indolence.

Such differences are not confined to the great continents alone; but different tribes in the same hemisphere seem to possess different native minds, and these remain unchanged through numerous ages. Tacitus describes the Gauls as gay, volatile, and precipitate, prone to rush to action, but without the power of sustaining adversity and the tug of strife; and this is the national character of the French of the present day. He represents the Britons as cool, considerate, and sedate, possessed of intellectual talent, and says that he prefers the native aptitude of the Britons to the livelier manners of the Gauls. The same mental qualities characterise the English of the nineteenth century, and they and the French may still be contrasted in the same terms. Tacitus describes the Germans, allowing for their state of civilization, as a bold, pru-

dent, self-denying, and virtuous people, possessed of great force of character; and the same features distinguish them still. The native Irishman, in manners, dispositions, and capacities, is a being widely different from the lowland Scotchman; and although we trace the two nations to the remotest antiquity, the same characteristic differences are found.

These differences between nations living under similar climates, are commonly attributed entirely to the religious and political institutions of the several countries. Presbytery and parish schools, for example, are supposed to have rendered the Scotchman cautious, thoughtful, and honest,—but habitually attentive to his own interest; while Popery and Catholic priests have made the Irishman precipitate and unreflecting,—but free and generous withal,—ready in the gust of passion to sacrifice his friend, and in the glow of friendship to immolate himself. But it is forgotten, that, in the ages when Popery and priests had equal ascendancy in all the British isles, the Englishman, Irishman, and Scotchman, were beings as specifically distinct as at present; besides, the more correct, as well as the more profound view, is to regard religious and political institutions, when not forced upon a people by external conquest, as the spontaneous growth of their natural propensities, sentiments, and intellectual faculties. Hierarchies and constitutions do not spring from the ground, but from the minds of men; and if we suppose one nation to be gifted with much Wonder and Veneration, and little Conscientiousness, Reflection, and Self-Esteem, and another to possess an endowment exactly the reverse, it is obvious that the first would be naturally prone to superstition in religion, and servility in the state; while the second would, by native instinct, resist all attempts to make them reverence things unholy, and tend constantly towards political institutions, fitted to afford to each individual the gratification of his Self-Esteem in independence, and his Conscientiousness in equality before the law. Those who contend that institutions come first, aud that character follows as their effect, are bound to assign a cause for the institutions themselves. If they do not spring

from the native mind, and are not forced on the people by conquest, it is difficult to see whence they can originate.

The phrenologist is not satisfied with these common theories of national character; he has observed that a particular form of brain is the invariable concomitant of particular dispositions and talents, and that this holds in the case of nations as well as of individuals.

In the Phrenological Transactions, an account is given of the Phrenology of Hindostan, by Dr G. M. Paterson. The HINDOOS are remarkable for want of force of character, so much so, that a handful of Europeans overcomes in combat, and holds in permanent subjection thousands, nay millions of that people. Power of mental manifestation bears a proportion to the size of the cerebral organs, and the Hindoo head is small, and the European large, in precise conformity with the different mental characters *. Farther, the Hindoo is distinguished by a great respect for animal life, and absence of cruelty in his dispositions; while, at the same time, he is destitute of fire, and also of that energy of mind which overcomes obstacles and gives force to command. The European is precisely the opposite; he lives to a great extent upon animals, is fierce in his anger, and is characterized by great combative and destructive vigour. The Hindoo brain indicates a manifest deficiency in the organs of Combativeness and Destructiveness; while, in the European, these parts are amply developed. The Hindoo is cunning, timid, and proud, and in him Secretiveness, Cautiousness and Self-Esteem, are large in proportion to the organs last mentioned. In intellect, the Hindoo is more prone to analogical than direct reasoning, and is fond of metaphors and comparisons, and little given to discriminating differences; and the organ of Comparison is much larger in his head than those of Causality and Wit. Dr Patterson states, that these facts are drawn from upwards of three thousand observations; and they are illustrated by a collection of Hindoo skulls, presented by him to the Phreno-

* At the end of this section a table of measurements is given of all the skulls mentioned in it.

logical Society. These skulls *, twelve in number, and four or five more of the same nation, acquired by the Society from other quarters, have been exhibited to public inspection for a considerable time, and no person has called in question either the justness of the character assigned to the Hindoos, or the correctness of the development described as accompanying it. We are entitled, therefore, *in hoc statu*, to assume the statements now made to be correct.

The Society's collection contains other specimens of national development of brain equally interesting. The CHARIB skulls present a striking appearance. They are much *larger* than the Hindoo heads, and, in conformity with the principle, that size indicates power, this tribe is the most remarkable, among all the native Americans, for force of character. The Europeans have in vain attempted to subdue them; they have hunted them down like wild beasts, and nearly extirpated them, but failed in every attempt to enslave them in a mass, as the Portuguese and Spaniards did the natives of Mexico and Brazil. Farther, the Charib brain is prodigiously developed in the regions of Combativeness and Destructiveness, in which the Hindoo head is deficient; and the former race is as ferocious as the latter is mild and inoffensive. In the reflecting organs, the Charib is the most deficient of any human beings whose skulls have come under our notice; and he is described as rushing with unbridled violence on present gratification, blind to every consequence, and incapable of tracing the shortest links in the chain of cause and effect. If the ear be taken as a centre, and a line drawn from it to the most prominent part of the forehead of the Charib skulls, and another line be drawn from the same point to the most prominent part of the occiput, it will be found, that by far the largest quantity of the brain is situated behind the ear; or, in other words, that the organs of the animal propensities greatly preponderate over those of the intellectual faculties; and if a

* I strongly recommend to the reader to inspect the casts of national skulls here referred to. The study of them will make an impression infinitely deeper than any description.

line is drawn from the ear to the highest point of the head, the height will be found to be small, compared with the European,—an indication that the organs of the moral sentiments also are deficient in size. The Society possesses casts of five skulls of Charibs, all of which, with individual differences, present a general type characteristic of the whole. In St Thomas' Hospital, London, I have seen the original of one of these casts:—the whole were procured by Dr SPURZHEIM from authentic skulls, and their genuineness may be relied on. It is confidently asserted by travellers, that the extreme depression of forehead in these individuals is artificial, produced by pressure, applied when young, some say by means of sand-bags laid upon the head while asleep; others by a board fixed to the cradle, and applied also during repose. There is no appearance of counter-pressure, which would unquestionably be found, if a board were tied on the forehead so forcibly as to depress the skull and brain, and this question is therefore attended with considerable difficulty; with the *cause* of the flatness we are not at present interested, the only point I wish to establish being the *fact* of concomitance between the deficiency of organization and deficiency of mental ability, which is so certain as to be altogether indisputable.

The NEW HOLLAND skull rises a little above the Charib, but indicates a lamentable deficiency in the regions of the intellectual and moral organs. The organs of Number, Constructiveness, Reflection, and Ideality, are particularly deficient, while those of the animal propensities are fully developed. The Society possesses casts of two skulls of natives of New Holland, and Sir GEORGE S. MACKENZIE has presented to it the actual skulls of a chief, and a female of that country; and the whole correspond, in a striking manner, in their general features.

If these skulls were put into the hands of a phrenologist to state the dispositions which they indicate, he would say that there ought to be considerable energy and determination, but extreme ignorance, rudeness, and grovelling lowness of cha-

racter. Every talent necessary for architecture, and the constructive arts in general, is defective, while Ideality is so small, that sentiments of refinement or elegance will scarcely be at all experienced. The most unaccustomed eye will perceive how far this skull and that of the Charib fall short of the European in the organs of Reflection, Ideality, and Constructiveness.

The following account of the actual condition of the natives of New Holland, is given in SMELLIE's Philosophy of Natural History:—"It would appear that they pull out the two fore-teeth of the upper-jaw; for in neither sex, nor at any particular period of life, are these teeth to be seen *. They are beardless; their visage is long, without exhibiting a single agreeable feature; their hair is black, short, and crisped; and their skin is equally black as that of the Guinea negroes. Their only clothing consists of a piece of the bark of a tree tied round their waist, with a handful of long herbs placed in the middle. *They erect no houses;* and, without any covering, they sleep on the ground. Men, women and children, associate promiscuously to the number of 20 or 30. A small fish, which they catch in reservoirs made with stones in arms of the sea, constitutes their chief nourishment; and with bread, and every species of grain, they are totally unacquainted †."—I select this description on account of its brevity.—SMELLIE refers to DAMPIER as his authority. In MALTHUS' Essay on Population‡, will be found a character of the New Hollanders, founded on "COOK's first Voyage," and "COLLIN's Account of New South Wales," coinciding in all important particulars with the foregoing.

The skull of the NEGRO evidently rises in the scale of development of the moral and intellectual organs: the forehead is higher, and the organs of the sentiments bear a larger proportion to those of the propensities, than in the New Hollander. The organs of Philoprogenitiveness and Concentra-

* These teeth are wanting in the chief's skull presented by Sir GEORGE S. MACKENZIE to the Society.

† Vol. ii. p. 84.

‡ Book i. chap. 3.

tiveness are largely developed; the former of which produces the love of children, and the latter that concentration of mind which is favourable to settled and sedentary employments. The organs of Veneration and Hope, also, are considerable in size. The greatest deficiencies lie in Conscientiousness, Cautiousness, Ideality, and Reflection. The dimensions of this skull are given in the table.

The different tribes which inhabit Africa present very different appearances in point of civilization; but none of them have made so great a progress as the European nations. I have been informed by persons who have been long resident in the West India Islands, that great differences are observed in the natural talents of the negroes, according to the provinces from which they have been brought. Some parts of Africa yield persons capable of becoming excellent operative mechanics; others, clerks and accountants; and some mere labourers, incapable of any intellectual attainment. It would be extremely interesting to learn in what respect they differ in the forms of the heads.

Some nations of Africa greatly surpass others in energy of character and mechanical skill. "The Caffres are entirely black, but bear no trace of the Negro features. In the form of their skull and face they differ little from the most perfect Europeans." This race is ingenious in several arts; but, on account of their constant wars, agriculture is in a depressed state. Although their coast is covered with excellent fish, they do not catch them, and indeed have no boats or canoes. Marriage is invariably conducted by sale. The Boshuans are represented as "gay, gentle, and peaceable" in their manners; yet they "carry on war as fiercely as all other barbarians.—Mr Campbell having, in the course of religious instruction, asked one of them, 'for what end was man made,' the answer was, 'for plundering expeditions *.'" Mr Bowditch gives an account of the Ashantees, by which it appears that they dis-

* Leyden and Murray's Historical Account of Discoveries and Travels in Africa, vol. ii. pp. 332, 350.

play great activity and considerable ingenuity of mind; but that they are debased by the most ferocious dispositions and the grossest superstition. The descriptions given by a variety of travellers of Timbuctoo, and of the commerce carried on upon the Niger by the natives of Africa, if they can be at all depended upon, also indicate considerable scope of mind, and some capacity for the social state, and place the Africans decidedly above the native Americans, of whom we shall shortly speak; all these facts coincide with the expectations which a phrenologist would form, on examining their different skulls.

One feature is very general in descriptions of the African tribes; they are extremely superstitious. They purchase *fetiches*, or charms, at a high price, and believe them to be sure preservatives against all the evils of life. This character corresponds with the development which we observe in the Negro skulls; for they exhibit much Hope, Veneration, and Wonder, with comparatively little reflecting power. Their defective Causality incapacitates them for tracing the relation of cause and effect, and their great Veneration, Hope, and Wonder, render them prone to credulity, and to regard with profound admiration and respect any object which is represented as possessing supernatural power.

The skull of a NORTH AMERICAN INDIAN differs considerably from that of the Negro: it is higher from the ear upward, and not so long from the front to the back. The forehead is not largely developed, while Firmness, Secretiveness, and Cautiousness, are very prominently enlarged; as is also Destructiveness. Adhesiveness and Concentrativeness, especially the latter, are small. The Society possesses only two casts of skulls of this tribe, and their general form and appearance are alike. It is impossible to draw any safe inference from so limited a collection, yet it may be worth while to notice their character, for the purpose of inducing travellers to attend to their cerebral development in their future descriptions.

" To fly from an adversary that is on his guard, and to avoid a contest where he cannot contend without risk to his

own person, and consequently to his community, is the point of honour with the American. The odds of ten to one are necessary to warrant an attack on a person who is armed and prepared to resist, and even then, each is afraid of being the first to advance. The great object of the most renowned warrior is, by every art of cunning and deceit, by every mode of stratagem and surprise that his invention can suggest, to weaken and destroy the tribes of his enemies with the least possible loss to his own. To meet an enemy on equal terms is regarded as extreme folly. To fall in battle, instead of being reckoned an honourable death, is a misfortune which subjects the memory of the warrior to the imputation of rashness and imprudence. But to lie in wait day after day, till he can rush upon his prey, when most secure and least able to resist him; to steal in the dead of night upon his enemies, set fire to their huts, and massacre the inhabitants, as they fly naked and defenceless from the flames, are deeds of glory, which will be of deathless memory in the breasts of his grateful countrymen *."

To this description may be added, that these savages possess insuperable determination: when the fate of war has placed one of them in the power of his enemies, he knows that the most dreadful tortures await him; but the point of honour then is to set the malignity of his tormentors at defiance, and to surpass in the powers of his endurance the utmost limits of their barbarous inflictions of pain. The American savage, besides, as already noticed, has never been found formed into regular society, but has continued a wanderer since the sun first rose upon his deserts down to the present day. Even contact with the European settlers, surrounded by arts and enlightened by intelligence, has scarcely communicated one spark of energy to this miserable race. When Europe has been conquered, the victorious and the vanquished have in a few ages amalgamated together, been blended into one, and have formed at last a single and united people.

* Malthus on Pop. B. i. ch. iv.

The native Americans have, on the contrary, uniformly receded before the Europeans; and even in those states of the Union in which their privileges are equal with those of the whites, they rarely rise above the dignity of a barber or a shoe-black.

The exact coincidence betwixt the development of these skulls and the character of this people would lead us to suppose that they represent the national shape. The general size is greatly inferior to that of the average European head; indicating inferiority in natural mental power. The combination of Destructiveness, Secretiveness, Cautiousness and Firmness, corresponds remarkably with their timid, cunning, persevering ferocity; while their deficient sentiments, Concentrativeness, and Adhesiveness, would account for the looseness of their social and patriotic relations.

The head of the BRAZIL INDIAN bears a great resemblance to the former. The deficiency in Size is the same, indicating natural inferiority of mind, and the combination of organs is similar, only Firmness is not so great, and Concentrativeness and Philoprogenitiveness are moderate. The dimensions are annexed in the Table.

It is known that the Jesuits attempted to civilize a number of these tribes, and that, by humane and intelligent treatment, they acquired a great moral ascendency over them, induced them to settle, and established something like order and the arts of social life among them. If their brains had possessed the European development, we would be led to expect that the seeds of improvement sown, and fostered for years by a protecting hand, would have sprung up, flourished vigorously, and produced an abundant harvest of permanent civilization; but the picture is precisely the reverse.—"It must be admitted," (says the reviewer of KOSTER's Travels in Brazil,) "that Mr KOSTER's representation of the Indians is by no means favourable; and the opinions which he expresses are of the more weight, because, as his feelings and principles are of the best kind, they lead him always to judge charitably, and to look forward with Hope." Infinitely ame-

liorated as the condition of the Indians has been, theirs is still no very desirable state of existence;—they are always regarded as children, and not always treated as they were by the Jesuits, with paternal kindness. But when they escape they shew little capability of acting for themselves, and an evident tendency (as if instinctive) to return to a wandering and savage life;—it does not arise from any feeling connected with the love of their ancestors, or a tradition of their free state; they do not appear to know that their ancestors had been slaves, much less would any knowledge be preserved of their anterior state. The Indian who has escaped from control scarcely ever plants for himself,—if he does, he sells the growing crop for half its value, and removes to some other district; fishing and hunting are his favourite pursuits, and he is never stationary for any length of time, unless it be near a lake or a rivulet." The strangest and worst part of their character is their want of natural affection,—an old charge against them, which Mr KOSTER's unexceptionable testimony confirms. "They appear," he says, "to be less anxious for the life and welfare of their children, than any other race of men who inhabit that country."

These observations present the most fertile field of speculation to the phrenologist. The cast of the Brazil Indian, shews a deficiency in size compared with the European; and, hence it corresponds with the fact, that these Indians are regarded and treated as children, that they are destitute of foresight, and that degree of steadiness of purpose which is able to pursue a remote advantage through numerous intervening obstacles. An individual is treated as a child in the general case, not out of perversity in his parents or guardians, but because his inferiority in intellectual power is felt both by him and them, although this may not be stated in so many words as the reason of his being subjected to guidance. When strength of mind appears, we are constrained, by the very laws of our constitution, to treat the possessor with respect, however infantine in bodily stature, or limited in point of age. Were the Indians, therefore, equal in their natural

energies to Europeans, they would soon, by dint of this mental power, acquire their knowledge and accomplishments, and instead of being their slaves, would become their rivals.

These Indians, however, have derived some improvement from education, although it has not supplied the defect of native energy. "If education has hitherto done little in implanting good qualities, it has done much in eradicating evil ones. They were among the fiercest and most revengeful of the human race; they are now quiet and inoffensive, rarely committing murder, (in a country where murder is accounted venial, and generally obtains impunity, if not applause;) and even those who are dishonest confine themselves to pilfering."

Mr KOSTER draws the following comparison between the Negro and Brazil Indian:—"The Negro character," says he, "is more decided; it is worse, but it is also better."—"The Indian seems to be without energy or exertion, equally incapable of great evil or of great good. Rich mulattoes and negroes are not uncommon; there is no instance of a wealthy Indian, nor did he ever see an Indian mechanic. The priesthood is open to them, but to little purpose. Mr KOSTER heard of only two Indians who were ordained as priests, and both died of excessive drinking."

It would be interesting to know whether the native Mexican brain is better developed, for a rude form of society existed there before the European conquest.

The SOUTH SEA ISLANDERS also present an interesting subject for phrenological observation. While the natives of Ceylon, Java, and several other islands of the East, have, after an intercourse with Europeans, and cultivation by missionaries for several centuries, made scarcely a perceptible progress towards Christianity, either in faith or morals, the inhabitants of Otaheite, and of others of the South Sea Islands, have been completely converted in less than half a century from their discovery by the English; and so complete is this reformation, that not only are the insignia of idolatry thrown down, and the worship of Christ substituted in their place, but they appear to have reformed even their

lives, and to have abandoned many of their barbarous practices. The phrenologist would infer, from these facts, that the development of the organs of Intellect and Sentiment is larger in them than in the Malays, New Hollanders, and other islanders of the East; and that, on this account, the doctrines of Christianity were the more readily felt to be congenial to their feelings and understanding, and in consequence more speedily and willingly embraced. We are still uninformed concerning the actual development of their brain, and I beg to suggest the propriety of some missionary, or traveller to those parts, sending home a collection of their crania.

The brains of the different EUROPEAN NATIONS differ considerably from each other, but a common type characterizes them all, and distinguishes them from those now described. They are decidedly larger than the Hindoo, American Indian, and Negro heads; and this indicates superior force of mental character. The portion before the ear, connected with the intellectual faculties, and the coronal surface, or the organs of the moral sentiments, are more amply developed in proportion to the base and posterior inferior parts of the brain, the organs of the animal propensities. In short, they indicate a higher natural power of reflection, and a greater natural tendency to justice, benevolence, and refinement, than the others. The features in which the European brain in an especial degree excels, are, Ideality, Conscientiousness, Causality, and Wit. The organs of these faculties are almost invariably small in the barbarous and savage tribes. The European skull belongs to the Caucasian variety of Blumenbach, which he considers as the most beautiful and perfect of all the national crania in the world; and in this point he and the phrenologists agree.

The ANCIENT EGYPTIANS appear, from the stupendous monuments of art and science left behind them, to have been a highly intelligent and civilized people; and it is a striking fact, that the skulls of ancient mummies are found almost invariably to belong to the same class as those of mo-

dern Europeans. In the Society's collection, there are casts of the skulls of five mummies, and I have seen or obtained accurate descriptions of the skulls of half a dozen more, and full size, large development before the ear, and broad coronal surface, characterize them all.

These facts appear to indicate, that when a nation is independent, and left at liberty to follow the bent of their own judgment and dispositions, their institutions spring from the peculiar mental constitution which they have received from nature, and that this constitution is in exact accordance with the development of their brains. Climate and other external causes modify to some extent the effects of natural endowment, but the distinguishing features of each people seem to bear a more direct and uniform relation to the size and form of their brain, than to those adventitious circumstances. Where a people is subjugated by a foreign power, as the Greeks by the Turks, and the Italians by the Austrians, the national character has no adequate opportunity of unfolding its peculiarities; and hence, if this circumstance is overlooked, the same race may seem to present different characteristics at different periods of their history. The modern Greeks, it was lately said, no more resemble their ancestors than the Hindoos the Europeans; and this was urged as an insuperable objection against Phrenology. Now, however, when the Turkish yoke is loosened so as to allow the native qualities to shoot, we see the same force of character, the same deliberate and determined heroism, and the same capacity for stratagem in war, with all the fickleness and proneness to dissension, the same ascendancy of passion over intellect and justice, which distinguished the Greeks in the days of Pericles, reappearing in their descendants. Many millions of Hindoos, Africans, and American Indians, have been for ages independent of a foreign yoke, and never displayed qualities such as those exhibited by independent Europeans.

MEASUREMENTS OF NATIONAL SKULLS.

	From Philoprogenitiveness to Lower Individuality.	From Concentrativeness to Comparison.	From Ear to Philoprogenitiveness.	From Ear to Lower Individuality	From Ear to Firmness.	From Ear to Benevolence.	From Destructiveness to Destructiveness.	From Secretiveness to Secretiveness.	From Cautiousness to Cautiousness.	From Ideality to Ideality.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Hindoo,	$6\frac{5}{8}$	$6\frac{1}{8}$	$3\frac{3}{8}$	4	$4\frac{7}{8}$	$5\frac{1}{8}$	$4\frac{4}{8}$	5	$5\frac{1}{8}$	$4\frac{1}{8}$
Charib,	$7\frac{2}{8}$	$5\frac{2}{8}$	$4\frac{7}{8}$	$4\frac{5}{8}$	$5\frac{1}{8}$	$4\frac{2}{8}$	$5\frac{6}{8}$	$5\frac{7}{8}$	$5\frac{6}{8}$	$4\frac{7}{8}$
New Hollander,	$7\frac{2}{8}$	$5\frac{7}{8}$	5	$4\frac{2}{8}$	$5\frac{4}{8}$	$4\frac{5}{8}$	5	5	$4\frac{2}{8}$	4
Negro,	$7\frac{4}{8}$	7	$4\frac{2}{8}$	$4\frac{5}{8}$	$5\frac{1}{8}$	$5\frac{1}{10}$	$4\frac{4}{8}$	5	$5\frac{2}{8}$	$4\frac{4}{8}$
American Indian,	$6\frac{2}{8}$	5	$3\frac{6}{8}$	$4\frac{7}{8}$	$5\frac{2}{8}$	$5\frac{2}{8}$	$5\frac{2}{8}$	$5\frac{2}{8}$	$5\frac{2}{8}$	$4\frac{5}{8}$
Brazil Indian,	$6\frac{5}{8}$	$5\frac{7}{8}$	$3\frac{6}{8}$	$4\frac{2}{8}$	$4\frac{6}{8}$	$4\frac{7}{8}$	$4\frac{6}{8}$	$4\frac{7}{8}$	5	$4\frac{3}{8}$
European,	$7\frac{5}{8}$	7	$4\frac{1}{8}$	$4\frac{6}{8}$	$5\frac{4}{8}$	$5\frac{5}{8}$	$5\frac{3}{8}$	$5\frac{5}{8}$	$5\frac{6}{8}$	5
Mummy,	$7\frac{2}{8}$	$6\frac{5}{8}$	$4\frac{5}{8}$	$4\frac{6}{8}$	$5\frac{2}{8}$	$5\frac{2}{8}$	$5\frac{4}{8}$	$5\frac{7}{8}$	$5\frac{7}{8}$	$4\frac{7}{8}$

These measurements are taken from individual skulls, and cannot be given as an exact statement of the average development of the different national crania. They are, however, an approximation to truth, and are sufficient to shew the interest of the investigation. The collection is still too limited to enable us to draw average results. The Negro skull is a very favourable specimen, and the European is perhaps under the average.

ON THE HARMONY OF THE MENTAL FACULTIES WITH EACH OTHER, AND WITH THE LAWS OF PHYSICAL NATURE.

In Phrenology there are three orders of faculties,—Propensities common to man with the lower animals; Moral Sentiments proper to man; and Intellectual Powers. I proceed to shew, that the dictates of each of the faculties proper to man are in harmony with the dictates of all the others; and that the Creator has established such relations between the human mind and the external world, that happiness, benefit, or advantage, is the natural result of actions approved of by the Moral Sentiments and Intellect; and evil or suffering the natural consequence of all manifestations of the lower propensities, in opposition to the dictates of the higher powers. The dictates of Benevolence, for example, when enlightened by Intellect, always harmonize with the dictates of Conscientiousness, and *vice versa;* and whatever conduct is approved of by these sentiments, when so enlightened, is always perceived by the understanding to be expedient, and if practically followed out, actually proves in its consequences to be so. In short, Phrenology aids us in demonstrating the truth of the maxim, *Nunquam aliud natura, aliud sapientia dixit.* In the following illustrations I necessarily confine myself to the present world; for consequences occurring in a future state do not fall within the limits of this science.

It is narrated that Themistocles told the Athenians that he had conceived a project which would be of the greatest advantage to Athens, but that the profoundest secrecy was necessary to insure its success. They desired him to communicate it to Aristides, and promised, if he approved, to execute it. He took Aristides aside, and told him, that he proposed unawares to burn the ships of the other Grecian states, then at profound peace with the Athenians, which would render Athens master of them all. Aristides reported, that nothing could be more *advantageous*, but nothing more *un-*

just than the project in view. The people refused to hear or to execute it. Here the *intellect* of ARISTIDES appears to have viewed the execution of the scheme as *beneficial*, while his sentiment of *Conscientiousness* distinctly denounced it as *morally wrong*; and the question is, Whether external nature is so constituted that the Intellect can, *in any case*, possess *sufficient data* for inferring *actual benefit* from conduct which is *disowned and denounced by the moral sentiments?* It appears to me that it cannot. Let us trace the project of THEMISTOCLES to its results.

In the inhabitants of the other Grecian states, the faculties of Self-Esteem, Combativeness, Destructiveness, Intellect, Benevolence, and Conscientiousness, existed. The proposed destruction of their ships (in time of profound peace), would have outraged the higher sentiments and intellect, and these would have kindled Combativeness and Destructiveness into the most intense activity. The greater the injustice of the act, the fiercer would the flame of opposition, retaliation, and revenge, have glowed; and not only so, but the more grossly and wantonly the higher sentiments were outraged by the act, the higher would be the class of minds which would instinctively burn to obtain redress. The Athenians, then, by the very constitution of nature, would have been assailed by this fearful storm of moral indignation and animal resentment, rendered doubly terrible by the most virtuous and intelligent being converted into the most determined of their opponents.

Turning to their own state again, only those individuals of the community in whom Intellect and Moral Sentiment were inferior to Acquisitiveness and Self-Esteem, which give rise to selfishness and the lust of power, would cordially approve of the deed. The virtuous would turn from the contemplation of it with shame and sorrow; and thus the number of the defenders would be diminished in the very ratio of the atrocity of the crime; while the power of the assailants, as we have seen, would, by that very circumstance, be proportionally encreased.

It was impossible, therefore, that advantage to Athens could

ultimately result from such a flagrant act of iniquity; and the apparent opposition, in the judgment of ARISTIDES, between the benefits to be expected from it and the justice of the deed, arose entirely from his intellect not being sufficiently profound and comprehensive to grasp the whole springs which the enterprise would excite into action, and to trace them to their ultimate consequences. There would, therefore, in point of fact, have been no opposition between the dictates of an intellect which actually surveyed the whole causes, and all the effects, and the dictates of Conscientiousness; but quite the reverse; and the Athenians, in following the suggestions of the latter faculty, actually adopted the most advantageous course which it was possible to pursue. The trite observation, that honesty is the best policy, thus becomes a profound philosophical truth, when traced to its foundation, in the constitution of nature.

Another example may be selected from our own history. In February 1820 THISTLEWOOD, and some other miserable wretches, known by the name of the *Cato Street Conspirators*, formed a plot to murder his Majesty's Ministers. EDWARDS, a spy, was employed to mingle with them, to gain their confidence, by pretending to be an accomplice, and to reveal their whole proceedings to his employers. He was accused of instigating, instead of merely watching the conspirators, which nobody attempted to defend. But, suppose that he had only spied and reported, was his employment justifiable? and if not *justifiable*, was it *expedient?* This case involves the same principle as the last. EDWARDS could not mingle among the conspirators and tell them that he was a spy; he must of necessity, therefore, have begun his employment by holding himself out to them as a friend, when he was in fact an enemy: in short, the first step of his proceedings necessarily involved a falsehood, or an outrage on Conscientiousness. Now, can a real gratification of Benevolence, or, in other words, can actual advantage, either to EDWARDS or the community, flow from a line of conduct commenced and carried on in direct opposition to the sentiment of Justice. If

the answer can legitimately be made in the affirmative, then the mental powers clash in their dictates, Conscientiousness denounces an action as unjust, and yet Benevolence approves of its results; and farther, the constitution of external nature is at variance with the dictates of one of the highest sentiments of the human mind. Let us analyse the case in all its bearings, and attend to the conclusion.

We may begin by inquiring into the extent of the dangers which are likely to arise to society from conspiracy. Phrenology authorises us to predicate, that men of powerful moral sentiments, and enlarged intellects, whose brains resemble those of the Reverend Mr M. or RAPHAEL, will not be naturally prone to enter into plots for *base purposes;* and it will scarcely be disputed, that, if the object is not wicked, the discovery is of little moment to society. Such individuals might enter into secret associations to produce a revolution like that of England in 1688, or a revolt like that of the United States against Britain; but the best interests of religion and morality render it desirable that such conspiracies should not be discovered, till crowned with complete success. Those persons, on the other hand, who are capable of entering into plots for shameful ends, are men of strong animal propensities, deficient moral sentiments, and limited intellectual endowment, such as BELLINGHAM, HEAMAN and THURTELL *. Now, what are their chances of success, if fairly left to themselves, and the operation of natural causes, in absence of spies and disguised informers?

In the *first* place, if their object be extensive, such as THISTLEWOOD'S, to murder sixteen men of the highest rank and most conspicuous station in the kingdom, the number of asso-

* The force of this argument hinges altogether on the fact, that a certain development of brain disposes to moral conduct, and an opposite development to crime; and, therefore, I cannot too earnestly request the reader to visit a collection of Phrenological Casts, and to select all the heads of individuals distinguished for morality and intellect, and to contrast them with the heads of executed criminals; and in reading this discussion, to keep the differences between them in view.

ciates must be considerable, say that their number is equal to that of their intended victims. A conspiracy, then, such as this, presents to the phrenologist the following points for observation. The conspirators are a numerous body of men, in whom the lower propensities are strong, the moral sentiments deficient, and the intellect in general weak. Certain visionary and extravagant expectations of personal aggrandisement, the gratification of revenge, or of some equally base passion, expected to accompany the attainment of their end, constitute the motives of their union: On the other hand, distrust of each other's honesty and discretion, the fear of detection and punishment, the hope of reward by betraying their purposes, or the suggestions of that portion of moral feeling which is present, even in the most depraved, are motives strongly tempting each to betray his companions, and the baseness of their natures gives these motives a prodigious chance of preponderating over attachment to the general cause.

In the *next* place, the poverty of their intellects, compared with the difficulties of their enterprise, increase the probability of their developing their designs through mere stupidity; for, of all projects, a plot among weak and wicked men, for nefarious objects, is the most difficult to conduct to a successful conclusion.

Hence, when the conspirators are a numerous body, the chances of detection, through the infidelity, imbecility, or compunctious visitations of one or other of them, increase in so great a ratio, as to give rise almost to a moral certainty that their designs will miscarry, and the explosion be prevented, by the use of mere vigilance, and other justifiable means. In fact, *the plot must actually be discovered, before a spy can be employed to watch it.* So much for the extent of the danger to be apprehended from conspiracy of rogues.

Let us next enquire into the probable conduct of any man who is capable of undertaking the office of a spy. Phrenology authorises us to predicate, that he must be deficient in moral principle in proportion to the energy of his selfish feelings, for the first step in the execution of his office is a sacrifice of

truth, for the expectation of reward. Deficiency of principle and high mindedness, therefore, being a first-rate requisite for his task, and his first step being vicious, it is not in nature that all that follow should be in the path of virtue. His leading motive being gain, he will infer that it will be the higher, the greater the extent of his services. But his services will be great in proportion to the magnitude of the discoveries made by him. His discoveries, however, cannot be important, unless the intentions of those whom he is to betray are very wicked, and their preparations very formidable. He has, therefore, a strong *interest* (a feeling to which, from his very vocation, he must be vividly alive), counteracted by little moral principle (which, from his undertaking the office, he cannot strongly possess), tempting him to lend an exciting hand to engender a plot, with the view of encreasing the apparent danger, thereby to add to the value of his services, and the extent of his reward; so that it would almost be another miracle in the moral world, if he did not fan the very flame, the first sparks of which he was sent to watch, that it might be extinguished before it blazed.

The conclusion, then, at which we arrive by this analysis, is, that Benevolence (to the ministry or the public), does not require an outrage on Conscientiousness for its gratification; because conspiracy, if its ends are wicked, and its magnitude great, will betray itself by the natural operation of its own elements, and may be defeated by ordinary prudence, or the use of means acknowledged by *all* the moral sentiments.

In regard to the spy himself, who, we have seen, engages in an employment disowned by Conscientiousness, in expectation of reaping benefit or advantage to himself, we require only to follow out his history to discover the futility of his expectations. In the first place, the higher sentiments exist, to some extent at least, in his employers; and even by them his vocation will be instinctively felt to involve so great a deficiency of moral principle, as to unfit him for any honourable employment, requiring integrity and character for its execution. They will in their inward thoughts despise him.

In the most favourable view, then, they will pay him his stipulated reward, and dismiss him forever from their sight, or place him in some base condition, congenial, in their view, to his sordid and unprincipled mind. But, farther, from the deficient mental constitution which he must necessarily possess, before being capable of embarking in his vocation, the whole probabilities are that he will foment the plot; and this being detected, his employers will be disgraced by his proceedings, and will probably visit him with punishment instead of reward. Finally, the higher faculties exist strongly in the *public*, and they instinctively recoil from all nefarious conduct. As soon, therefore, as the spy shall be known to them, he will become the object of a pitiless storm of moral indignation; every man's hand will be against him; and a severe punishment will overtake him, instead of his expected advantage.

If these views be correct, we come again to the conclusion, that, in this instance also, the dictates of the several moral faculties harmonise, and that the constitution of the external world is in accordance with their supremacy, so that it is not necessary to do evil that good may come.

These views have long been recognised by the moral and religious; but before the tangible views of the constitution of the mind afforded by this science were possessed, it was extremely difficult to demonstrate their truth. The force of the reasoning by which they are supported, depends, as I have said, on the fact, that certain moral and intellectual deficiencies must be present, in the mental constitution of the individuals, before they can be capable of joining in wicked enterprises; and that the natural operations of minds so framed, will ensure the failure of their schemes; but, if we go into society at large, two-fourths of mankind will deny the existence of natural differences in the mental powers, another fourth will admit them, but deny that any such peculiarity is necessary to constitute a conspirator; and the other fourth probably assert, that such views are theoretical, and not to be relied on in practice. Phrenology, on the other hand, exhibits the men-

tal faculties to us as agents, or causes which produce effects, and enables us to trace their results with a degree of precision and confidence of their stability, that would authorise even a prudent man to rely on them in practice.

In No. LXXXI. of the Edinburgh Review, there is an able article on the abolition of the impressment of seamen, which admirably illustrates the doctrine we are now considering. The author commences by observing, that " it would be absurd at this time of day, to say one word on the manifest *cruelty and injustice* of our practice of impressment, since nobody, so far as we can learn, denies that it is in itself most cruel and unjust, or seeks to defend it on any other ground *than that of necessity* and he proceeds to enquire, whether it be expedient or not. If any one admits that impressment is " cruel and unjust," he must allow that it outrages Benevolence and Conscientiousness. If, then, he imagines that its consequences, when traced out by Causality, will nevertheless unequivocally appear to be beneficial, what would follow? This would imply, that the Creator has either given us moral sentiments, which disown the conclusions of the intellect, and intellect which stands opposed to the dictates of the sentiments, or that he has constituted the external world so unskilfully, that we may act in direct opposition to the moral faculties, and nevertheless be greatly benefited by our conduct. The phrenologist, on the other hand, who believes in the Wisdom and Benevolence of God, cannot for a moment entertain such absurd conceptions. He would analyse the question in the following manner, to arrive at its real merits. It is admitted, he would say, that impressment is cruel and unjust; and it is therefore disowned by Benevolence and Conscientiousness: Those who practise it, however, contend that it is *expedient* or *beneficial* to the community; but, if it were so, the dictates of the moral sentiments would stand in opposition to the constitution of external nature. We hold, however, that these always coincide: Therefore, *injustice and cruelty cannot in any case* be beneficial to those who practise them; and hence impressment *cannot* be either necessary or expedient. If these prin-

ciples be correct annunciations of *natural laws*, the actual results, when clearly traced, should coincide with them, as precisely as the motions of the planets do with the laws of gravitation discovered and expounded by NEWTON; and accordingly this is truly the case. The reviewer shews, in the clearest manner, that the real consequences of impressment are, that the nation gets fewer men, and worse men, and pays higher for them, than if impressment were done away with. I cannot go into the details, without breaking in upon the unity of the present subject, but the article is well worthy of perusal, and forms a beautiful illustration of the principle now under discussion *.

Many persons at one time attempted to justify the slave trade, and now defend the continuance of slavery, on alleged grounds of advantage to Britain from the practice; but, if real benefits, when the whole consequences are taken into account, could be demonstrated to arise from so atrocious an infraction of the dictates of Benevolence, Justice and Veneration, we should be reduced to the dilemma before alluded to. The subject is by far too extensive for discussion here; but we may rest assured, that the principle now contended for will apply to it as well as to the cases which we have analysed in detail. The Great Creator's laws admit of no exceptions; and in the west, as in the east, to an intellect that can embrace the whole relations of the case, oppression and injustice will be found to recoil, in the shape of suffering, on the heads of those who practise them, as certainly as the sun gives light, when risen above the horizon. I would not be understood, however, as maintaining, that this enormity, after its long continuance, can be *instantaneously* laid aside, with advantage even to its victims. All I contend for is, that its adoption cannot have been for the interest of Britain; that its continuance cannot minister to her advantage, and that every day that it exists, it must, of necessity, carry its own punishment in its train, and produce a certain portion of evil to her and her colonies.

* An abstract of the article is published in the Phrenological Journal, vol. ii. p. 478.

Much has lately been written to induce the Legislature to re-enact the laws against combination among workmen; and we may try the question by the rules here expounded. It is an obvious dictate of Conscientiousness, that every man has a right to dispose of his labour in such manner as pleases himself, provided he abstains from aggression against his neighbour. If, then, the constitution of nature is in harmony with the dictates of Conscientiousness, it must be not only just but actually *advantageous* to society at large, to *masters* themselves, as well as to servants, to permit the latter to be free. If suffering is experienced in the transition from injustice to justice, this must necessarily be the fruit of the *former;* for the latter, if God has made the world, must, in its direct and natural consequences, yield benefit to *all.*

This subject is one of great extent, and of mighty interest. Up to the present day, legislators and mankind at large have never practically acted on the principle of harmony between the constitution of external nature and the moral powers of man; but often on the opposite doctrine. Each nation, for example, has conceived that it might benefit itself by the robbery, plunder, and devastation of its neighbour; or, in other words, that it might outrage Conscientiousness, Benevolence, and Veneration, and reap a golden harvest of prosperity. If the principle now contended for be sound, a mind that was sufficiently comprehensive to embrace the whole consequences, fairly and naturally flowing from such conduct, would arrive at a perfect demonstration of the fallacy of the notion. In like manner, in times that are scarcely bygone, nations have endeavoured to grow rich, by acting under the dictates of Acquisitiveness and Self-Love, in opposition to the voice of Benevolence and Justice, by throwing every possible obstacle and restriction in the way of the prosperity of their neighbours, and snatching at every apparent advantage in favour of themselves. Now, if the Creator has arranged the world in such a way, that nations, as well as individuals, may practise justice and mercy towards each other, with gain instead of loss, we may be certain that all these attempts will terminate in the disadvantage of those who place in them their

hopes; and experience is now proving this to be the case. Every act of selfishness on the part of one nation just excites retaliation in another, and the system spreads around, till the first aggressor is encircled by a barrier of restrictions, cramping every legitimate exertion, which it will require centuries to remove.

In the intercourse of nations, also, a good diplomatist is supposed to be a person of such depth of design, that no one can fathom his intentions, and possessed of such a capacity for intrigue, as to be able to circumvent all those with whom he transacts. Such qualities are requisite only when the object desired to be gained stands in opposition to the moral sentiments of man; for, if the end be acknowledged by Justice, Veneration and Benevolence, then it would be an infringement of the wisdom of the Deity, were fraud and deception *necessary* for its successful prosecution; and if every thing that is unjust is also prejudicial to him who desires it, which assuredly it is when all its consequences are seen, it follows, that all dishonesty, overreaching, self-seeking, whether in public or private, is futility and imbecility, and blindness to real advantage, instead of profound penetration and practical wisdom.

Mr Stewart, in his preliminary dissertation, makes some beautiful and sound remarks on this subject, and among others observes, that Fenelon, in his Adventures of *Telemachus*, by merely laying down the pure dictates of Benevolence and Justice, in regard to international and commercial law, has anticipated the profoundest discoveries of the political economists of the present day. In treating of judgment *, I have stated, that a sound practical understanding is constituted more by a good endowment of the sentiments, than by possession of a brilliant intellect, and the principles now unfolded explain the *rationale* of this doctrine. If apparent advantage prompt an individual to a certain line of conduct, but Benevolence, Conscientiousness and Veneration direct their dictates against it, and if his intellect be too limited to discover fallacy in his expectations, he will assuredly act most wisely and be-

* Page 395.

neficially, by obeying the dictates of the higher sentiments as his guides, and abstaining from the conduct which *they denounce*. It is always safe to *abstain* from actions of which they disapprove, even although the intellect should not be able to trace the consequences; but, it is not safe to follow their dictates *actively*, except when they are enlightened by intellect, because they, being emotions only, do not judge of the most proper means for their own gratification.

History will never accomplish its full measure of utility, till it be written on the principles now laid down. If we trace the actions of the human species from the first dawn of their existence up to the present hour, then, according to these views, their whole happiness ought to be found to flow from obedience to the moral powers; and no flagrant indulgence of the lower propensities in opposition to them will occur, that does not carry its own punishment in its train. To bring this great and important truth clearly out, would require a mind of great scope and profundity, and of high endowment of sentiment; but such a mind, I am convinced, might accomplish the task without once deviating from the most rigid rules of the inductive philosophy.

It will probably occur to many readers, that, in actual life, and in history, innumerable exceptions to this doctrine will be found. The patriot will be pointed to, expiring on the rack beneath the blows of the triumphant tyrant; the good man will be shewn to us ruined and oppressed by the prosperous knave; and we shall be asked, what confidence can we repose in rules that admit of so many and such important exceptions? The answer is, that, to attain their legitimate ends, the moral sentiments must act under the guidance of enlightened intellect, because their blind dictates may produce abuses, and lead to evil, in the same way as unrestrained animal propensities. Suppose that, in Spain, at this moment, when the ferocious bigotry of FERDINAND spreads terror and desolation over every mind, some patriot should arise, and, proclaiming the supremacy of justice over a tyrant's will, should incite his countrymen to rid themselves of their oppressor, the probable con-

sequence, would be his own execution, and that of all those who embarked in his design; and it might be said, that, in this instance, an individual following the unbiassed suggestions of Benevolence, Veneration and Justice, would be brought by his conduct to the scaffold. Let the intellect, however, be employed on the scheme, and the result will be seen to wear a different aspect. The Spanish nation, in general, appears to be sunk in an abyss of degradation; animal ferocity, intellectual imbecility, and bewildered sentiment, at present characterise them as a people. To propose to minds in this state of demoralization to step forth and encounter danger and death, for the purpose of establishing the supremacy of law, justice, and enlightened piety, is as little in accordance with the laws of the moral world, as to embark on a twig with the view of saving a fellow creature from drowning, would be in harmony with the laws of physical creation. In both cases, Benevolence would act blindly, without regard to the constitution of external nature, and the destruction of the individual would ensue. But let a person act in accordance with this constitution, under the guidance of the moral sentiments, enlightened by intellect, and the consequences will be different. The great cause of FERDINAND's tyranny is the gross ignorance and superstition of his subjects. To remove him, therefore, while these causes remain, would not be so great an exertion of Benevolence as might at first be supposed. Intellect directing this sentiment, would suggest the cultivation of the minds of his people as likely to be more beneficial. Hence, true patriotism in Spain would consist in disseminating knowledge, and exciting to probity; and he who should communicate liberal ideas, and pure sentiment to the Spaniards, would do them a greater service than another who should decapitate FERDINAND, and proclaim the Constitution of the United States of America. Such a Constitution, indeed, communicated suddenly to a people in their benighted condition, would not be a gift of *Benevolence;* it would give the reins to their evil passions, and the country would be deluged with blood *.

* Mr LYON, in an able Essay on the Phrenological causes of Political Liberty,

In like manner, where the just man suffers, we shall find, that, in general, there has been a *defect* in his own conduct; that his justice has acted *blindly*, without regard to the qualities of those in whose power he placed himself, or to the natural and legitimate consequences of his own actions. The proposition maintained on the present occasion, is not, that individuals may act fearlessly under the blind dictates of the moral sentiments, and be certain of success; but that, when the intellect is thoroughly enlightened concerning the qualities and relations of external objects and beings, there will always be distinguishable a field in which the moral sentiments may be legitimately manifested, and that the individual will best promote his real interest, by shaping his conduct in accordance with them.

The great source of the sufferings and calamities that have attended and now attend the virtuous, is their own ignorance of, and inattention to, the real constitution of nature. If a person, actuated by the purest Benevolence, should proceed to construct a railway, with the view of conferring great advantages on the inhabitants of a particular country, but without first convincing the proprietors through whose lands it was to pass of the benefits of the plan, and obtaining their consent; also, without attending to the laws of gravitation, and their effects on heavy bodies moving along a surface such as he proposed to adopt; and likewise, without calculating the probable expence of the plan, compared with his own means to defray it; no one would think of accusing Providence for his failure, or exclaim against the constitution of the world, as one in which Benevolence encountered determined opposition, and led to inevitable ruin. Every reflecting person would acknowledge, that the disappointment arose from the projector's own inattention to the natural relations of things, and would hold him alone to blame for the

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published in the Phrenological Journal, vol. ii. p. 598, throws light on the real circumstances which fit a nation for freedom, and shews that the attempts of patriots have often failed, from their not attending to certain requisites, without which liberty cannot exist.

consequent distress. In the same way, men, actuated by vivid impulses of the higher sentiments, have frequently rushed blindly forward in a path that looked like that of virtue, but altogether regardless of the natural qualities of the objects which surrounded them, and without any comparison of their own strength with the obstacles to be surmounted; and because they have encountered calamity and reproach, they have exclaimed, that this is a wicked world, in which the vicious triumph and the just obey. To an intellect, however, which could have seen the real relations of things, it is certain that they would have appeared running in blind opposition to the constitution of nature; and that either the object which they had in view, was *not* the one calculated to be *really beneficial*, or that it was attainable in one way, while they had unfortunately selected another path which did not lead to it. Where the virtuous run counter to the institutions of Providence, they cannot succeed unless GOD were to repeal his laws, and work miracles in their behalf; but from this it does not follow that His arrangements, when profoundly traced and distinctly perceived, are not in perfect harmony with the dictates of all the superior faculties of man.

Teaching and preaching seem susceptible of improvement in one respect. At present they are confined too exclusively to the mere announcement of duties; we are told to "be pious, to be just, to be charitable." Such precepts are the simplest of all communications, they are the direct and spontaneous dictates of the moral sentiments, which are possessed, to some extent, by all men; but a great deal more information is required to teach us how to obey them with success. The animal propensities, for example, solicit us to act in one way, the sentiments in another; and the intellect, uninstructed in regard to the *relations and consequences of things*, is incapable of reconciling the opposite desires, or of devising a course of action that will satisfy both. Hence the individual either abandons himself to his propensities, reaps disappointment and calamity as the result, and complains of the vanity and vexation of all earthly enjoyments; or he resolutely sub-

dues the propensities, is sternly virtuous and pious, and then complains that this world is a weary wilderness, a warfare in which there is no rest, a state to be *endured*, but not enjoyed. Now, it appears to me that there is error in both of these courses of action, and that GOD has established such relations among the faculties themselves, and between them and the external world, that it is, in general, possible to gratify the *whole faculties*, without abusing any, and that the result of such gratification will be satisfaction and real enjoyment, highly favourable, at the same time, to morality and religion.

To be able to find out the line of conduct calculated to lead to this result, the individual must know, 1*st*, The nature of his own faculties, their legitimate uses, and their abuses: 2*dly*, The relations of these faculties among themselves; and, 3*dly*, Their relations to external beings and objects. Before Phrenology, was discovered no correct or scientific information existed concerning the primitive faculties of man, and, consequently, their relations could not be discovered. Now, however, that the constitution of the mind is known, the instructors of mankind ought to employ their intellects in discovering and teaching *how* the faculties may be gratified, so as to reap all the enjoyment which the Creator has placed within our reach, and *how* to avoid the evils that result necessarily from conduct in opposition to His arrangements. (See Note C.)

ON INSANITY AND CRIMINAL LEGISLATION.

AMONG the most interesting phenomena of mind, are those presented by it when labouring under disease. No stronger proof could be adduced of the imperfect state of mental philosophy, as taught by the metaphysicians, than the fact, that in the diagnosis, treatment, and cure of Insanity, their doctrines are entirely useless. Future ages will be surprised when they learn, that, in the nineteenth century, professors in every college lectured upon the mental powers, and were listened to by attentive hearers; but that when the manifestations became

deranged, their knowledge was conceived to bear so small a relation to the case, that they were passed by, and a physician or surgeon, probably altogether unacquainted with metaphysics, was called in, and the disordered mind committed to his administration for a cure. If the philosophy of mind, in its sound state, were truly founded in nature, such a separation of theory from practice could not occur. The fundamental error originates in the neglect by the metaphysicians of the influence of the organization with which the mind is connected. They study the mind as if it were a disembodied spirit; but a spiritual essence cannot become diseased, and be cured by medicine; the organs alone are subject to malady; and hence, whenever the action of these corporeal instruments become deranged, and unusual manifestations occur, a new element as it were starts into play, not known or admitted in the metaphysical systems, and their whole rules, principles, and theories, become inapplicable.

The phrenologist, on the other hand, studies the mental powers in connection with the organization. He ascertains the healthy functions of the faculties and organs; and when they become diseased, the phenomena appear to him natural and easy to be accounted for.

In treating of the organs, I have occasionally noticed the effects of their derangement on the mental manifestations *. It may perhaps be expected, that I should proceed to shew what light Phrenology will throw upon the medical treatment of Insanity; but this would be passing beyond the proper bounds of science into the province of medicine. A few observations, however, may be hazarded on the subject, without impropriety. It was lately the practice to treat madness or fury by bleeding and general depletion; and cases of melancholy, by administering bark, wine, and other tonics and stimulants. Now, the phrenologist would be led to suspect that the cause of both these diseases may frequently be the same, or that inflammatory action, affecting the organs of Combative-

* See pages 74, 81, 96, 109, 125, 136, 151, 165, 166, 179, 193, 203, 218, 249, 316, 374, 380.

ness and Destructiveness, may produce the symptoms denominated Fury; and that the same cause affecting the organs of Cautiousness, Conscientiousness, and Veneration, may produce the symptoms designated Melancholy. It will at once be admitted, that all remedies ought to have reference to the cause of the disease, and not vary merely on account of the symptoms. Inflammation of the ear, for example, produces distressing noise; and inflammation of the eye produces bright sparks, and the sensation of light. It would be ridiculous, however, to treat the inflammation of the ear by tonics, and that of the eye by depletion. In like manner it appears to have been absurd to treat inflammation, or whatever else the affection of the organs of Combativeness and Destructiveness may be, by bleeding, and to treat the same affection of the organs of Cautiousness, Veneration, and Conscientiousness, by administering tonics. A correct knowledge of Phrenology will be of some service in preventing the physician from mistaking difference of symptoms arising from the same cause attacking different parts of the brain, for actual difference of disease; and it will tend to introduce system and consistency into his administration of remedies.

Diseases of the organs of the mind differ from affections of other organs in this, that they are susceptible of great alleviation from moral treatment; and here Phrenology affords a powerful aid. The basis of a rational moral treatment must be to avoid every circumstance and idea that can by any possibility irritate and excite the diseased feeling or intellectual faculty. Now, the phrenologist, who knows the boundaries of each faculty when in health, its range of objects and interests, and who discriminates correctly, the precise powers impaired, must obviously have it much more in his power to avert all prejudicial influences from the patient, than a person who possesses either no knowledge, or an imperfect knowledge founded only on vague conjectures, concerning the faculties in health, who does not believe in the existence of separate organs and powers, and who, in short, has neither theory nor principle, in regard to the mind, on which he can ground his proceedings.

The next object to be attained by moral treatment, is to supply to the sound faculties every excitement that is at all likely to prove beneficial, by diminishing the activity of those which are diseased. To attain this end successfully, nothing appears to be more indispensable than to know correctly what other faculties the patient possesses, and in what degree they are susceptible of excitement. When we contemplate a physician, who is no phrenologist, proceeding to determine on such a point, he is absolutely without aid or compass to guide him. If he assumes his own mind as the standard of human nature in general, and prescribes music to a melancholy patient, because he himself likes music, he may utterly err; if he prescribes mechanical exercises, because he himself is fond of relaxing his mind in this department of art, he may again fail; or if, taking a wider basis for his prescriptions, he order to one patient a kind of exercise which he found to benefit another, here, again, he may be mistaken, for the combination of faculties may be different, and then the same objects or employment will not interest both. In short, let him do all that human skill and the best intentions can accomplish, and he must still prove as frequently unfortunate as successful; and his efforts must necessarily be repressed by a Consciousness, that he does not see clearly the whole elements which he is attempting to direct, and that his best laid schemes are liable to be rendered abortive, by circumstances in the mental constitution of the individual which he cannot discover, till they manifest themselves in causing his disappointment.

To the physician, on the other hand, who is acquainted with Phrenology, and who possesses sufficient tact of mind to avail himself of its aids, the whole circumstances are different. He would know what sound mind is, and, by examining the head of the patient, be able to discover the range of his desires and his aversions, and of his intellectual strength and weakness; and, what is of no mean importance, be able to satisfy the patient that he understands his disease. A large and active brain, however, well developed in the moral and intellectual regions, will be indispensable in the individual himself,

who take the practical direction of the insane, to enable him to turn Phrenology to full account; for it is undeniable, that many men of respectable attainments possess no tact for treating diseased feelings, sentiments and intellectual powers, even although the constitution of their organs was known to them as matters of science; and besides, they possess no mental resources to enable them to call forth and support in action the faculties of their patients, by the exercise of their own. The resident director of a lunatic asylum, in my opinion, ought to be a man of genius, splendidly endowed by nature, with the Propensities, Sentiments, and Intellectual powers in his own mind; and instructed in Medicine, Phrenology, and a variety of other branches of knowledge. Such a person would possess all the chords of mind powerful in himself, and could touch the different varieties of them in his patients. He would enjoy that force of character and buoyancy of spirit which have immense influence in calling out latent energies, and even in soothing irritated feelings.

The objection will no doubt occur, that men of genius will not deign to accept of such an employment. Not certainly while matters continue on their present footing; where the treatment is empirical and unsatisfactory, and where talent and genius can produce few or no results, from possessing no principle to direct their exertions. But alter the aspect of affairs, shew how these qualities can find scope in the situation in question, and point out how they can benefit mankind, and then I have no doubt that the very best of men will be attracted to it, through feelings of Benevolence as well as a field for acquiring an honourable reputation. I say nothing of emolument, because this can never be wanting. If the advantages are worth the purchasing, money will never be withheld. Besides, genius when united with high moral feelings, and no other would suit, is not held in bondage by the love of gain. The Church of Scotland lately possessed Dr Chalmers; it afforded him only L. 400 a-year; and from whatever motive he has left it, it is not because the emoluments were in his own opinion inadequate to his deserts.

A knowledge of the effects of disease in the organs on the manifestations of the mind, is important, in the next place, to judges, lawyers, and all persons liable to be called to decide as jurymen on the actions of the insane.

In law, only two kinds of insanity are recognised by the present practice, Idiocy, arising from great deprivation of intellect, and Furiosity, consisting of ungovernable impulses to violence. These cases of insanity, when the symptoms are sufficiently marked, are attended with little difficulty. The principle has often been mentioned, that power in the faculties depends upon size in the organs. A certain size is requisite to the healthy manifestation of the mind, and when it is not present, idiocy never fails to occur. The casts of the idiots in the phrenological collection are examples of this fact. But, farther, the brain, like other parts of the body, may become diseased, and the manifestations will in consequence be disturbed; hence it is quite possible to meet with idiots whose heads are not small; but in all such cases internal disease must necessarily exist. Furiosity, again, appears to arise from ungovernable activity in the mental organs, generally, and particularly in those of Combativeness and Destructiveness. These cases do not require me to dwell on them.

But there are other forms of mental derangement, not yet recognised in law, and scarcely even by reflecting men in common society, which, nevertheless, are not of rare occurrence; and the true nature of which can be understood only by means of Phrenology.

When we examine a very small brain, and perceive general idiocy accompanying it, the effects of deficiency in size are easily recognized, and mental weakness is then so palpable, that no one can doubt of its existence: But there is another case which occurs in life, in which the brain is quite sound *in structure*, in which *certain of the organs* are developed to *an average degree*, but in which *others* of them, say the whole intellectual region, is so extremely deficient in size, that an average strength of intellect is wanting. A case of this kind proves an enigma to courts, philosophers, and the

vulgar, for the individual does not rave, neither does he talk incoherently; on all matters connected with sentiment and propensity he commonly acts with propriety; and yet the general tenor of his actions betrays a deficiency of mind, which renders him incapable of managing his own affairs. These remarks will be best illustrated by a case which occurred some years ago in the Court of Session.

J—— B——, student of divinity, having succeeded to some property on the death of a brother, the Court of Session, on 10th July 1816, appointed W—— G——, his sister's husband, *curator bonis*, to manage his effects, (on the certificate of two medical practitioners that he was imbecile in mind.) In a year and a half afterwards, a petition was presented to the court in name of Mr B—— himself, and of certain persons as his interdictors, alleging that he was capable of managing his own affairs, and craving that the curatory in favour of Mr G—— might be recalled. This brought on the question, whether he was imbecile or not; and the court remitted to the sheriff of Edinburgh, then Sir William Rae, to adduce evidence, and to report upon the subject. The following evidence was given, to shew that Mr B—— was sane.

J—— W——, Solicitor of Supreme Courts, deposed, that he became acquainted with B—— in 1781, when at the High School of Canongate; that B—— "was an excellent scholar, and generally dux of his class." B—— was employed by Mr Inglis, the master, "to assist him." "He was uncommonly good natured and obliging, and not deficient in point of understanding, but quite the contrary." "Down to within these two or three years there was no material change on his mind; but, during this last period, he was not so correct as he used to be."

The Rev. A—— J—— of S—— deposed, that, about ten or twelve years ago, B—— taught a school at Elphinston, and applied to the presbytery of Haddington to be licensed. He was remitted to two or three of the presbytery, to examine him privately; and the report was favourable. He was

taken, therefore, upon public trials, and was *remitted* to his studies,—a mild mode of rejection.

J—— B——, Esq. advocate, deposed, that B—— officiated as his private teacher in 1799 or 1800, and it did not appear to the deponent, at that time, that there was any defect in his mind. He saw him for half-an-hour in the house of J. A. MURRAY, Esq. advocate, in summer 1818, and, for any thing he could see on that occasion, there was no material alteration on the state of his mind. His impression was, that his mind was entire, but that his manners, habits, and dress, were calculated to lead to a supposition that his mind was imbecile.

J—— D——, coach-maker in Edinburgh, deposed, that he was at the Canongate school with B——, and about thirteen years ago he attended the deponent's son as a private teacher, and has called upon him since. When at the Canongate school, B—— was the best scholar in his class; he was not defective in understanding, and was not made game of by the other boys. His mind continued equally free from defect when he attended the deponent's son, and he considers his understanding as perfectly entire at present.

The Rev. J—— S——, Edinburgh, deposed, that, so far as the deponent could judge from conversing with him, he seemed to be possessed of all his faculties, as far as to be able to perform the ordinary duties of life, and this in February 1818.

R—— R——, shoemaker, deposed, that B—— was very *siccar* (Anglicè *hard*) in his bargains, and spoke rationally on many subjects; and his gestures were the worst thing about him.

Mr M——, cutler, P —— M——, baker, and other tradesmen, all deposed that B—— made bargains with them, with sufficient attention to his own interest, and conducted himself rationally.

On the other side.

The Rev. J—— P——, Edinburgh, deposed, that B——

and he attended the classes in the College together: that the boys about the College treated him as a fool, and that his impression at this time was that B—— had been born a fool. He has observed no change on his faculties, and considers him still as an imbecile person.

P—— B——, insurance-broker, considers him as a weak minded man.

R—— W——, merchant, had a fixed impression that B—— was silly in his mind.

Mrs P——, 17. Crosscauseway, considers him as altogether an imbecile and weak person, and incapable of managing his own affairs.

R—— K——, writer, deposed, that his general impression was that B—— was crazy.

Dr A——, Dr W—— F——, and Dr G—— W——, all reported that B—— was highly imbecile and deficient in understanding.

The Sheriff of Edinburgh gave in a report to the same purpose; and the Court held him to be imbecile, and refused his petition for recal of the curatory under which he had been placed.

It is impossible to read these contradictory statements without surprise; and an unreflecting mind might suspect want of discernment or candour on the part of the witnesses. But, in the *first* place, this case shews us how extremely vague the notions are which ordinary thinkers attach to the word *faculties;* and, in the *second* place, the fact revealed by Phrenology, that some faculties may be diseased or deficient, while others are entire, removes every difficulty.

I have seen B——, and can testify that his head presents a due development of Language, Lower Individuality, Acquisitiveness, Secretiveness, Conscientiousness, and Cautiousness; while the organs of the Reflecting Faculties, although distinctly marked, are deficient in size. Hence, the witnesses who had attended to the manifestations of his faculty of Language alone, deposed that he was an excellent scholar. The shoemakers and tradesmen who had sold him goods, having

found that, under the influence of his powerful Acquisitiveness, he drove a hard bargain, swore that he was a shrewd and *siccar* man. The presbytery of Haddington, at his first examination, which was confined to the languages, were pleased with his appearance: but the moment the manifestations of the Reflecting Faculties were required in a sermon, his deficiencies of understanding appeared, and the presbytery accordingly rejected him. The medical gentlemen, and the sheriff who attempted to reason with him, pronounced the same opinion. The individual appears to me to possess the sentiments and perceptive faculties in a sound state, and in an average degree; while his reasoning powers are rather deficient in strength than deranged.

The litigation in this case was prolonged to a ruinous extent, and the Court was occupied for several days with long pleadings, with the view of arriving at a distinct perception of the real state of B——'s mind. It is obvious that each advocate might present a case of demonstrative evidence of sanity or insanity, according as he founded on the manifestations of the faculties whose organs were fully developed, or of those whose organs were deficient in size; and the difficulty to the Court in judging where the truth lay, without a theory of mind at all capable of reconciling the apparent contradictions, must have been very great. To a phrenologist, the case would have been clear from the first, and the different parts of the evidence would have appeared, not in opposition, but completely harmonious.

Another form of insanity that comes occasionally under the cognizance of Judges and Juries, appears to arise from uncontrollable activity of *particular* organs, with integrity of other organs to such an extent as to prevent raving or external signs either of fury or of idiocy.

Baron Hume, in his Commentaries on the Criminal Law of Scotland, mentions the following case. In June 1739, Robert Thomson was accused of the murder of George Forrester, committed at mid-day in the muir of Ballencrieff, and on the highway from Haddington to Aberlady, by knock-

ing him down from his horse with a stone, and cutting his throat with a pen-knife, as he lay on the ground. The pannel was a blacksmith, and had been employed in his trade as usual, that very morning, till ten o'clock; and farther, not more than half an hour before the murder, two persons who met him on the highway had spoken to him in passing, and without observing any thing unusual in his appearance. A few hours after committing the murder, he was taken into custody, and, in the afternoon of the same day, and in the course of conveyance to the jail, he had so far recovered as to be sensible of what he had done. He pointed out the precise spot where he had killed the deceased; showed "the innocent blood" (as he called it) on the ground; said that his own blood would be shed for it, and expressed concern on account of the distress which he would bring upon his father. He also related to the persons who had charge of him upon the way, that the deceased had many times cried for mercy while he was striking him on the ground; but "I trow (said he) I had no mercy on him, for I believed it was the devil I killed." In the same strain, he added, that, before meeting the deceased, he had chased the devil through the muir in another shape, "like a man with a whin-cow in his hat," and who suddenly vanished from before him in the pursuit.

In this individual, the speech and behaviour, except in the act itself, appear to have been rational, collected and indicative of self-possession; so that, unless the perpetration of a dreadful crime, without a motive referible to reason, were received as of itself sufficient proof of insanity, a judge or jury would possess no circumstance on which to found an acquittal. According to the systems of the mind taught in schools and colleges, no principle appears to exist in human nature, which, when excited by disease, could inspire with the propensity to commit such acts; and, therefore, they must of necessity be attributed to reason by those who cannot account for them in any other way. The phrenologist, on the other hand, knowing that the propensity of Destructiveness exists in every mind in a state of health, and that the organ of it may enter into a

state of disease, independently of the organs of the other faculties, would at once ascribe such acts as I have noticed to an impetuous impulse of that organ, which the higher powers were, for the time, unable to controul. This doctrine will be better understood and appreciated, after attending to another remarkable example of this kind of disease.

Case of Robert Dean.—" On Friday evening last *, a dreadful and most unaccountable murder was committed in Thames Street, Kent Road, London, by a young man named Deans, an engraver. The victim was a girl under five years of age, named Mary Albert, in the family of whose parents Dean was very intimate, and he had always *shewed the greatest fondness* for the infant. He had taken the little girl in his arms to a neighbouring shop, and bought her some apples, and soon after the infant was found with its throat dreadfully cut, and died in about half an hour. Dean absconded, but surrendered himself on Tuesday morning. He was brought by Myott, the watch-house keeper of St Andrew's, Holborn, before the Lord Mayor, on Tuesday morning, and the following circumstances were declared. The prisoner went to the watch-house about a quarter before five o'clock this morning, and said he wished to surrender himself. The officer asked, Why? and in what way? He replid, " My name is Robert Dean, and I am the murderer of the child over the water!" He was asked whether he was serious and certain. He said " Yes;" and that ever since he committed the deed, he had wandered about from place to place in a state of great agony of mind. He went as early as half-past seven o'clock yesterday morning to Bow Street, the neighbourhood of which he perambulated until the same hour at night, in the hope that some one of the officers would recognise him, for he had not courage then to surrender himself. He then renewed his wanderings, and scarcely knew in what direction he proceeded, until he found himself in Moorfields, where he entered the Scots Chapel, and heard a sermon, which had a strong effect upon him. After this, he walked about the streets, until,

* Extracted from Caledonian Mercury of 18th October 1818.

weary both in mind and body, he determined on giving himself up to justice, and espying the watch-house entered it for that purpose. He confessed most freely to all around that he murdered the child MARY ALBERT, whom he adored. But it was not the infant who was his intended victim. SARAH LONGMAN (a girl residing in Aldgate near his lodgings), was the person whose life he had intended to take. She had disappointed him, and he prepared the knife to kill her. 'The devil, however, tempted him to act otherwise, and while he held the child in his arms, he thus reasoned with himself,—If I kill SARAH LONGMAN, *she will have much sin to answer for;* but if I merely kill the child, the crime will not be so great, as she must be innocent.' He instantly resolved upon the act, and having done it, he thought he beheld the devil in his court below, while blazing fires seemed to surround him.

"He is an extraordinarily soft and inoffensive looking young man; he wept much, and occasionally looked wildly around him.

"He was committed for trial."

Surrey Lent Assizes, Kingston, April 3. 1819 *. "Crown side, Murder.—ROBERT DEAN was put to the Bar this morning, charged with the wilful murder of MARY ANN ALBERT, a little girl between four and five years old, on the 16th October last. The case was fully proved.

"MAYOTT, a police officer, gave in a statement which the prisoner had dictated to him shortly after he was apprehended. It set forth, that he was rendered very unhappy by being forbid by her father all farther correspondence with a young woman of the name of LONGMAN, to whom he had paid his addresses. In a state of despair he first thought of murdering Miss LONGMAN; but considering that she might have some sins to answer for, he determined upon killing the innocent child, and he accordingly took the poor infant out and cut her throat. He afterwards ran about in a state of distraction, and at length surrendered himself.

* Extracted from the Edinburgh Advertiser, 13th April 1819.

"The prisoner, who, during the course of the evidence above mentioned, appeared to be in a kind of idiotic stupor, being called upon to make his defence, merely said, in a wild manner, that he was not guilty.

"The case went to the jury, under the learned judge's direction, and the prisoner was found guilty.

"Mr JUSTICE-PARK pronounced sentence of death in an impressive manner, and the prisoner was ordered for execution on Monday next.

"During this awful stage of the proceedings the prisoner exhibited a maniacal apathy to the doom that awaited him, and he was removed from the bar in a state of mental abstraction.

"He was aged 25 years."

Execution of ROBERT DEAN*, *on 2d April* 1819.—"On Thursday ROBERT DEAN, who was convicted of the murder of MARY ANN ALBERT, was executed on the top of Horse-Monger Lane jail. An immense crowd was collected to witness the execution. The unfortunate man had been at prayer, with little intermission, from the period of his apprehension. It was needless to recommend devotion to him. He was, on Wednesday night, visited by Lord ROCKSAVAGE and Mr SINCLAIR, both of whom prayed with him. He expressed much gratitude at their kindness. 'They came,' he said, 'with Christian feeling, to visit the poor wretch in his dungeon.' Mr MANN, chaplain, had much conversation with him. DEAN regretted, that, as he was going to a place where there was no gnashing of teeth, he had it not in his power to take with him his beloved SARAH, who was now exposed to a wicked world. The chaplain endeavoured to induce him to speak of the little girl, whose life he had taken away, and told him she would meet him in a better world. 'No doubt,' said he, 'CHRIST, who is now saving my soul, is waiting for me; but I am sorry for poor SARAH, she is in a dangerous world.' Mr MANN rejoiced to see him so full of penitence, and told him, with what happiness his friends would hear

* Extracted from the Caledonian Mercury of 17th April 1819.

that not a wish of escape from punishment had passed his lips, nor a murmur of complaint. 'Why should I complain,' said he, 'conscious as I am, that the change I am going to make is for the better. Where is now VOLTAIRE? in hell. Where is TOM PAINE? in hell. *GOD have mercy upon them, as he has upon me.*' His general appearance was that of a maniac; but on all subjects he spoke rationally, although often incoherently. After the sacrament had been administered to him, he appeared impatient to leave the world, and asked whether every thing was not in readiness for his journey? On being told, by Mr MANN, that some time was to be allowed for preparation. 'Preparation!' said he, 'Who can say that I want preparation? Never was a man more ready to die!' Mr MANN having observed, that the preparation of the body, not of the soul, was what he meant; DEAN smiled. 'Oh,' said he, 'I shall then be going.' He refused to stand up while any part of the ceremony in the chapel was performing; and he frequently prayed aloud, and with great fervour. When the officers were striking off his irons, he looked wildly about, and at last fixing his eyes on the gallows, he bent towards it, and then gazed at the sky. The name of GOD was in his mouth when he reached the platform. He then said, 'GOD bless you all,' and prayed in so loud a tone as to be heard by the crowd around the platform. At 9 o'clock the drop fell, and he died, after a severe struggle."

A cast of DEAN's head was procured by Mr DONKIN of London, immediately after his execution, and now forms part of the Phrenological collection *. In it the following organs are decidedly large, those in italics *excessively* so;

Amativeness,	Adhesiveness,	Benevolence,
Philoprogenitiveness,	*Destructiveness*,	Veneration.

The following are decidedly deficient:

Ideality,	Causality.
Comparison,	Wit.

* The reader is requested to inspect the cast, if possible, and to contrast it with the heads of men of amiable dispositions and vigorous intellect; the impression will be greatly stronger than can be produced by description. It is to be found in all the Phrenological Collections.

In short, the organs of the animal propensities, in large size, are combined with a great deficiency of the two controlling organs of Cautiousness and Firmness, and of the whole organs of reflection. Disappointment in love appears to have produced diseased action in the organs of Amativeness, Philoprogenitiveness and Adhesiveness, which soon extended itself to the whole brain, and then the different mental faculties are perceived acting like so many automata, when their different organs happen to be excited by external objects. Amativeness excited Destructiveness, and he first resolved to kill SARAH LONGMAN. The little child, however, fell accidentally in his way, and stimulated Philoprogenitiveness. He then bought apples for the child, and bestowed on it the warmest caresses. Destructiveness, however, again came into play, and a kind of random gleam from Benevolence and Veneration, at the same time suggested, that, if he murdered SARAH LONGMAN, her eternal welfare might be endangered, and then, under an entire absence of intellectual perception, he murdered the child, whom, a moment before, he had cherished. No sooner was Destructiveness gratified than Benevolence and Veneration started vividly into action. Overwhelmed with remorse, he was prompted by Veneration to enter a chapel;—the impulses of the higher faculties were so much reinforced by the sermon there heard, that he hastened to the watch-house, and gave himself up to the law. In prison, the temptations to indulge his lower propensities were withdrawn; his higher sentiments were cherished by the benevolence and piety of the chaplain, and other individuals who visited him; they then blazed forth in a state of insane inspiration; and, in this condition, the miserable being was launched into eternity, by the hands of the public executioner.

Such a spectacle makes one blush for the administration of English criminal law, and excites a deep feeling of regret, that the conductors of the public press should, in 1815, have considered it their duty to load, with abuse, a system of philosophy, which, had they then proclaimed its true nature, might, in 1819, have saved this wretch at least from the gallows, and sent him, more appropriately, to a lunatic asylum. No

person, in the least degree conversant with the phrenological theory of mind, could possibly have consented to the execution of a man so evidently insane.

The objection may probably occur, that, if diseased and irresistible impulse were allowed to extenuate crimes, every criminal would urge such a plea to escape,—would feign this kind of insanity, and appeal to the feelings of the jury to procure an acquittal. In answer, it may be observed, that in this, as in every other instance of judicial proceeding, evidence must be led to support a plea in mitigation, before it can be listened to. If the circumstances themselves were as pregnant with proofs of disease as the case now detailed, the danger of leaning to mercy would be very small. If, on the contrary, the crime charged could be traced to, or accounted for, on other motives apart from diseased impulse, the law would presume these, and the burden of proving the contrary would lie upon the criminal himself; and if the proof were satisfactory, I cannot conceive a reason why it ought not to have its just effect. Besides, such offenders would not, even on the principles now contended for, be let loose again on society, to commit new devastations, but would be kept as lunatics in confinement for life; so that small temptation would be afforded by the supposed slightness of the punishment to sane individuals to commit crimes.

There is a third condition of mind, which appears to me to predispose an individual to crime, which is still farther than any of the foregoing from being recognised by society at large, and which is scouted by the law. I refer to those cases in which the brain is of a full size, and all the parts of it sound in structure; but in which, in consequence of mere disproportion in the relative size of the organs, certain propensities predominate naturally in excess, and certain controlling sentiments are naturally feeble in a great degree.

Suppose an individual to possess a full forehead, and an average understanding, but an inordinate Acquisitiveness, and a great deficiency in Conscientiousness, he would then enjoy the power of distinguishing between motives, and of tracing consequences, but he would be deficient in the natural capa-

city of feeling or experiencing the sentiment of duty; for the sentiment of justice would be to him as colour to Mr James Milne. Individuals exist whose actions indicate such an endowment as this; and it may prove interesting to trace their history and treatment, on the maxims at present current in society. Macintyre, aged about 30, was executed at Glasgow in 1821 for theft; and his history was briefly this. When a boy he stole, and was committed repeatedly to Bridewell. This infliction of suffering neither lessened his propensity to steal nor strengthened the sentiment of justice to restrain it; for he afterwards enlisted as a soldier, stole from his comrades, and was flogged. This aggravated torture, however, also failed to eradicate his tendency to dishonesty, or to add to the sentiment of duty, for he stole again; and again was lashed at the halberts. It would be disgusting to continue in detail the story of his crimes and sufferings; suffice it to say, that, by the time he had arrived at 30 years of age, he had been five times in Bridewell for theft; had received 2000 military lashes for theft; had been times without number in prison on suspicion of theft; and at last was actually executed at that early age for theft.

We do not possess the skull of Macintyre, but the Society has casts and skulls of more than fifty criminals, which elucidate a highly important fact in regard to the natural constitution of individuals whose lives have terminated on the scaffold. In comparing the size of the organs of the Propensities and Sentiments, we find, that, in persons virtuously disposed, by much the larger portion of brain is situated in the anterior and superior regions of the head, the parts which compose the organs of Intellect, and the Moral Sentiments. In those, on the other hand, who have been executed for their crimes, there is a great preponderance of the posterior and inferior parts, and the coronal surface is narrower, or, in other words, the animal organs greatly preponderate over those proper to man *.

* The reader is again reminded that no description can convey any idea of the strength of the evidence of the above facts, like an inspection of the casts of the heads.

The boy J—— G——, whose history and character is recorded in the Phrenological Transactions, may be taken as an illustration of the effects of this kind of deficiency of brain. In him, Secretiveness is very large, Acquisitiveness full, and Conscientiousness extremely deficient. Now, in stating to him the obligations under which he and every member of society lie to speak truth, and to refrain from stealing, I fear that the power of feeling or conceiving the obligation is not sufficiently possessed by him to render the sense of duty a motive capable of controlling the strong impulses to vice, presented by the large and very active organs of propensity. This view has been forced upon me by occurrences which have taken place in regard to J—— G——. In the Transactions, a full detail of delinquencies from his earliest years is given. He was brought to Edinburgh on 3d October 1822, placed in the house of Mr Andrew Reston, and put to school, with a view to reformation. He was well clothed, lodged and fed ; treated with perfect gentleness, and allowed every reasonable indulgence. He conducted himself tolerably for three months, only manifesting a great insensibility to truth, and an insuperable tendency to concealment. About the beginning of February 1823, however, whether from familiarity having rendered him bold, from restraint of his propensities, even to a limited degree, having become disagreeable, or from what other cause, is unknown, he gradually became more and more unprincipled in his conduct. Mr Reston states, that he attempted to corrupt his children, advising them to deny every thing when they were interrogated ; that, during night, he rose, lighted a lamp, and searched the house, for what purpose except to steal he could not divine ; that he absented himself from church, went to Leith, came home, and for half an hour invented statements tending to prove his presence at the service, in an opposite gallery, having, as he pretended, turned to the right hand by mistake instead of the left, with such consistency, readiness, and dexterity, that if he had not been seen at Leith during sermon his absence could not have been believed in ; that he embezzled

small sums of change when he was sent on errands; that he picked up money about the house whenever he saw it, and, especially, abstracted a penny and hid it in a chair before the eyes of the family, and denied at the same instant all knowledge of the transaction; that he robbed Mr Reston's children of their playthings, and at last, on Sunday morning, 16th February 1823, put on his best clothes, picked Mr Reston's pocket of 1s., stuffed his own pockets with bread, and eloped, casting himself upon the world to indulge his desires without restraint.

In the course of the few conversations which he held with Mr Reston or his family, he stated, that he felt it impossible to avoid lying. He was offered sixpence if he would abstain from falsehood for a week. He smiled, and said, "I know I need not promise, for I cannot do it." Even with the children of his own age he was not communicative. He fished all manner of information out of them, but told nothing; and feigned great stupidity and bluntness of intellect, when requested to do any little piece of service which might oblige others, but was troublesome to himself.

Mr Reston stated on his elopement, that he would not take him back; that, prior to personal observation and experience, he could not have believed in the existence of such a human being, and that the public would not believe his statement, although it were laid before them; but that his own conviction was irresistible, that the boy's propensities to falsehood and theft were altogether uncontrollable by himself or by others, except by depriving him, by physical restraint, of the means of indulging them.

A gentleman attending a summer course of lectures in 1813, mentioned, that he knew the case of a woman in the parish of Falkirk, who, while yet a child, manifested so strong a propensity to theft, that her mother actually chained her to the house, to prevent her going abroad to steal; that when she became older, she was tried at Stirling for theft, and acquitted for want of evidence; but on her way home from the trial, stole the whole clothes of a washing from a hedge, in

which she was detected, and at length was tried again for theft, and the evidence being complete, was found guilty, condemned to death, and actually hanged.

Now, as I have said, such individuals exist, whether Phrenology is believed or not; and the question occurs, What mode of treatment ought to be followed, to do justice at once to them and to society? If their crimes spring from natural deficiencies, it is obvious that lenity or severity towards them can have no influence on *other* individuals *similarly constituted.* To hang fifty such boys would not amend the brains of other individuals equally deficient in development, who might witness their fate; and until their brains are altered, we are supposing that their propensities cannot be changed. If they have so much controlling power, as to be open to the influence of common motives, so as to be deterred by example, they do not belong to *the class* about which I am now writing; and to prevent misapprehension, the reader is requested to keep in view, that, at present, I speak only of individuals, if such exist, who are incapable of resisting the impulses to crime which beset them; and the question recurs, How ought they to be treated?

It is mere childish absurdity to pretend, that, because the disposition to evil exists, the individuals have a right to indulge it to the destruction of others. We are satisfied, that the madman who commits murder in his frenzy could not help it; but, do we therefore allow him deliberately to kill all whom he meets? The tiger cannot help its instinctive thirst for blood; but do we allow it to prey upon us at its pleasure? Society, therefore, has a clear right to protect itself against aggression; and an irresistible tendency to crime conveys no necessary *license* for the prepetration of unrestrained wickedness.

Society, then, may clearly restrain the persons of whom we are now treating: But how may this best be done? A course of proceeding must be devised, calculated to protect individuals from being deprived of liberty unjustly, or on frivolous

pretences, and to guard society against the ceaseless action of evil dispositions.

Both ends, it appears to me, may be accomplished without difficulty, by treating the tendencies of such individuals as a species of insanity. Allow the public prosecutor to charge an individual with *possessing irresistible tendencies to crime*, and assemble a Jury to hear the evidence of the charge, and assign the accused the aid of counsel, to shew the negative, if they are able to do so. In such a case, the proof would not be founded upon one single offence, the one in which the accused had been detected, but would necessarily embrace the whole period of his life. Suppose, for example, that J—— G—— were to be placed at the bar, to be cognosced as liable to this species of insanity, the keepers of the Charity-work House in Glasgow, in which he was brought up, could swear to his frauds and thefts while in that establishment, notwithstanding every effort to prevent him; Mrs Cockburn, and the tutor in her family, on whose benevolence he cast himself after his elopement from Glasgow, could bear similar testimony; and Mr Andrew Reston could depone to the facts before narrated; and to his firm conviction, founded on close observation and considerable experience, that the tendency is natural and irresistible. Suppose that twenty other witnesses could be obtained to deliver the like opinions. A Jury might safely return a verdict of insanity, and then the boy would be at once deprived of liberty, and freed from responsibility to human laws, for life. Society would no longer suffer from his actual depredations; he would not roam abroad as a focus of corruption, for all children possessing a mental constitution like his own, and humanity would be saved the pain of seeing him imprisoned time after time, flogged time after time, and at last hanged,—all because in him the moral organs had been in a similar state of deficiency to the organ of colouring in Mr Milne, or the organ of Tune in Ann Ormerod *. He ought to be committed to a penitentiary, such as is recom-

* See Phrenological Journal, vol. ii. No. 8.

mended by Mr BENTHAM, where the opportunities of committing transgressions would be withdrawn, where the mind of the keeper would direct his conduct, which his own principles were not able to guide; where he might exert, for his own maintenance, the talents which nature has bestowed on him, and where every enjoyment might be allowed that he could earn by his industry, not incompatible with safe custody and morality. If he appeared ever to obtain the control over his vicious propensities, he might then be liberated, as a patient who had recovered from a moral disease.

If, on the other hand, the accused should defend himself against the charge of moral deficiency, and the jury should be satisfied that the evidence did not support it, then responsibility to the laws would be completely established; and society would possess a guarantee, that the individual on whom the officers of justice were inflicting pains and chastisement, was not a patient incapable of amendment, but a human being alive to the influence of motives, and susceptible of improvement from the lessons of experience.

The reader is respectfully reminded, that the alleged deficiency in the moral organs of habitual criminals, is susceptible of physical demonstration. If, therefore, any one feel alarmed at the doctrine here expounded, his first duty is to ascertain, by examination of facts, whether it be *true.* If it is not a correct interpretation of nature, let it be speedily abandoned; but, if it be supported by facts, and it appears to me to be so, after extensive observation, then it becomes the duty of every friend of humanity to hasten the day when it shall be practically applied.

OBJECTIONS TO PHRENOLOGY.

I. MATERIALISM.

The objection, that Phrenology leads to materialism, has been frequently urged against the science; but it appears singularly unphilosophical, even upon the most superficial consideration. Phrenology, viewed as the assertion of certain physical facts, cannot, if unfounded, logically lead to any result, except the disgrace and mortification of its supporters. On such a supposition, it cannot overturn religion, or any other *truth*; because, by the constitution of the human intellect, error constantly tends to resolve itself into nothing, and to sink into oblivion; while truth, having a real existence, remains permanent and impregnable. In this view, then, the objection, that Phrenology leads to materialism, is absurd. If, on the other hand, the science is held to be a *true interpretation of nature*, and if it is urged, that, nevertheless, it leads fairly and logically to materialism, then the folly of the objection is equally glaring; for it resolves itself into this,—that materialism is the constitution of nature, and that Phrenology is dangerous, because it makes this constitution known.

The charge assumes a still more awkward appearance in one shape, in which it is frequently brought forward. The objector admits that the mind uses the body as an instrument of communication with external nature, and maintains, that this fact does not necessarily lead to materialism. In this I agree with him; but I cannot perceive how it should lead nearer to this result, to hold that each faculty manifests itself by a particular organ, than to believe that the whole mind acts on external objects by means of the whole body, or the whole brain. In short, in whatever point of view the system is regarded, whether as true or false, the objection of materialism is futile and unphilosophical; and one must regret that it should have been brought forward in the name of Religion, because every imbecile and unfounded attack against philo-

sophy, made in this sacred name, tends to diminish the respect with which it ought always to be invested.

The question of materialism itself, however, as a point of abstract discussion, has of late excited considerable attention; and I shall offer a few remarks upon its general merits. In entering on the subject, it is proper to take a view of the nature and extent of the point in dispute, and of the real effect of our decision upon it. The question, then, is, Whether the *substance* of which the thinking principle is composed be matter or spirit? And the effect of our decision, let it be observed, is not to *alter the nature of that substance*, whatever it is, but merely to adopt an opinion consonant with, or adverse to, a fact in nature over which we have no controul. Mind, with all its faculties and functions, has existed since the creation, and will exist till the human race becomes extinct, and no opinion of man, concerning the cause of its phenomena, can have the least influence over that cause itself. The mind is invested, by nature, with all its properties and essences, and these it will possess, and manifest, and maintain, let men think, and speak, and write, what they will, concerning its substance. If the Author of Nature has invested the mind with the quality of endless existence, it will, to a certainty, flourish in immortal youth, in spite of every appearance of premature decay. If, on the other hand, Nature has limited its existence to this passing scene, and decreed that it shall perish for ever when the animating principle passes from the body, then all our conjectures, arguments, discussions, and assertions, respecting its immortality, will not add one day to its existence. The opinions of man, therefore, concerning the substance of the mind, can have no influence whatever in changing or modifying that substance itself; and if so, as little can these opinions undermine the constitution of the mind, or its relations to time and eternity, on which, as their foundations, morality and religion must, and do, rest as on an immutable basis. According to Phrenology, morality and natural religion originate in, and emanate from, the primitive constitution of the mental powers themselves. Innumerable

observations have proved, that faculties and organs of Benevolence, Hope, Veneration, Justice, and Reflection, exist. Now, our believing that the mind will die with the body will not pluck these sentiments and powers from the soul; nor will our believing the mind to be immortal implant a single one more of them in our constitution. They would all remain the same in functions and constitution, and render virtue amiable and vice odious, although we should believe the mind to be made of dust, just as they would do were we to believe the mind to be a more immediate emanation from the Deity himself.

In short, therefore, this question of materialism is one of the most vain, trivial, and uninteresting that ever engaged the human intellect: and nothing can be more unphilosophical, and more truly detrimental to the interests of morality and religion, than the unfounded clamour, or cant shall I call it, which has been poured forth from the periodical journals about the dangers attending it. A manly intellect, instead of bowing before prejudice, would dissipate it, by shewing that the question is altogether an illusion, and that, adopt what opinion we will, concerning the substance of the mind, every attribute belonging to it must remain unaltered and unimpaired.

But not to stop in our investigation till we have reached the goal, we may inquire, whether it be possible to discover the substance of which the mind is composed, whether it be material or immaterial? Previous to doing so, however, we ought to endeavour to ascertain what means we possess of arriving at a knowledge of the essence of the mind. All our knowledge must be derived either from consciousness or observation. Now, by reflecting on what we feel, we discover nothing concerning the nature or essence of the thinking being. We do not feel a spiritual substance stirring about within us, and elaborating sentiment and thought; and neither do we feel a *material substance* producing these effects. We are conscious only of feelings and emotions, of friendships and attachments, of high conceptions and glorious thoughts;

but whether these originate from matter or spirit; whether the first embryo substance of reflection dwelt lowly in the dust, or soared a pure ethereal essence amid the regions of boundless space, before it was constituted a part of us; whether God, in creating man, was pleased to invest his material organs with the property of thought, or to infuse into him a portion of immaterial fire;—on all these points Consciousness gives us no information. A great deal of popular delusion, indeed, has been kept alive on this point, by the fact being overlooked, that we are not conscious of the operations of the brain. Men in general, because they are sensible only of thought and feeling, and not of the movements of any material organ performing these acts of the mind, imagine that it is necessarily an immaterial substance, which is thinking and feeling within them; but they are equally unconscious of the contraction and relaxation of the muscles, and they might as well imagine that their arms and legs are moved, not by material organs, but by the direct impulse of spirit, as entertain the supposition in question. In short, the truly philosophical conclusion is, that, by means of consciousness, we are unable to discover of what substance the thinking principle is composed.

Does observation, then, throw a stronger and steadier light upon this long agitated question? The mental organs, while in health, and in the natural state in which their functions are most perfectly performed, are completely hid from inspection. No eye can penetrate the integuments of the head, and the tables of the skull, and the *dura mater*, and the *pia mater*, to obtain a view of the operations performed in the brain, while the thoughts run high, and the sentiments swell with emotion; and when external injury or disease removes these coverings, the mind does not then disport in all the vigour of its healthy action. Besides, even when all these external obstacles to inspection are removed, still it is only the surface of the convolutions which is perceived, and the soul may be enthroned in the long fibres which extend from the surface to the *medulla oblongata*, or thought may be elaborated there, and still evade

detection. It will be said, however, that death will solve the question, and allow the whole secrets of the soul to be disclosed; but, alas! when the pulse has ceased to beat, and the lungs no longer play, the brain presents nothing to our contemplation, but an inert mass, of a soft and fibrous texture, in which no thought can be discerned, and no sentiment can be perceived, and in which also no spirit or immaterial substance can be traced; so that from inspecting it even imagination receives no food for conjecture, as to the presence or absence of an immaterial guest while life and health yet animated its folds.

Observation, therefore, reveals as little in regard to the substance of the mind as does reflection on consciousness; and as no other modes of arriving at certain knowledge are open to man, the solution of the question appears to be placed completely beyond his reach. In short, to use an observation of Dr Spurzheim, Nature has given man faculties fitted to observe phenomena as they at present exist, and the relations subsisting between them; but has denied to him powers fitted to discover, as a matter of direct perception, either the beginning or the end, or the essence, of any thing under the sun; we may amuse our imagination with conjectures, but will never arrive at truth, when we stray into these interdicted regions.

The solution of this question, therefore, is not only unimportant, but it is impossible; and this leads me to observe, that no idea can be more erroneous than that which supposes the dignity and future destiny of man as an immortal being, to depend, of necessity, on the substance of which he is made.

Let us allow to the materialist, for the sake of argument, that the brain is the mind, and that medullary matter thinks,—What then? If, in fact, it does so, it must be the best possible substance for thinking, just because the Creator selected it for the purpose, and endowed it with this property. In this argument, the religious constantly forget that the same omnipotent hand made the brain that created the mind and the universe itself, and that, in the dedication of every cerebral convolution to its objects, be they thinking or any other pro-

cess, the Divine Wisdom is as certainly exercised, as in impressing motion on the planets, or infusing light and heat into the sun. If, therefore, *de facto*, God has made the brain to think, we may rest assured that it is exquisitely and perfectly adapted for this purpose, and that His objects in creating man will not be defeated, on account of His having chosen a *wrong substance* out of which to constitute the thinking principle. But what *are* His objects in creating man? This brings us to the jet of the question at once. Mr Lawrence, it is said, founds no moral doctrine on his opinions regarding the essence of the mind; but other materialists, who make these opinions the foundation of atheism, wish us to believe that the best evidence of the Divine intention in creating the human soul, is to be found in discovering the *substance* of which it is made; and they insinuate, that, if it is constituted of a very refined and dignified material, the conclusion necessarily follows, that it is intended for magnificent destinies, while, if it is composed of a rude and vulgar stuff, it must be intended only to crawl on this filthy world. Here, however, sense and logic equally fail them; for no principle in philosophy is more certain than that *we cannot infer* from a knowledge of the mere substance of any thing for what ends it is fitted. Exhibit to a human being every variety of imaginable essence, and if you allow him to know no more of its properties than he can discover from examining its constituent parts, he will be utterly incapable of telling whether it is calculated to endure for a day, or last to eternity. The materialist, therefore, is not entitled, even from the supposed admission that medullary matter thinks, to conclude that the human being is not immortal and responsible. The true way of discovering for what end man has been created, is to look to the *qualities* with which he has been endowed, trusting that the substance of which he is composed is perfectly suited to the objects of his creation. Now, when we inquire into the qualities, we find the thinking principle in him to differ, not only in *degree*, but in *kind*, from that of the lower animals. The latter have no faculty of Justice, to indicate to them that the unrestrained manifestation

of Destructiveness or Acquisitiveness is wrong; they have no sentiment of Veneration to prompt them to seek a God whom they may adore; they have no faculty of Hope, pointing out futurity as an object of ceaseless anxiety and contemplation, and leading them to desire a life beyond the grave; and, indeed, the convolutions of the brain, which in man form the organs of these sentiments, do not exist in the lower animals. Those organs also, which in man serve to manifest the faculties of Reflection, are, in the lower animals, eminently deficient, and their understanding, in exact correspondence with this fact, is so limited as to be satisfied with little knowledge, and to be insensible to the comprehensive design and glories of creation. Man, then, being endowed with qualities which are denied to the lower creatures, we are entitled, by a legitimate exercise of *reflection*, the subject being beyond the region of the external senses, to conclude, on principles truly philosophic, that he is designed for another and a higher destiny than is to be allotted to them, whatever be the *essence* of his mind.

II. ON THE EFFECTS OF INJURIES OF THE BRAIN ON THE MANIFESTATIONS OF THE MIND.

(By Dr A. Combe.)

Of all the arguments advanced for the subversion of Phrenology, no one has been more frequently or more confidently urged, than that which rests on the alleged fact of the brain having, in various instances, been wounded or destroyed in whole or in part, without in any degree impeding the usual operations of mind. When narrowly examined, however, this objection proves to be at variance with the views of those who maintain it, and completely demonstrative of their ignorance of the principles of the science against which it is directed. "The system of Gall and Spurzheim," it is said, "however ingenious or amusing in theory it may be, is *annihilated* by the commonest references to fact. Experience has shewn us, that a man may live in the *full enjoyment of his in-*

tellectual faculties, although a part of his brain is destroyed by disease. Portions of the brain, various in situation and size, have been found to have been entirely disorganized, yet no single power of the mind was *impaired*, even to the very day of the patient's death. It would be difficult to find any one portion of the brain, that has not, in some case or another, been deranged in its structure, without any injury to the mind. Certainly, of the parts specified by GALL and SPURZHEIM, every one has, in its turn, been found wanting, without any deficiency in that *intellectual* faculty which they would represent it either to produce or sustain *." Such are the *ipsissima verba* of a learned and respectable, though prejudiced opponent; and although others might be quoted, who go still farther than he does, I am ready to admit, that, if the statements here recorded were as clearly substantiated as they are sweepingly made, neither the system of philosophy which we advocate, nor any other which acknowledges the necessity of the intervention of a material instrument for the manifestation of the mind, could possibly survive for a day.

At first sight, the foregoing objection appears to be highly plausible and relevant; and coming as it generally does, directly or indirectly, from the members of the medical profession, who, naturally enough, are supposed to be best qualified to judge, it is received by many with implicit confidence, and thus operates upon them with all the force of truth; and, in fact, to those who are alike ignorant of Anatomy and of Phrenology, and who, therefore, have no means of forming an accurate estimate of its force, it does present a very formidable aspect. As, however, to those who are acquainted with both these sciences, and who are consequently better qualified to judge correctly, the very facts upon which the objections are grounded, seem, instead of invalidating the fundamental principles of the new philosophy, to be clearly and unequivocally demonstrative of their truth; it may be useful to state such an abstract of the evidence itself, as shall enable even the unpro-

* RENNEL on Scepticism, p. 100.

fessional reader to determine how far it authorizes the inferences which have been deduced from it by our opponents. With this intention, I shall first make some observations on the testimony offered of the alleged integrity of all the mental faculties, in cases of extensive injury of the brain; and then examine anatomically, how far the extent, situation, and nature of the injuries sustained in the cases alluded to, authorize us to infer the partial or total destruction of any individual phrenological organ; and, lastly, I shall offer a few remarks on the possibility of discovering the functions of the brain, from noticing the effects of its injuries,—a mode of proceeding lately recommended from high authority.

In proceeding to this inquiry, it must first be observed, that, without a single exception, all the cases alluded to are related by surgical authors, for purely professional purposes, without the remotest idea of their being afterwards founded on, to prove that entire preservation of the mental faculties may coexist with extensive disorganization of the organ of mind; consequently, in all of them, as will be seen by a reference to Dr Ferriar's paper, in the 4th volume of the Manchester Memoirs, and to the 48th number of the Edinburgh Review, the state of the mind is mentioned merely incidentally, and in very vague and general terms, as it was, in reality, scarcely attended to. For instance, it is stated in one case, that "the senses were retained to the last;" in another, that "there was no loss of sensibility;" in a third, that there was "no alienation of mind;" and, in a fourth, that "the patient remained quite well." The want of precision, indeed, and the utter inadequacy of the statements to establish the important conclusions deduced from them, are so palpably conspicuous, that even the Reviewer already alluded to, hostile as he is to the doctrines of Phrenology, expresses a "wish to see cases more minute, in all their details; and *observed, with a view specially to this physiological inquiry*, substituted for those we at present possess*," before he ventures to pronounce

* Edinburgh Review, No. 48. p. 448.

an irrevocable decree; and if *he* hesitates, it would surely be too much to expect *us* to pronounce, upon testimony rejected by *him*, a verdict against ourselves.

But, even granting that these cases had been observed, *with a view specially to this physiological inquiry*; still this testimony, to be of the smallest value in establishing the point contended for, necessarily supposes two conditions or requisites in those by whom they are narrated, which were manifestly not possessed, viz. 1*st*, *A perfect knowledge of the number and nature of the primitive* faculties of the human mind; and, 2*dly*, A previous knowledge of their relative degrees of endowment and energy during health, in the particular cases under consideration.

Now, as to the first of these, it is well known, that scarcely any two metaphysicians who make the philosophy of mind their particular study, are agreed either upon the number or nature of the primitive mental powers. Much less, then, can we expect the surgeon, engaged in the hurry of general practice, to be better informed. "Certain crude ideas," says the Edinburgh Reviewer, in his notice of Sir E. Home's paper on the Functions of the Brain, "are attached to the words Intellectual Faculties; *a vague conjecture arises as to the seat and nature of these faculties* *." How, then, I would ask, can any one certify, even after the most scrupulous attention, that *all* the powers of the mind are retained, when he is ignorant what these powers are? When he is *ignorant*, for instance, whether the propensities of Destructiveness, Acquisitiveness or Secretiveness exist, and whether the sentiments of Veneration, Hope or Conscientiousness, are primitive emotions. The state of these, and other feelings and propensities, proved by Phrenology to be primitive, is never once alluded to in the history of injuries of the brain; and, consequently, for any thing we are told to the contrary, they, along with their respective organs, might have been entirely wanting, in every one of the cases which are advanced as instances

* Edinburgh Review, No. xlviii. p. 439.

of entire possession of the faculties. The opponents never speak of any except *intellectual* faculties; and in expecting lesion of these powers, when, for instance, it is the cerebellum, or posterior lobes of the brain alone, that are diseased, they display at once their own ignorance of the nature and number of the primitive faculties, and their most profound ignorance of the doctrines which they impugn. If any injury occurs in that portion of the brain lying under the most prominent part of the parietal bone, which the phrenologist states to be the organ of Cautiousness, and if we are in doubt as to the accuracy of the function assigned to it, and wish to have our observations confirmed or refuted by the phenomena attending such a case, one would naturally suppose that, as the organs are all double, we would begin by observing, whether the corresponding portion of brain on the opposite side partook in the disorganisation or not; and that we would then proceed to investigate the state of that particular faculty, of which these parts constitute the organs, and thus ascertain whether the feeling of Cautiousness ever remained undiminished, where, from the extent of the disease, it ought, according to the ordinary laws of the animal economy, to have been either impaired, or entirely awanting.

This mode of proceeding, plain and simple as it appears, is not that pursued by the opponents of Phrenology. The opponent does not care, and does not inquire, whether it is one side only, or both sides, which are diseased: he makes no inquiry about the presence or absence of the manifestations of the sentiment of Cautiousness: he proceeds at once to the state of the *intellectual* powers, with which Phrenology most distinctly teaches that that part of the brain has no direct connection; and finding none of the faculties which he calls Attention, Perception, Memory or Imagination at all impaired, he, with great confidence, concludes, that the part in question *cannot be* the organ of *Cautiousness;* and so satisfied is he with his own reasoning, that he thinks himself entitled to ridicule those who do not see its cogency as clearly as he does himself. On any other subject, this mode of reasoning would

be looked upon as proceeding from a very blameable and lamentable degree of ignorance; but such was once the state of the public mind, that, when directed against Phrenology, it was hailed almost universally as highly philosophical and satisfactory.

Even supposing, however, that the number of primitive faculties was known, still no dependence can be placed upon cases not observed, with a view "specially to this physiological inquiry;" for daily experience proves, that whenever a patient is able to return a rational answer to any simple question about his health, the surgeon and attendants, whose attention is not directed to the point, invariably speak of him as in full possession of all his faculties, although he is as unable to think or reason on any serious subject, with his accustomed energy and facility, as a gouty or rheumatic patient is unable to walk with his accustomed vigour. In one sense, no doubt, the former may be said to be in possession of *all* his faculties, just as the latter, merely because he can drag himself across a room, may be said to possess the power of muscular motion; but then the power of exercising the faculties may be, and is, as much diminished in the one case, as that of using the muscles in the other. Even take a convalescent from any acute disease, in which there has been no particular affection of the brain, and introduce a subject which requires a train of thinking, and concentration of mind, to which, in health, he is fully equal, so far from retaining his powers undiminished, he will soon be reminded of his enfeebled state, by painful confusion in the head, and other disagreeable symptoms. But, confine his attention to any thing, which requires no effort on his part, and you benefit, rather than harm him by such exercise, for it is then suited to the diminished vigour of his mind. Now, this is precisely the kind of discourse which the judicious surgeon permits to his patient, and from it alone he forms his own opinion of the state of the mind; and, therefore, a person in such state is uniformly said "to retain his faculties," &c. In like manner, the convalescent gouty or rheumatic patient, if gently exercised by strolling about his room, reaps

benefit and strength; but suppose you force him to an effort beyond what his muscular energy is calculated to support, the same bad effect is produced as in the case of the mind, and as well might this person be said to retain his power of voluntary motion undiminished, as the other all his force of intellect unimpaired.

That the evidence as to the state of the mind, after wounds or alteration of the cerebral mass, is really so vague and unsatisfactory, may easily be shewn from Dr Ferriar's paper, and from the Edinburgh Review, the text-books of the opponents. Besides the objection of extreme latitude in such expressions, as "no loss of sensibility," "no loss of voluntary motion," &c. &c., when used to indicate the condition of *all* the mental faculties, it may be remarked, that Dr Ferriar speaks of one man as retaining all his faculties entire, who, it appears, had laboured under hypochondriasis for ten years; a disease, the very existence of which implies a morbid activity of some of the mental feelings, and which, consequently, ranks in the list of insanities; and of a girl who, with evident symptoms of oppressed brain, is also said to have retained her faculties; and that the reviewer speaks of a lady, who, "the day before her death, was capable *of being roused from her stupor*, and was then in possession of all her senses." But the idiot from birth, when roused from his natural stupor by the exaltation of a fever, appears sometimes to gain a considerable share of intellectual power, only to be lost upon recovery. Will he too, then, be said to be in full possession of every faculty, because thus shewn to be susceptible of excitation from stimuli? The inference, in the one case, is certainly as logical as it is in the other.

But, even allowing also that, from a previous acquaintance with the number and functions of *all* mental powers, we were qualified to judge of their *presence* or *absence*, it seems still to be a self-evident proposition, that before we can affirm that a man possesses them all *unimpaired* under disease, we must have had some previous knowledge of the relative degrees of endowment and energy in which he possessed them when in

health. The differences of intellectual vigour, of temper, and of moral dispositions, between man and man, are exceedingly great. The scale extends from the lowest pitch of idiocy, up to the highest endowment of genius; and the history of diseases informs us, that a man, whose faculties have suffered a great diminution of energy, may still be able to return a rational answer to a question, although his mind is unable to fathom the depths it penetrated before. If, then, our first acquaintance with a patient suffering from an injury of the brain is formed by the side of his sick-bed *after* the accident has occurred, what means do we possess of knowing how far his mental powers in general, or any one in particular, have been injured or impaired? Even under the most favourable circumstances, the difficulty is by no means easily surmountable; and, when we consider that injuries of the head are by far more frequent in hospital than in private practice; and, that, in the former, the surgeon has seldom seen the patient before, it will be obvious, that, even supposing the testimony as to the actual state of the faculties to be as specific and precise as it is general and vague, still, in a great majority of instances, the surgeon is unfavourably situated for speaking of the comparative force of any of them, seeing that this does not form the direct or usual object of his inquiries, and that, although it did, he must necessarily be ignorant of the degree in which they were manifested before the injury was sustained.

Having now shewn that the observers quoted by the opponents were evidently neither acquainted with the number and functions of the mental faculties, nor in possession of any means of judging of the actual existence, or comparative diminution of any individual faculty, in cases of disease or wounds of the cerebral mass, I proceed to point out an anatomical requisite, which, although as essential as the other two, seems not to have been possessed in any perceptible degree by any of those to whom the cases occurred, or by whom they are quoted. I allude to knowledge of the *situation*, *form*, and *direction* of fibre of the several organs of which the

phrenologists state the brain to be a congeries. Without this knowledge, any observations are manifestly imperfect:—how, for instance, is a man to ascertain that the organ of Cautiousness has been wounded or destroyed, if he knows neither its local situation nor the direction in which its constituent fibres run? And yet this is precisely the state of mind of those upon whose authority the objection we are now refuting is so strenuously urged:—nine-tenths of the cases occurred long before the organs were discovered, and the remaining tenth were, I believe, observed in ignorance of the discovery, so that all come under one class. If any one, indeed, could prove that he has found *both* the organs of Cautiousness destroyed, while the corresponding feeling was manifested as powerfully as before, then he would prove the operation of that sentiment to have been erroneously ascribed to that particular part of the brain. But unless he knows accurately the situation of that organ towards the surface, and the direction of its fibres towards the interior, whether they are horizontal, vertical, or oblique, and unless he ascertains the condition of the organs of both sides, How can he venture to affirm that they were destroyed either in whole or in part? We are told, it is true, by Mr Rennel, and other opponents, that every individual part specified by Gall and Spurzheim has in its turn been destroyed, without injury to the faculty of which they call it the organ. But if we examine the foundations upon which such assertions rest, the same want of precision, the same inconclusive vagueness, will be found to prevail, as in the evidence of the state of the mind. Not a single case in point can be produced; and it is evident that Mr Rennel, as well as the other opponents, supposes the organs to be confined to the surface of the brain, instead of extending to its very base, to the medulla oblongata. They also, by what rules of logic I know not, appear to think injury of one organ sufficient to destroy the function of both, although they may see the reverse exemplified in individuals who hear or see well with one ear or one eye, after that of the opposite side has been destroyed.

The brain has been considered by many physiologists, and

particularly by those of them who are hostile to Phrenology, to be a single organ, every part of which concurs in executing a single function, viz. that of manifesting the mind; but so far from supporting their own conclusions, the cases referred to, if true, are directly subversive of them, and leave no choice, except between the phrenological doctrine of a plurality of cerebral organs, and the notion that the brain, the most delicate, the best protected, and apparently the most important organ of the body, is, after all, a mere useless incumbrance, or at most, a mere mass fitted into a case, and placed at the top of the neck, more for the sake of ornament, or of preserving equilibrium, than for any more rational purpose; a conclusion which, however logically deducible from their own premises, they would, I am satisfied, be fully more averse to admit than the truth of phrenology itself. The phrenological doctrine is, indeed, the only one by which these facts, so far as they are true, are at all explicable; for the moment we can prove not only that the brain consists of two halves or hemispheres, but that each half is a congeries of parts performing distinct functions, all difficulty disappears, and the phenomena become consistent with the ordinary laws of nature. We then see how one side or one part may be wounded or diseased, without involving the functions of the opposite side, or of the other parts, just as one eye may be put out without destroying the function of the other, and the organ of one sense, sight for example, be injured or destroyed, while the organs of all the others remain sound.

Upon the same principle, it will be evident, that, before we can expect complete loss of any one faculty, the entire organ of *both* sides must be destroyed,—a fact which has been altogether overlooked by the objectors. For it will be seen upon an attentive examination of the cases quoted, that not a *single instance is recorded in which this destruction of both organs has occurred, while the alleged manifestations existed.* In almost all the cases, the injury or disease is expressly said to be on one side only; and where it is on both, the parts affected implicate different organs. But this will be better understood

by an abstract of the cases themselves, as they are recorded in the Manchester Memoirs, and in the Edinburgh Review. In perusing them, I beg the reader's attention to the vagueness of the information which they offer in regard to the integrity of the mental faculties, and also to the extent and nature of the cerebral injuries.

Mr EARLE relates the case of a man *whose sensibility* remained unaffected till within a few hours of his death, although an abscess occupied nearly one-third of the *right* hemisphere. Mr ABERNETHY saw a gentleman who lived for two years in the full possession of every faculty, notwithstanding a cavity two inches broad by one long in the *right* hemisphere. Another was perfectly sensible with an abscess in the *left* hemisphere. Sir JOHN PRINGLE * found an abscess in the *right* hemisphere, as large as an egg, in a patient "*who had never been delirious, nor altogether insensible;*" and in another, "*who had never been so insensible as not to answer reasonably when spoken to,*" he found an abscess in the *cerebellum* as large as a pigeon's egg. Dr FERRIAR says that Dr HUNTER found the whole of the *right* hemisphere destroyed by suppuration, in a man who retained his faculties to the last. One of WEPFER's patients manifested no *loss of sensibility*, although a cyst was found in the *right* hemisphere of the brain as large as a hen's egg. DIEMERBROEK saw a young man who received a thrust from a sword, which entered at the eye, and passed upwards through the *right* ventricle, as far as the sagittal suture. During ten days he "*remained quite well,*" with no loss of sensibility, of voluntary motion, or of judgment, "cum sociis convenienter, et bono cum judicio, quacunque de re disserens;" after which he was cut off by a fever. PETIT † saw a soldier, shot through the *left* lobe of the cerebellum and *left* posterior lobe of the brain, live forty-three hours, whose faculties were perfect to the last. Another man, mentioned by QUESNAI as seen by BAGIEU, received a musket-shot from below upwards through the *right* anterior

* Diseases of the Army, p. 259. † Mémoires de l'Acad. 1748.

lobe, who had *no bad symptom* till the twelfth day, and ultimately recovered. Next are mentioned three cases; in the first of which a ball, in the second the end of a stiletto, in the third a part of a knife, remained in the brain *without inconvenience* for some years. GENGA tells us of a man who, from a blow on the *left* parietal and occipital bones, lost a portion of brain as large as a pigeon's egg, and *yet recovered.* PETIT saw a man with a corpus striatum converted into a matter like dregs of wine, with no *loss of sensibility*, although one side was paralysed. VALSALVA saw an old man who was *not insensible*, with an abscess of the *right* thalamus opticus extending to the surface of the brain. Then come some cases of diseased pineal gland and cerebellum, without loss of sensibility. The Reviewer then speaks of a lady who complained for a fortnight of an affection of the head, became comatose, and died. "The day before her death she was capable of being roused from her stupor, *and was then in full possession of all her senses.*" The *left* hemisphere of the cerebellum was converted into pus. Then follows a case from LA PEYRONIE, nearly similar, without *loss of sensibility.* DRELINCURTIUS * saw a steatomatous tumour as large as the fist between the cerebrum and cerebellum, produce first blindness, then deafness, and at last the abolition "omnium sensuum et functionum animalium, et necem ipsam." Dr TYSON † mentions a case where the *left* hemisphere of the cerebellum was found sphacelated, and the testis of that side enlarged and stony. The patient had been ill two months, and for the most part rational. In the Mémoires de l'Acad. Royale, 1703, DUVERNEY relates a case of extensive injury, *without loss of sensibility.* The Chevalier COLBERT received a blow from a stone upon the temple, which drove in the bones forming the back part of the orbit, as well as the sella turcica. The inferior portion of the middle lobe of the brain, as far as the cerebellum, was found broken down, and partly in a suppurating state. He lived seven days, "retained his judgment per-

* Addend. ad WEPFER, Hist. Apop. Obs. 83. † Phil. Trans. No. 228.

fectly, continued to perform all his functions, and exhibited a surprising tranquillity of mind till his death." FERRIAR attaches little importance to this case, as confused. One of the most remarkable cases, is that quoted by the Reviewer from PLANQUE, and by Dr FERRIAR from LA PEYRONIE, as having occurred to BILLOT *. A boy of six years received a pistol-shot in the middle of the brow, which passed through to the occiput. He survived eighteen days, and lost a portion of brain as large as a nutmeg daily, and yet *remained quite well* until within a few hours of his death. The portion of brain, found remaining in the skull, *did not exceed the size of a small egg*.

The Reviewer then quotes three cases of hydrocephalus internus, or water in the head, which convince him that *sensibility* may remain after the whole brain has been destroyed.

Many of the Reviewer's cases are taken from Dr FERRIAR's paper in the Manchester Memoirs. I shall, therefore, select the most interesting of those which he has omitted. DIEMERBROEK † quotes a case from LINDANUS, of a patient receiving a wound in *one* of the lateral ventricles, who went about as usual for fourteen days, and then died. His surgeon thrust a probe into the ventricle every day, without exciting any sensation. He says ‡ he saw a woman who lost a portion of brain as large as the fist, from a fracture of the *right* side. She lived thirty-six days without alienation of the mind, although paralytic on the opposite side. In the appendix to WEPFER's Hist. Apoplect., Dr BRUNNER mentions a case of a drunken blacksmith, aged sixty-four, who died of apoplexy, whose faculties were rather excited than impaired, although he observed, after death, "piam matrem aqua turgidissimam. —Ablata dura matre serum perpetim exsudavit et effluxit limpidum. Uterque ventriculus aqua scatebat turbida, quin omnes recessus et cerebri cavitates hac inundatæ et repletæ fuerunt. Cerebellum minime flaccidum, sed sicut reliquæ cerebri partes firmum apparuit," &c. He was rather acute in

* Mém. de l'Acad. 1741. † Anat. lib. 3. p. 637. ‡ Page 580–1.

his intellect towards the end. La Peyronie mentions a case of a man who had been troubled with hypochondriacal symptoms for ten years, whose faculties were never affected, although the fourth ventricle and *cerebellum* were found diseased. A girl died in the fourth month of an arthritic complaint, with *evident symptoms of oppressed brain*, but in perfect possession of her intellectual powers, although the brain was soft, and water effused. Bonnet saw a case, where, after eleven days' illness, and, only towards the end, occasional alienation of mind, "tota fere basis cerebri, imprimis cerebellum, et ea pars medullæ spinalis quæ primis vertebris excipitur, sphacelo inventæ sunt correptæ."

Dr Ferriar concludes, by quoting from Ambrose Pare', what he considers a most extraordinary case; but Pare''s authority being very great, he thinks it merits confidence. It is that of the Duc de Guise, "who was wounded in the head by the thrust of a lance, which entered *under* the right eye, near the nose, and came out at the neck, between the ear and the vertebræ. The steel remained *in the brain*, was extracted with great difficulty, and the patient recovered." Such are the principal cases.

The farther removed an account is from what we are accustomed to observe in ordinary circumstances, the stronger is the evidence required, before we can believe it, and inversely. So, in the present instance, when we find almost all the cases mentioned, consisting of very partial injury of *one* side only of the brain, with no striking disturbance of *intellect*, we are not disposed to be scrupulous in admitting them to be true. We see such things occur in our own day, and they are, in themselves, sufficiently probable; seeing that the organs are double, and that one may be affected without the other participating in the injury; and that the organs of the intellectual faculties constitute so small a portion of the brain, as to leave nearly two-thirds of the whole mass to be destroyed on *both* sides, without necessarily interfering with the intellect. But when we come to such cases as that of the boy, who is said to have lost all his brain excepting "*about the*

bulk of an egg," and yet "*remained quite well*" till within a few hours of his death, we are compelled to pause, and ask for stronger evidence than that afforded by a quotation at third hand of a single case. Neither the Reviewer nor Dr Ferriar appear to have seen Billot's own account of it, since each has quoted from a different source; and not having been able to procure the original work, I know not whether it is correctly quoted by either. But if *one* such case could be made out by incontestible evidence, it would not only lay prostrate the whole fabric of Phrenology, but it would save us a great deal of time and useless labour at present spent in trying to find out the functions of a part, which, according to this account, could not possibly have any; and therefore, when we see the whole body of physiologists persevering in their endeavours to discover the uses of the brain, with as much zeal and earnestness as if no such case had ever been heard of, the only conclusion which we can legitimately draw is, that they, hostile as most of them are to Phrenology, have just as little faith in the accuracy of the details as the Phrenologists themselves, and if they disregard the story as unworthy of credit, we have surely, at least, an *equal* right to pursue a similar course, and to withhold our belief. In like manner, when we are told, as in the three cases alluded to by the Reviewer, of the faculties remaining entire after the complete destruction of the brain by water, we are entitled to require evidence of no ordinary force before giving credit to their truth, more especially since the late discoveries by Gall and Spurzheim of the structure of the brain, shew the fallacy of the appearances commented upon as indicating the absence of that organ.

Out of the twenty-nine cases here quoted from different authors, *eighteen* expressly refer to injury of *one side only*. These require no remarks; for, granting that none of the faculties were lost, there still remained the sound organs of the opposite side to execute the functions. *Five* more expressly refer to injury or disease of the *cerebellum* and *fourth ventricle*, parts which have no immediate connection with the

exercise of the *intellectual* faculties, which alone are mentioned. In two, the side is not mentioned. In three more, the *whole* brain was extant, but altered in appearance; and, lastly, comes the case *par excellence*, in which the brain had almost disappeared, and which, if admitted, would undoubtedly bury Phrenology and its opponents in one common ruin. Some of these demand a few observations.

In Dr Brunner's case of the drunken blacksmith, who died apoplectic, the whole of the brain was still extant at his death; but a quantity of water was found effused upon it; notwithstanding which, he not only retained his faculties, but was even more acute. "Cerebellum minime flaccidum, sed sicut reliquæ cerebri partes firmum apparuit." This is the consequence of a certain degree of inflammation, which, in the case of the brain, as well as in that of other organs, often *exalts* instead of diminishing the function. Hence *it* proves nothing against us. The effusion appears to have been the cause of the apoplexy and of death.

In the hypochondriacal patient, already referred to, even supposing all the faculties to have been unimpaired, the visible seat of the disease was confined to the *cerebellum* and fourth ventricle, and did not extend to the organs of the *intellectual* powers. In Bonnet's case of eleven days' illness, with occasional alienation towards the end, where the cerebellum, part of the base of the brain, and a portion of the medulla spinalis, were mortified, "sphacelo inventæ sunt correptæ," the part of the base of the brain is not mentioned; and, therefore, no conclusion can be drawn in favour of any of the organs of the intellectual faculties having been even partially destroyed; and, besides, there is every reason to believe the sphacelus not to have existed for any length of time, but to have been the immediated forerunner of death.

Lastly, Although what Dr Ferriar calls the very extraordinary case of the Duc de Guise, be included in the eighteen cases of injury of one side only, it is deserving of particular attention. The lance entered *under* the right eye, near the nose, and came out at the neck between the ear and

vertebræ. The steel, it is said, remained *in the brain*, was extracted with difficulty, and recovery followed. The state of the faculties is not even mentioned. In this case, he says, the base of the *brain* must have been extensively injured. I humbly apprehend, however, that the brain was not, and could not be touched. Let any one examine on the living, or on the dead subject, the direction of such a wound, and he will instantly agree with me in opinion, and will then be at no loss to account for the difficulty of extracting the steel. Having seen it stated in BOYER's *Traité des Maladies Chirurgicales*, that the spear entered *above* the eye, I procured the original work of AMBROSE PARE', and found that Dr FERRIAR was right in saying that it entered *under* the eye. *But* PARE' *never once mentions either brain or faculty.* He says, "The head of the lance stuck so fast as to require a pair of smith's pincers for its extraction. Although the violence of the blow was so great, that it could not be without *fracture of the bones, a tearing and breaking of the nerves, veins and arteries, and other parts*, yet the generous Prince, by the favour of GOD, recovered," p. 235, lib. x. Although the state of the faculties is not mentioned by Dr FERRIAR, I remember to have read in some French historical author, that the Duke bore the extraction with great fortitude, and retained his faculties apparently undiminished, and the above quotation accounts perfectly for the fact; for it shews that the brain was not in the least affected, the wound being altogether below it. In the case of the Chevalier COLBERT, also, Dr FERRIAR says, the eye was crushed to pieces, and the orbit knocked in; which misapprehension must have arisen from the confused account given by the original author DUVERNEY; for, in point of fact, the stone struck the *temple*, and not the front of the eye.

Little confidence can, at any time, be placed in the history of dissections, made only to discover the cause of death, when afterwards applied to physiological purposes. The surgeon, who has been in the habit of seeing numerous dissections, and particularly in hospital practice, made with this object

alone in view, knows well how *very general* the examination of the diseased parts frequently is, even when seated in organs whose structure and functions are both known; and this observation naturally applies with double force to parts so little known as those contained in the cavity of the cranium. The Edinburgh Reviewer himself, in speaking of some parts (such as the corpus callosum, fornix, &c.), which have *not been expressly mentioned* as destroyed, says, p. 446., "We believe, indeed, that several, if not the whole of them, were actually destroyed in the cases we have quoted; but that they were omitted in the detail of the dissection, either from a fear of being tedious, or because the authors did not conceive *minuteness of description to be an object either of practical or physiological importance.* As it is, however, instances are still wanting, in *which the parts we* have enumerated are *expressly stated to have been destroyed*; and we beg leave to call the attention of the physiologists to this circumstance," &c. The phrenologists, in like manner, beg leave to call the attention *of the public to this circumstance*, that instances are still wanting, in which any one of their organs is expressly stated to have been destroyed, and the function to have remained unimpaired.

To such an extent, indeed, have anatomical structure and minuteness of detail been neglected in the history of the diseases and injuries of the cerebrum and cerebellum, *in so far as they are connected with the mind*, that in almost every instance, the palpable fact of the organs being double has been overlooked; and not only has no attention been paid to the situation of the individual organs, in examining the effects of their injuries in relation to Phrenology, but it never has once been taken notice of by the opponents, that, while they confine their attention to the state of the *intellectual faculties alone* in all cases of wounded brain, the organs of these faculties, in the new system, constitute not more than one-third of the whole cerebral mass, and that the other two-thirds constitute the organs of the sentiments and propensities, which are

never inquired into, as not being conceived to have any thing to do with the brain.

As it appears, then, notwithstanding the affirmations of the opponents, to be quite consistent with the principles of Phrenology, that injuries of the brain may occur, without necessarily affecting the *intellectual* faculties, I might, perhaps, here safely drop the subject. Before quitting it, however, we may shortly inquire how far the cases referred to coincide, or are compatible with the doctrines which the opponents themselves profess. Many of them teach, for example, that the whole brain is the organ of mind, and that every part of it is engaged in every act of thought. Now, it seems to me, that their own cases are fatal to any such theory; for as the brain is subject to all the ordinary laws of animal organisation, were any part of that general organ injured, the function, even according to their own account, ought always to be impaired in proportion. Instead of which, they tell us, that the function which they believe it to execute, does not suffer with *almost total* destruction of the organ! No other part of the human body is known to retain its functions unimpaired, amidst total or partial change, or destruction of its structure; and, therefore, had they not been blinded by preconceived opinions, they must have perceived that the very circumstance of the brain being partially injured, without any considerable derangement of intellect, was sufficient to prove that every part of that organ was *not* necessary to every individual act of mind, and that the brain was not the single organ they believed it to be.

Phrenology, or the doctrine of a plurality of organs and faculties, alone satisfactorily explains the apparent contradiction, by shewing, that the state of one organ, or part of the brain, does not necessarily affect the condition and functions of the others, and thus the phrenologist, who considers particular parts of the brain to be the organs of distinct mental faculties, may be quite consistent in believing, that one of these organs, and the faculty with which it is connected, may be wounded and impaired without necessarily inducing any diminution, or alteration in the functions of the others; and as he thinks it

proved, that two-thirds of the brain constitute the organs of the propensities and sentiments, he may still be quite consistent in believing that large portions of these two-thirds, even on both sides, may be injured without necessarily disturbing, in any high degree, the *intellectual* operations carried on by the remaining sound third, which he has previously ascertained to constitute the organs of the *intellectual* faculties. But the opponent who believes in the *unity* of the brain, is very differently circumstanced, and can no more account for the intellect continuing unimpaired, after the destruction of *any* part, than he could for sight remaining unaffected by disease, or destruction of the eye. What, then, are we to think of the consistency of those philosophers, who, like Dr FERRIAR, in one page gravely doubt, whether the brain has not been altogether destroyed, without loss of mental faculties; and yet in another declare that they consider, as he does, "these medical facts as almost demonstrating that the brain is the *instrument*,—not the cause, of the reasoning powers?" We, too, consider the brain as the instrument of the mental faculties; but we are not so inconsistent as to suppose, that it is a matter of indifference to the manifestations of these faculties, whether that instrument be a whole or a broken one, or have even altogether ceased to exist. We farther consider that Phrenology, so far from having any thing to fear from these "medical facts," derives additional confirmation from them, since it is upon phrenological principles alone that they are either explicable or consistent with any of the known laws of nature. It is in such circumstances that the new science rises so far superior to any theory of the mind hitherto invented; and it can only be from its being founded on the solid basis of truth, that it is ever so beautifully and simply consistent with the observed phenomena of mind, alike in a state of health and of disease.

I proceed, before concluding the subject (being in some measure connected with the present essay), to make a few observations on a mode of investigating the functions of the individual parts of the brain, proposed by that excellent surgeon Sir

E. Home *, and differing widely from that in use among the Phrenologists. "The various attempts," says he, "which have been made to procure accurate information respecting the functions that belong to individual portions of the human brain, having been attended with very little success, it has occurred to me, that were anatomical surgeons to collect, in one view, all the appearances they had met with, in cases of injury of that organ, and of the effects that such injuries produced upon its functions, a body of evidence might be formed, that would materially advance this highly important investigation."

As this mode of inquiry is still looked upon by many as the most promising and philosophical that has yet been tried, and as such is recommended by the Edinburgh Review, it may be worth while to see what it is really able to effect. To me it appears to be totally inadequate to the purposes of original discovery, although it may be usefully employed to procure additional information, *after* the functions of the different parts of the brain have been ascertained by other means

The defects of this mode of investigation, are, 1*st*, That so long as we remain unacquainted with the situation and limits of the different cerebral organs, it is impossible for us to pronounce, whether, in any given case, one only, or several, are implicated; and also, whether the destruction of any organ is partial or complete.

2*dly*, That so long as we remain ignorant of the number and functions of the mental faculties, and of the effects of their various combinations with each other, we are necessarily unable to decide in any case, what particular faculty or quality of mind has been impaired or destroyed. Some faculties, for instance, require the presence of such external objects for their operation, as are not to be found in the chambers of the sick, or in the wards of an hospital; and, therefore, it is possible that the power may be altogether destroyed, and yet its

* Philosophical Transactions for 1814, p. 469.

absence may not even be suspected by the surgeon or his attendants, who never were aware of its existence as an independent faculty, even when the brain was entire.

3dly, That the complex and delicate structure of the brain, makes it exceedingly difficult, if not impossible, to injure or destroy one part without the neighbouring parts, and the functions which they perform, participating in a greater or less degree. Thus, Professor Rolando of Turin, who has devoted much of his time to the study of the anatomy and functions of the brain, in speaking of mutilations which he had performed, with a view to discover the functions of a particular part of that organ in the lower animals, complains of this as an almost unsurmountable obstacle. "I have made," says he, "innumerable experiments to discover the results of injuries done to the bigeminal tubercles, and the parts in the neighbourhood of the optic thalami, *but I have rarely obtained consistent results;* which is not surprising, if we consider the peculiar interlacing of the numerous medullary fibres which meet in these parts; for, as it is extremely difficult to know what bundles of fibres have been affected in these operations, we cannot draw clear and precise conclusions, where there is a difference in the result." If this holds true with regard to mutilations performed with every precaution to avoid wounding other parts, and under every advantage which an acquaintance with anatomy can afford, it certainly applies with tenfold force to injuries, the results of accidental and unguided violence.

Lastly, That, from the mere aspect of the wound, we are never certain of the precise extent of the injury done to the brain; and, consequently, can never positively refer the phenomena to an affection of any particular part, and of it alone. One injury, for instance, apparently of the very slightest nature, often produces the most serious constitutional symptoms, and disturbance of the whole mind; while another, to appearance much more severe, is productive of little inconvenience. In the former, the effects of the violence seem to extend either immediately or from sympathy over the whole brain, or at

least, much farther than its external or visible seat, while, in the latter, the affection is more strictly of a local nature; and thus the results obtained in one case are often entirely negatived by those obtained in another.

In accordance with, and in corroboration of the opinion which I have here ventured to express, as to the total inadequacy of this mode of investigation, for the purposes of original discovery, I would ask no better authority than Sir E. Home himself. For although, for the sake of greater accuracy, he confines himself to cases which have come under his own immediate notice, and, although these must have been observed with a view specially to this inquiry; yet, his own essay on this subject, affords the most convincing proof and apposite illustration of all the defects of the mode which it is written to recommend. The first things, for example, that strike the reader on referring to it, are, 1*st*, That out of the *ten* classes, into which the cases are purposely divided by Sir Everard, no less than *seven*, (1. Undue pressure of water on the brain, 2. Concussion of the brain, 3. Preternaturally dilated or diseased bloodvessels of the brain, 4. Extravasated blood, 5. Formation of pus, 6. Depression or thickening of parts of the skull, 7. Pressure from tumours), resolve themselves into affections, in which the *totality* of the brain is, in some way or another, concerned; 2*d*, That, in one, (viz. 8. Injury of the medulla spinalis), *the entire brain is unaffected*; and, 3*dly*, That *in two only*, (9. Injury to the substance of the brain; and, 10. Alteration of structure), is the affection generally confined to *individual* portions of that organ; although in very many instances, even in these two classes, it extends over all the brain. From his own statement, then, the reader would naturally anticipate *a priori*, that the effects resulting from most of these injuries would be such as are known to indicate derangement, not of one, or of several, but of all the parts of the brain; and, consequently, that they could not, by any possibility, lead to the discovery wished for, of the functions of its *individual* portions. Accordingly, Sir Everard himself informs us, that the effects produced are, *delirium*, *convulsions*, *coma*, *apoplexy*, *sickness*,

watching, and the like, and not lesion of any particular faculty, or of any individual function. In one or two instances, indeed, the state of the memory and of the external senses is mentioned, but without being connected in any way with specific injury. The reviewer himself, with every wish to be pleased with Sir EVERARD'S method, is constrained to say, that the results obtained in this manner are so vague and contradictory, that they "serve only to confirm what had already perhaps been sufficiently made out by the authors we have named; to-wit, that there is no sort of uniformity either in the kind or degree of the symptoms which accompany diseases of the brain." And in this sentiment I cordially concur with him, in so far as regards violent injuries.

To render the results obtained, either from observing the effects of cerebral injuries in man, or from the performance of mutilations upon the brains of animals, at all valuable in illustrating the cerebral physiology, a previous knowledge of the seats of the organs, and of the nature of the faculties which they subserve, has been already shewn to be an indispensable requisite; and if we suppose these to have been accurately ascertained by other means, then the facility of making interesting and precise physiological and pathological observations is so greatly increased, that much valuable information may be obtained; especially in some individual cases, in the two last mentioned classes of Sir E. HOME. But without this preliminary knowledge to guide us in our observations, it is obvious that nothing precise or practical can be got at.

If an injury of the cerebellum, for example, or of part of the posterior lobes of the brain, occurs to a philosopher, who is firmly satisfied in his own mind "that the whole brain is engaged in every act of thought," and that no part of it is appropriated to the manifestations of any of the propensities or sentiments, what inference can he draw as to the function, upon finding no intellectual faculty with which he is acquainted impaired or wanting? He cannot consistently investigate the state of the propensities, and refer any irregularities among them to the injury sustained, because these are not intellectual faculties, and, according to him, have no connection with

the brain. He remains of necessity as much in the dark as ever. But let such a case occur to the phrenologist, or to him who has ascertained, by previous observation, the uses of the part, it is evident, that, although he could not, any more than the philosopher, infer the function from a consideration of the symptoms alone; yet, having discovered it by other means, he comes to the inquiry fully competent to judge whether his former observations are confirmed or refuted by the phenomena now before him. It is only when in possession of this previous qualification that we can derive any advantage from such cases in increasing our knowledge of mind.

That the philosopher with such views could never have been led to the discovery of the connection between certain parts of the brain and the propensities and sentiments, by the mere observance of their injuries, is proved by wounds of these parts having been actually attended with symptoms corresponding to their phrenological functions, and neither he nor the anatomical surgeon having drawn any such inference. Wounds and diseases of the cerebellum, for instance, have forced themselves upon their notice, where the sexual propensity was extinguished by loss of substance, or preternaturally excited by the subsequent inflammatory action; and yet no one drew the inference that the cerebellum was the organ of Amativeness *. The temper and moral sentiments have also been entirely changed, in consequence of certain injuries of the brain, while the intellect remained unimpaired; and no one drew the conclusion that the parts affected were the organs of these sentiments. Nor would they have been warranted in doing so, because instances of injury confined so entirely to one part as to affect its function, without having any influence upon those of the neighbouring parts, are so rare, in comparison to those of an opposite kind, that no just inferences can be drawn from them alone; although, combined with other evidence, they are highly important.

* Wepferus' Historiæ Apoplecticorum, edit. 1724, p. 487. Majendie's Journal de Physiologie for April and August 1822; also Medical Repository, vol. xviii. p. 268-358.—Larrey's Memoires de Chirurgie Militaire et Campagnes, vol. ii. p. 150; vol. iii. p. 262.

CONCLUSION.

In the Introduction to this work, it is observed, that, "in surveying the philosophy of man, as at present exhibited to us in the writings of philosophers, we perceive, *first*, That no account is given of the influence of the material organs on the manifestations of the mental powers; that the progress of the mind from youth to age, and the phenomena of sleep, dreaming, idiocy, and insanity, are left unexplained or unaccounted for, by any principles admitted in their systems: *Secondly*, That the existence and functions of some of the most important primitive faculties are still in dispute; and, *thirdly*, That no light whatever has been thrown on the nature and effects of combinations of the primitive powers in different degrees of relative proportion. It is with great truth, therefore, that Monsieur De Bonald, quoted by Mr Stewart, observes, that "diversity of doctrine has increased from age to age, with the number of masters, and with the progress of knowledge; and Europe, which at present possesses libraries filled with philosophical works, and which reckons up almost as many philosophers as writers; poor in the midst of so much riches, and uncertain, with the aid of all its guides, which road it should follow; Europe, the centre and focus of all the lights of the world, has yet its *philosophy* only in expectation."

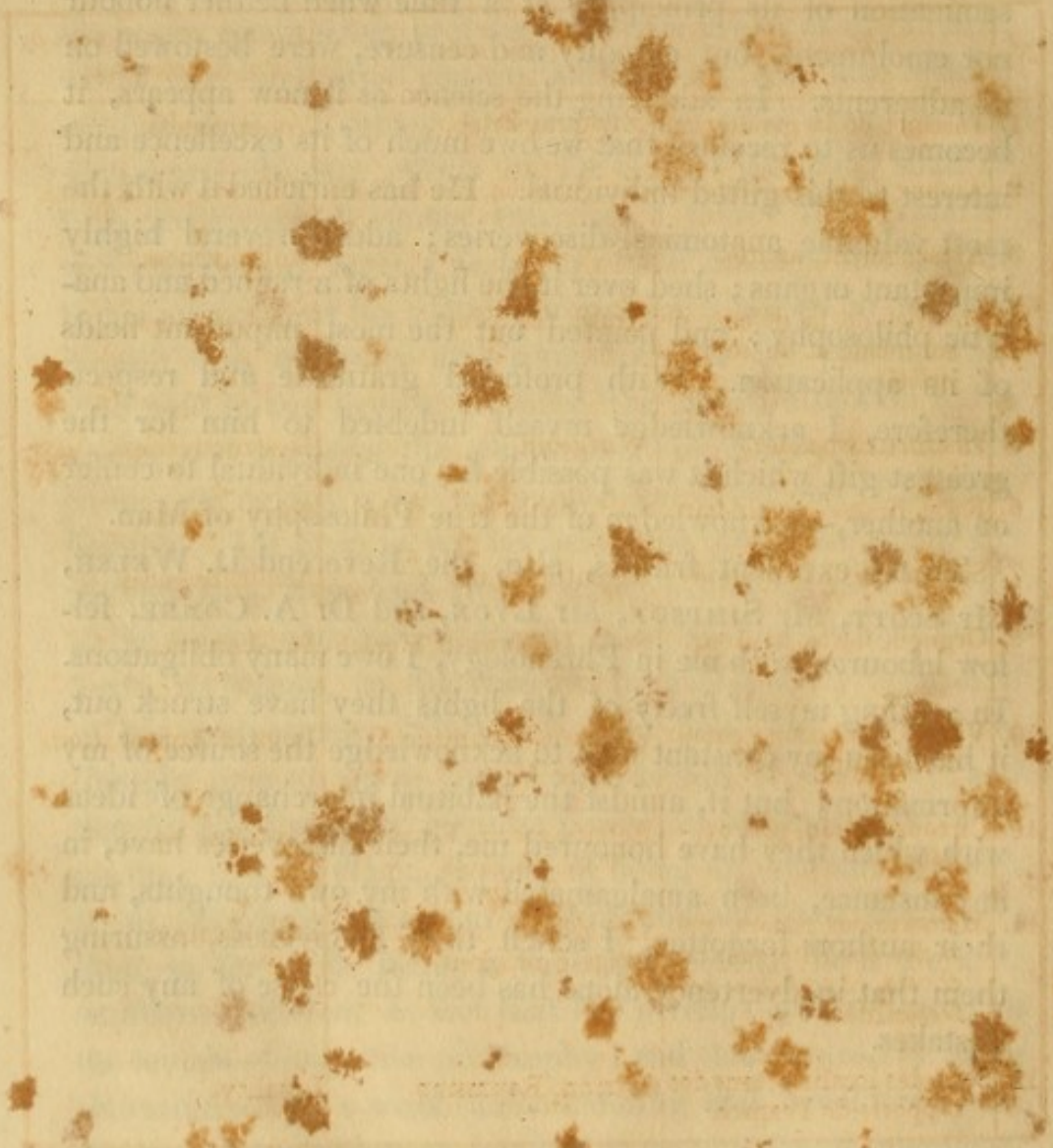
May I hope that Phrenology will now appear to the attentive reader calculated to supply the deficiency here pointed out, and to furnish Europe, at last, with the Philosophy so long in expectation?

Hitherto the writings of Dr Gall have been little known to the British public, except through the medium of hostile reviews; and the most unmeasured ridicule and abuse have been poured out against them, as if they were a disgrace to the century in which they were produced; and his fellow labourer Dr Spurzheim has sustained an equal share of this unmerited storm. In preparing the present volume for the press, I have drawn largely from the works of both of these

founders of the science; in many instances I have compared their statements of fact with nature; sifted their arguments, and weighed deliberately their conclusions; and I now feel it an imperious duty to state, that the present generation has, in my humble judgment, re-acted, in their cases, the scenes which have attached so deep a stigma to the ages of GALILEO and HARVEY. The discoveries of the revolution of the globe, and the circulation of the blood, were splendid displays of genius in their authors, and interesting and beneficial to mankind; but their results, compared with the consequences which must inevitably follow from Dr GALL's discovery of the functions of the brain, (embracing, as it does, the true theory of the animal, moral, and intellectual constitution of man), sink into relative insignificance. Looking forward to the time when the real nature and ultimate effects of Dr GALL's discovery shall be fully recognised, I cannot entertain a doubt that posterity will manifest as eager a desire to render homage and honour to his memory, as his contemporaries have shewn in treating himself with indignity and contempt. If the present work shall tend in any degree to rouse the public attention to his merits, and to excite the philosophers of England to do him justice ere he die, it will accomplish one great end of its publication. Let them at last lay aside the prejudice which has so long kept them back from looking with their own eyes into his works, and from appealing, with the lights which he affords, to Nature, as the standard by which to try the merits of his pretensions. They will then find that a fortunate thought opened up to him a vast region of discovery, and that he has displayed gigantic powers in prosecuting it to its results; that Dr GALL, in place of being an ignorant pretender to knowledge, is a man of profound and solid erudition; that, so far from being a wreckless theorist, he is the most stubborn adherent to fact that has perhaps ever appeared in the annals of inductive philosophy; and that, instead of being characterized by a weak understanding and bewildered imagination, he manifests an intellect at once profound, regulated, and comprehensive.

Dr SPURZHEIM's works and lectures have rendered him better known in this country, and the force of truth has for some years been operating in his favour. No reviewer would now reckon it creditable to use the terms so unceremoniously applied to him in 1815; but a great debt of respect and gratitude remains to be paid by Britain and the world to Dr SPURZHEIM. He is second in fortune rather than merit to Dr GALL. The great discovery of Phrenology unquestionably belongs to the latter; but to Dr SPURZHEIM is due the praise of early appreciating its importance, of fearlessly dedicating his life to the enlargement of its boundaries and the dissemination of its principles, at a time when neither honour nor emolument, but obloquy and censure, were bestowed on its adherents. In admiring the science as it now appears, it becomes us to recollect that we owe much of its excellence and interest to this gifted individual. He has enriched it with the most valuable anatomical discoveries; added several highly important organs; shed over it the lights of a refined and analytic philosophy; and pointed out the most important fields of its application. With profound gratitude and respect, therefore, I acknowledge myself indebted to him for the greatest gift which it was possible for one individual to confer on another,—a knowledge of the true Philosophy of Man.

To my excellent friends, also, the Reverend D. WELSH, Mr SCOTT, Mr SIMPSON, Mr LYON, and Dr A. COMBE, fellow labourers with me in Phrenology, I owe many obligations. In availing myself freely of the lights they have struck out, it has been my constant wish to acknowledge the source of my information; but if, amidst the habitual interchange of ideas with which they have honoured me, their discoveries have, in any instance, been amalgamated with my own thoughts, and their authors forgotten, I solicit their forgiveness, assuring them that inadvertency alone has been the cause of any such mistakes.



APPENDIX.

Names and Order of the Organs adopted by Dr Gall.

No.	*French.*	*German.*	*English Names given by Dr Spurzheim.*
1.	Instinct de la generation.	Zeugungstrieb.	Amativeness.
2.	Amour de la progéniture.	Jungenliebe, Kinderliebe.	Philoprogenitiveness.
3.	Attachement, amitié.		Adhesiveness.
4.	Instinct de la défense de soi-même et de sa propriété.	Muth, Raufsinn.	Combativeness.
5.	Instinct carnassier.	Wurgsinn.	Destructiveness.
6.	Ruse, finesse, savoir-faire.	List, Schlauheit, Klugheit.	Secretiveness.
7.	Sentiment de la propriété.	Eigenthumsinn.	Acquisitiveness.
8.	Orgueil, fierté, hauteur.	Stolz, Hochmuth, Herschsucht.	Self-Esteem.
9.	Vanité, ambition, amour de la gloire.	Eitelkeit, Ruhmsucht, Ehrgeitz.	Love of Approbation.
10.	Circonspection, prévoyance.	Behutsamkeit, Vorsicht, Vorsichtigkeit.	Cautiousness.
11.	Mémoire des choses, mémoire des faits, sens des choses, éducabilité, perfectibilité.	Sachgedœchtniss, Erziehungs-Fœhigkeit.	Individuality.
12.	Sens des localités, sens des rapports de l'espace.	Ortsinn, Raumsinn.	Locality.

No.	*French.*	*German.*	*English Names given by Dr Spurzheim.*
13.	Mémoire des personnes, sens des personnes.	Personen-sinn.	Form.
14.	Sens des mots, sens des noms, mémoire des mots, mémoire verbale.	Wort-Gedœchniss.	Language.
15.	Sens de langage de parole, talent de la philologie, &c.	Sprach-Forschungs-sinn.	Held by Dr SPURZHEIM to be included in the last organ.
16.	Sens des rapports des couleurs, talent de la peinture.	Farben-sinn.	Colouring.
17.	Sens des rapports des tons, talent de la musique.	Ton-sinn.	Tune.
18.	Sens des rapports des nombres.		Number.
19.	Sens de méchanique, sens de construction, talent de l'architecture.	Kunst-sinn, Bausinn.	Constructiveness.
20.	Sagacité comparative.	Vergleichender-scharfsinn.	Comparison.
21.	Esprit metaphysique, profondeur d'esprit.	Metaphysischer-Tiefsinn.	Causality.
22.	Esprit caustique, esprit de saillie.	Witz.	Wit.
23.	Talent poétique.	Dichter-Geist.	Ideality.
24.	Bonté, bienveillance, douceur, compassion, &c.	Gutmœthigkeit, Mitleiden, &c.	Benevolence.
25.	Faculté d'imiter, mimique.		Imitation.
26.	Sentiment religieux.		Veneration.
27.	Fermeté constance, persévérance.		Firmness.

Dr GALL marks as unascertained several organs admitted by other Phrenologists.

Names and Orders of the Organs according to Dr SPURZHEIM's *Classification in his "Observations sur la Phrænologie."*

ORDER I.—FEELINGS.

Genus I.—PROPENSITIES.

1. Amativeness.
2. Philoprogenitiveness.
3. Inhabitiveness.
4. Adhesiveness.
5. Combativeness.
6. Destructiveness.
7. Constructiveness.
8. Acquisitiveness.
9. Secretiveness.

Genus II.—SENTIMENTS.

10. Self-Esteem.
11. Love of Approbation.
12. Cautiousness.
13. Benevolence.
14. Veneration.
15. Firmness.
16. Conscientiousness.
17. Hope.
18. Surnaturalité *(Wonder)*.
19. Wit.
20. Ideality.
21. Imitation.

ORDER II.—INTELLECTUAL FACULTIES.

Genus I.—EXTERNAL SENSES.

Touch.
Taste.
Smell.
Hearing.
Sight.

Genus II.—PERCEPTIVE FACULTIES.

22. Individuality (Lower Individuality).
23. Form.
24. Size.
25. Weight.
26. Colouring.
27. Locality.
28. Number.
29. Order.
30. Phenomènes (Upper Individuality).
31. Time.
32. Tune.
33. Language.

Genus III.—REFLECTIVE FACULTIES.

34. Comparison.
35. Causality.

Arrangement contained in Dr SPURZHEIM's *"Essai Philosophique." (He omits the numbers in this work; I add them in the order in which the Organs stand).*

ORDER I.—FEELINGS, *(Facultés affectives).*

Genus I.—FEELINGS COMMON TO THE LOWER ANIMALS AND MAN.

1. Amativeness.
2. Philoprogenitiveness.
3. Inhabitiveness.
4. Adhesiveness.
5. Combativeness.
6. Destructiveness.
7. Constructiveness.
8. Acquisitiveness.
9. Secretiveness.
10. Cautiousness.
11. Love of Approbation.
12. Self-Esteem.

Genus II.—FEELINGS PROPER TO MAN.

13. Benevolence.
14. Veneration.
15. Firmness.
16. Conscientiousness.
17. Hope.
18. Feeling of the Marvellous.
19. Ideality.
20. Sense of the Ludicrous.
21. Imitation.

ORDER II.—INTELLECTUAL FACULTIES.

Genus I.—EXTERNAL SENSES.

Touch.
Taste.
Smell.
Hearing.
Sight.

Genus II.—INTERNAL SENSES, WHICH GIVE A KNOWLEDGE OF EXTERNAL OBJECTS, AND THEIR QUALITIES.

22. Individuality.
23. Size.
24. Form.
25. Consistence and Weight, (probable).
26. Colour.

Genus III.—Internal Senses, which give a knowledge of the Relations of Objects.

27. Locality.
28. Number.
29. Order.
30. Phenomena, (Higher Individuality).
31. Time.
32. Tune.
33. Language.

Genus IV.—Reflecting Faculties.

34. Comparison.
35. Causality.

Arrangement contained in Dr Spurzheim's "Phrenology," published 1825.

Order I.—FEELINGS or AFFECTIVE FACULTIES.

Genus I.—Propensities.

1. Amativeness.
2. Philoprogenitiveness.
3. Inhabitiveness.
4. Adhesiveness.
5. Combativeness.
6. Destructiveness.
7. Secretiveness.
8. Acquisitiveness.
9. Constructiveness.

Genus II.—Sentiments.

10. Self-Esteem.
11. Love of Approbation.
12. Cautiousness.

Genus III. of the Affective Faculties.

Superior Sentiments.

13. Benevolence.
14. Veneration.
15. Firmness.
16. Conscientiousness.
17. Hope.
18. Marvellousness.
19. Ideality.
20. Mirthfulness or Gayness.
21. Imitation.

UNDERSTANDING OR INTELLECT.

External Senses.

Feeling.
Taste.
Smell.
Hearing.
Sight.

PERCEPTIVE FACULTIES.

I.—Intellectual Faculties, which perceive the existence of External Objects and their Physical Qualities.

22. Individuality.
23. Configuration.
24. Size.
25. Weight and Resistance.
26. Colouring.

II.—Intellectual Faculties, which perceive the Relations of External Objects.

27. Locality.
28. Calculation.
29. Order.
30. Eventuality.
31. Time.
32. Melody.
33. Language.

REFLECTIVE FACULTIES.

34. Comparison.
35. Causality.

Note A. p. 284.—*Observations on Individuality by Mr William Scott.*

I consider the Lower Individuality to be the power which connects the lower observing faculties, and enables them to act together in the perception of external objects. The special observing powers of Form, Size, Colouring, &c. never act by themselves. We never actually *perceive* Form by itself, nor Size by itself, nor Time by itself, nor Tune by itself, nor Order by itself, nor Number by itself. We perceive at once a certain object, of a particular size and form, situated in a particular place; or we perceive a certain number of ob-

jects, arranged in a certain way, relatively to one another, or following each other in a certain succession. The faculties, conversant with these several qualities, never act entirely independent of each other, but always more or less together, and in concert. Every object we perceive is a concrete object, combining in it more or fewer of these different qualities, while the whole forms but one individual, and is perceived and remembered as such. The power, by which it is so perceived and remembered, is called Individuality; and as its organ lies in close juxtaposition to those of the special observing powers, I conceive that it is, in some way or other, connected with these powers, and that it draws its materials from them all. It takes up the threads from these subordinate parts of the machinery, and unites them into one firm and distinct tissue of perception; or, to use another simile, it collects the scattered rays, transmitted through so many separate apertures, and forms the whole into one entire and perfect image.

I imagine that this power also combines the energy of the lower observing faculties, in *recalling* a picture or conception of some object, or group of objects, formerly observed, but not immediately present to the senses. In recalling these conceptions, we have before us (more or less accurately, according to the perfection of the faculties employed) the whole circumstances of Form, Colour, Position, Arrangement, Sound, and so on, in which the object or event originally presented itself to us. But these impressions gradually wear away and fade from our recollection, and, at last, we retain nothing but a bare outline of the fact, (object, or event,) remembered. This I conceive to be the office of the Lower Individuality alone. Thus, when we see any object, for instance a horse, we remember, for some time, with tolerable accuracy, the form, colour, height, and other qualities of the animal. This we may do by means of the Lower Individuality, united to and acting along with the lower special observing powers of Form, Size, Colouring, &c. But soon, unless something has occurred to impress these circumstances forcibly on our minds,

they vanish from our recollection, and we remember nothing but the simple fact of our having seen *a horse*. In this last case I conceive Individuality is acting alone, unassisted by the other powers above mentioned. In this way I conceive, that, by means of this faculty, we arrive at a species of abstract ideas; as, in the case supposed, we have a sort of notion or impression of *a horse*, abstracted from all consideration of its form, colour, or other sensible qualities.

There is another way in which we may arrive at the formation of general ideas, and that is by the assistance of Comparison. We see by comparing together different individuals of the same species, for instance of horses, wherein they all resemble one another, and the result of this comparison, or what Dr Brown calls the Feeling of Resemblance, is the *general individual* idea which we express by the word *horse*.

Ideas of this last class I conceive to be within the province of the *Higher Individuality*, and to be formed with the assistance of *Comparison*, and the position of the organs of these two faculties favours the conclusion that they are so. But in whatever way these two kinds of general ideas are formed, I conceive that, when they are formed, they differ little or nothing from one another. I can even conceive that they may coalesce and coincide, and that the two operations may be both, in some degree, necessary to the formation of clear distinct general ideas of the different classes of objects which we see around us. They seem together to form a connecting link between sense and reflection.

These two organs, therefore, the Higher and Lower Individuality, are both concerned with facts and actual existences. I do not conceive, that one of them is taken up with events, and the other with objects that exist; but that both of them take cognizance of events as well as things; only I conceive, that the former being more connected with the lower observing powers, is taken up with those objects and events which are or have been presented to our senses, and that the latter is occupied with such knowledge respecting them, as may be derived from reflection, or received from testimony, or

from books, through the instrumentality of the organ of Language. I farther conceive it probable, from the position of the organs, that objects or occurrences are suggested to the former, chiefly by relations of contiguity, and that it retains a recollection of objects or events, without regard to any connection farther than the order in which they have occurred: that it apprehends and remembers insulated facts, without regarding causes or consequences, without any comparison, and without any arrangement, excepting merely that in which they happen to have existed. But in the Higher Individuality, which is in close juxta-position to the organs 30, 31, and 32, I conceive, that the order in which the ideas will occur, will be materially modified by the co-operation of these organs, and that they will be suggested to the mind according to some relations of resemblance, causation, or contrast, so as to be treasured up and retained ready for use, in some distinct and luminous arrangement. It is by means of these higher powers, and the resemblances, ratios and differences which they discover to us, that we are enabled to classify objects, and to form our notions of genera and species; and if we suppose that the memory of objects which exist, according to this sort of classification, is part of the province of the Higher Individuality, it is easy to see how this power should give a fondness and a capacity for the study of Natural History, the very essence of which as a science, consists precisely in this kind of arrangement.

I conceive that this faculty, the Higher Individuality, is also that which gives a capacity and a fondness for civil history; which contains just as much of detail as is necessary to interest and to exercise the talent for remembering facts, and as much of arrangement as to excite, without fatiguing, the reflecting powers. Comparison, aided by this power, will enable the lawyer or the statesman, to recal a vast store of similar circumstances that have occurred in courts of law, or are recorded in history, and to produce them as *cases in point*, for the purpose of leading their auditors to the conclusion they wish; and I understand it has been observed, that many

speakers, remarkable for this sort of talent, have possessed a large endowment of Higher Individuality. Great reflecting power is not necessary for this species of oratory, which is, to an ordinary audience, perhaps, the most brilliant and persuasive of any; and in conformity to this, it has been observed, that many of our greatest orators, of whom casts have been preserved, do not appear endowed with any great or preponderating share of the reflecting organs.

Note B. p. 284.—Observations on the same Organ, by the Reverend David Welsh.

Organs of Motion and Substance, or Substantiality.

Lower Individuality appears to be the organ of Motion, in the same way that Form is the organ of Form, &c. &c. The idea of Motion is primitive, and cannot be resolved into simpler elements; nor is there any other faculty of which it can be shewn to be the function. Locality is the organ of relative position, but this does not *involve Motion*,—at least there might be the one idea without the other. I was led to conceive this to be the organ of Motion, from observing, that those who had it large were restless,—could not remain in one position, and, in examining objects, moved them about, and could not be satisfied when they saw any object, without taking it in their hand, and turning and looking on it on all sides. Hence, it is very much connected with curiosity,—at least a certain species of curiosity. Taking up a letter, for instance, looking at it on all sides, and where Secretiveness is also large, it would take a large Conscientiousness to keep one from looking in. Locality alone would not give the desire of travelling. Lower Individuality must be also large. If Individuality without Locality is large, then there is a kind of fidgettyness and moving up and down in a smaller sphere, and without any reference to geographical knowledge.

Upper Individuality.—The special function of this organ seems to be, to give the idea of Substance. There is an idea of Colour, Weight, &c. &c.; and, besides this, we have an idea of a sort of substratum in which these reside. This arises from Upper Individuality. The idea of the substance Mind is to be ascribed to the same faculty. I think all the functions attributed to this organ might easily be traced to this, which I conceive to be the essential function*.

Note C.—*On the Harmony of the Faculties, p.* 493.

Philosophers are agreed, that the physical laws of nature admit of no exceptions; but it is generally supposed, that the same rule does not hold in regard to the phenomena of the moral world. The laws of physical nature, however, have been discovered, only by accurate observation of the causes and relations of the phenomena, and wherever such observation has not been practicable, irregularity and uncertainty appear to prevail to as great an extent in the physical, as in the moral, department of Creation. Before Newton's discovery of the laws of gravitation, the planetary movements must have appeared a chaos of incomprehensible intricacy. The motions of the comets now wear the same aspect; they appear and disappear, no one can tell how, or when, or where. Within the Tropics, the causes of the winds are known, and their courses appear regular and intelligible; but in the temperate zones, the causes of the atmospheric phenomena are more complicated, their operation is not yet distinctly traced, and, in consequence, great seeming irregularity and uncertainty in the seasons prevail: But no philosopher can doubt, that if we could discover the *causes* of the motions of the comets, we should find them operating according to fixed laws, like gravitation in the planetary system; and that if we could trace *all* the causes

* The statement contained in this note was written by Mr Welsh in a letter, without any view on his part to publication; but the ideas appear of so much importance, as to authorise me to give them to the public.

that influence the atmosphere in temperate regions, we should find regularity in the phenomena in them also. I infer from analogy, that the same undeviating predominance of principle must hold in the moral world; and that the confusion which appears in it, must arise from our ignorance of the *causes* of the phenomena. A few illustrations of this inference may be given.

Suppose that an individual, under the influence of Benevolence, confers great benefits on two men; one of them repays him with the deepest gratitude; the other, with the blackest treachery and malignity. Here, it has been said, the same causes do not, in the same circumstances, produce the same effects. Phrenology, however, shews that the causes are not the same. Both persons benefited are men; but the first must possess a high development of the moral organs; while the second must be deficient in them. Now, Phrenology enables us to discover *à priori* the nature of these individuals, and to anticipate their conduct, when the circumstances in which they are placed are known. The uncertainty, therefore, in this case, is apparent only, and arises from ignorance of the real constitution of the men.

Again, it is a law of Nature, that the physical qualities of parents descend to their offspring. The brain is part of our physical constitution, and the size of its different organs determines the mental qualities which preponderate in the mind. Suppose, that a person, ignorant of this law, or disbelieving it, marries a partner beautiful to the eye, and fascinating to sense, but deficient in Conscientiousness and other moral organs: the offspring will probably inherit this development. Farther, let us suppose them to be placed in circumstances which require the energetic operation of these organs to preserve them in the paths of virtue;—the organs are deficient from hereditary descent; temptation prevails; the children err; the parents suffer grievous affliction; and the ways of Providence are regarded as darkly mysterious and unjust. When, however, this arrangement of the CREATOR is discovered, and when the converse case is attended to, that children born of

two individuals, of opposite sexes, both possessing well constituted brains, will be virtuous and intelligent, the apparent obliquity of the moral law disappears, and the family affliction is perceived to be a *necessary* effect, not of the laws of creation, but of a neglect or abuse of them. From numerous observations, I am convinced that such a law as this exists. The exact limits of it are not yet ascertained, but the reason is obvious; the phenomena have been very little attended to. So far as I have noticed, the qualities of the *stock* of which each parent is descended, influence, to a great degree, the character of the offspring. Where the stock of both parents has been moral and intelligent, I have not met with an instance in which *any* of the children have proved vicious. Where the stock of one parent has been deficient, and the other not, either some of the children take the qualities of the one side, and others take those of the other, or they are a modified type of both.

Farther, when the Spaniards discovered South America, they set at defiance all the moral laws of creation; and, under the blind impulses of Acquisitiveness, Self-Esteem and Destructiveness, plundered, ravaged and oppressed, the wretched Peruvians and Mexicans; extorted gold and treasure from them, to satisfy their avarice; but practised no industry, and followed no occupation, calculated to produce wealth. They expected, nevertheless, riches, power and prosperity, to follow from these proceedings; and Europe at large envied the supposed greatness and good fortune of Spain. But mark the consequences. The plundered treasure poured into old Spain rendered the King independent of the resources of the people, and favoured tyranny and oppression in his government. It averted the minds of the people from industry and labour, the only *natural* sources of wealth, and fostered an immoral, rapacious, gambling spirit; and these causes operating for several ages, have ended in the degradation of the Spanish people, and subjected them to the fearful calamities which have rendered them the pity and the contempt of Europe. The Spaniards of the sixteenth century, who committed these gross immoralities, transmitted their dispositions to their posterity; these conti-

nued to neglect industry, and to seek wealth by oppression; or, in other words, to gratify Acquisitiveness and Self-Esteem, in direct opposition to Conscientiousness and Benevolence. Intellectual darkness, and moral degradation, were the inevitable concomitants and consequences of such proceedings. Prosperity and national independence flow from intelligence and high morality alone; but these being wanting in Spain, the lower faculties having been long trained to unlimited indulgence, calamity and desolation as naturally resulted to that benighted country, from these causes, as corn from seed sown in a fertile soil. It is in this way that the moral government of the world appears to me to be vindicated. Turning to the colonists themselves, the descendants of the first oppressors, we perceive indolence, ignorance, superstition, and avarice, with all their concomitant evils, characterizing them for centuries, till at last, after a bloody struggle, they have cast off the yoke of the mother country, and aspired to a nobler destiny, and their future condition will depend altogether upon the extent to which they shall carry the supremacy of the moral and intellectual powers, in their public and private conduct. If we conceive, for a moment, that the Spanish invaders of South America had proceeded under the dictates of the moral Sentiments and Intellect, to cultivate the arts of peace and practise industry, in the same manner as William Penn and his fellow settlers did in Pennsylvania, it is obvious, that they and their posterity would have reaped a far richer harvest of wealth and enjoyment, than by the lawless course they chose to follow. European energy and knowledge, exerted on the productive soil, and in the favourable climate of South America, would have speedily enriched the settlers. In short, the prosperity of the United States may be contrasted with the poverty of the Spanish colonies. as a convincing proof of the worldly advantages that follow in the train of virtue, compared with the miseries engendered by vice.

The question will naturally occur, however, What fault did the Mexicans and Peruvians commit, that could justify so awful a visitation as that brought upon them by their ruthless

invaders? The answer to this question brings out the importance of a principle frequently stated in the preceding work, namely, that *all the faculties* are necessary to the perfection of man; and that it is only their abuses that produce evil. If we suppose the Mexicans and Peruvians to have possessed brains equal or superior to those of the Spaniards; in short, if we imagine South America to have been peopled by a race equal to those who now inhabit Britain, no one will hesitate to allow that the invaders would have landed on their shores only to find a grave. The South Americans, therefore, must have been inferior in animal, moral, and intellectual qualities, or in one or other of these qualities to the Spaniards, otherwise the oppressions they suffered could not have taken place. They appear from what we have ascertained, to have possessed brains inferior in size, and minds of course inferior in energy and capacity, to those of their invaders. In moral qualities they were probably their equals, but, as explained in the text, the Creator has so constituted the three orders of faculties, that the moral sentiments are soft and inefficient, when not supported by vigorous propensities, and blind, when not enlightened by intellect; and on account of deficiencies in one or other of the classes of faculties, the South Americans became the prey of the more energetic nation. How the Mexican and Peruvian brains came to be inferior to the European we do not pretend to know; for experience is wanting to inform us. Looking, however, at the sphere that falls under our own observation, we discover, that neglect of the physical laws of nature in the production and nutrition of children causes the brain to degenerate in Europe; and whether the same causes produce the same effects in America, every one must decide for himself. All that I contend for is, that the Spaniards did not reap advantage, but brought evil on themselves by their immoralities; and that deficiencies existed in the Mexicans and Peruvians, from whatever cause these may have proceeded, which rendered them inferior in mental energy to their invaders; and I infer from all I yet see, that the evils in both cases arose from abuse or neglect of the institu-

tions of the Creator, and were not the necessary or legitimate consequences of observing them.

This subject, however, I freely admit, is beset with difficulties of no ordinary magnitude, and I do not pretend to be able to solve all the cases of apparent exception that may be produced; but it must always be recollected, that, till Phrenology was discovered, it was impossible to trace these laws with any success, on account of the unacquaintance of mankind with the great element of the moral world, the constitution of the human mind; that the application of this science is only begun; and that, if the principles here contended for appear sound, and solve the phenomena with which we are best acquainted, we ought not to be deterred from entering on so noble an investigation, by obstacles which will probably diminish as we proceed.

THE

PHRENOLOGICAL JOURNAL,

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CONTENTS.—No. I.—Introductory Statement—Suppression of Phrenology—On Destructiveness—Correspondence betwixt Mr George Combe and Dr Barclay—Phrenology and Professor Jameson—Mr Charles Bell on the Functions of the Nerves—Dialogue between a Philosopher of the Old School and a Phrenologist—Alleged claims of Reil to Dr Gall's Discoveries in the Anatomy of the Brain—The Spider and the Bee—The Enemies of Phrenology—Letter from Miss Cordelia Heartless—Character of Macbeth phrenologically analysed—Three Skulls of Murderers in Museum of Surgeons, Dublin—Materialism and Scepticism—Anti-phrenological Lectures by the Sieur Donnerblitzenhausen, &c.

No. II.—Cranioscopy—Phrenological Analysis of the Characters of Louis XI. and Charles the Bold, as delineated in Quentin Durward—Dugald Stewart, Esq. on Milton's Garden of Eden—Second Dialogue between a Philosopher of the Old School and a Phrenologist—Phrenological Analysis of Mr Owen's New Views of Society—Burke, Fox, and Pitt—On Constructiveness—Phrenology applied on a Voyage—Biblical Fragments—Captain Franklin's Journey—Shakespeare's Iago analysed—On the Frontal Sinus—Effects of Size and Activity in the Organs—General Directions for observing Development—Phrenology and the Medical Society—Signs of the Times—Our First Number—Proceedings of the Phrenological Society—On the Cerebral Development of John Thurtell.

No. III.—Phrenological Essay, read by Mr Andrew Combe to the Medical Society, Edinburgh, 21st November 1823—On the Combinations in Phrenology—Shakespeare's Iago analysed—Case of John Pallet—Master James Hubard—St Ronan's Well—Flourens on the Nervous System—Phrenology and Mr Owen—Ventriloquism—Proceedings of the Phrenological Society—Dr Milligan *v.* Phrenology.

No. IV.—Ideality—Phrenology applied in the Education of a Youth—Case of a Mechanical Genius—Shakespeare's Othello—Redgauntlet—New Monthly Magazine *versus* Phrenology—Dr Hibbert on the Philosophy of Apparitions—On the Accordance which subsists between Phrenology and the Scripture Doctrine of Regeneration—Ambrosian Manuscript—Spurzheim on Education—On Size—Professor Rudolphi and Phrenology—Dr Nares and Phrenology—Captain Ross on Decimal Notation of the Organs—Fielding's Miss Matthews—Observations on Secretiveness—Elements of Phrenology by George Combe—Outlines of Phrenology by J. De Ville—Lord Byron—Mr Rolph and the Philadelphia Journal on Phrenology—Phrenology illustrated by Quotations from the Poets—The Encyclopædia Edinensis and Phrenology.

No. V.—On the Cerebral Development of Nations—On the Propensity of Philoprogenitiveness—On the Manifestations and Development of A. R.—Dr Pritchard and Phrenology—The Inheritance; a Novel—On the Conjectural Organs of Hunger and Thirst—Mr Hood's Cases of Injuries of the Brain—Case of Compression of the Brain—Skulls of Three Murderers in Dublin—Skulls of executed Criminals in Glasgow College—Villers on Phrenology in 1802—Phrenology in 1822—Apparitions—American Elements of Phrenology—Music—Catalani, De Begnis, and Kalkbrenner—How to make Converts to Phrenology—Sir G. S. Mackenzie on a New Holland Skull—Time—Deaf and Dumb Dancing—Outlines of Phrenology—Illustrations from Rousseau—On Materialism—Casts illustrative of the Phrenological Organs—Proceedings of the Phrenological Society—Notices, and Signs of the Times.

No. VI.—Cursory Remarks on Ireland—Letter to the Editor on Marriage—Case of Henry Griffiths—Dr Spurzheim's French Works—Phrenology applied to the Fine Arts—On the Nerves, Spinal Marrow, and Brain—Letter on some Abuses of Self-esteem—On Acquisitiveness—Letter on Conscientiousness—Versification and the Edinburgh Academy—South Sea Islanders—Sketch of Laws for a Phrenological Society—Mr G. Combe on Concentrativeness—Gentoo Laws—On the Skulls of the Papuan Islanders—The Modern Athens—On the Female Character—Shakespeare's Queen Mab—Spectral Illusions—Dr Brown's Philosophy—Tribute to Mr George Combe—Proceedings of the Phrenological Society.

No. VII.—On the Genius and Cerebral Development of Raphael—Letter to the Editor on Philoprogenitiveness—On the Second Sight—On the statement of Cerebral Development in Words and Numerals—On some Abuses of Destructiveness—Phrenology in German Encyclopædia—On the Effects of Old Age on the manifestations of the Mental Faculties—Historical Notices of early Opinions regarding the Functions of the Brain—On the influence of Amativeness on the higher Sentiments and Intellect—Letter from Dr Spurzheim to the Editor of the Phrenological Journal—Case in which the Faculty of Language was impaired—Weight—Instinct of Equilibrium—Education—London University—History of the discovery of the Phrenological Organs—Wright's Life of Wilson—On Hereditary tendency to Crime—Naval Discipline—Proceedings of the Phrenological Society—On the situation of the conjectural Organs of Hunger and Thirst—Notices, and Signs of the Times.

No. VIII.—On the propensity of Philoprogenitiveness—Proverbs illustrative of Phrenology—Dr Otto on Phrenology—History of the discovery of the Phrenological Organs—Fatalism and Phrenology—On the cerebral Development of Luscombe, a criminal—On the Development and character of the North American Indians—On Combativeness—Instinct of Self-defence and Defence of Property—Propensity to contend—Courage—Of Music, and the different faculties which concur in producing it—Ventriloquism—Juvenile acting—Essay on the Phrenological Causes of the different degrees of Liberty enjoyed by different Nations—Dr Spurzheim on Phrenology—Phrenological Analysis of the character of Macbeth—Case of deficient Tune—Letter on Sea Sickness—Notices.

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5. Mr Hume, F. R. S. and M. P.
6. James Cardinal, an illustration of Hydrocephalus.
7. A Lady; organs of Conscientiousness large, Firmness small.
8. Deans, executed at London for child murder. This individual was insane.
9. ———, executed at York for robbery and murder.
10. Mitchell, executed for murdering his sweetheart.
11. Haggart, executed for murdering Mr Morrin, Dumfries turnkey.
12. Dempsey, executed for shooting a policeman at Greenock.
13. Maxwell, executed for stouthrief at Edinburgh.
14. Rev. Mr M., late Baptist preacher, London.
15. An amiable character, native of the west of Scotland.
16. A contrast to the above, who, after several irregularities, drowned himself.
17. An Idiot, from Dr S.
18. A ditto.
19. Miss Clara Fisher, a celebrated juvenile actress.
20. Napoleon, organs marked.
21. Head, organs marked by Dr S.
22. Thomson, the poet.
23. New Phrenological Bust, organs marked. See note below *.
24. Mary Macinnes, executed at Edinburgh for murder.
25. Dr D., executed at London for forgery.
26. A Virtuous Character.
27. A Brazil Indian Chief.
28. François Cordonnier, author of the tragedy of Zenobia, &c. Ideality large.
29. Dr Spurzheim.
30. John Pallet, executed at Chelmsford for the murder of Mr Mumford.

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* *Extract from the Minutes of an Ordinary Meeting of the Phrenological Society, 3d January* 1821.

"A new Phrenological Bust was presented by Messrs LUKE O'NEILL & SON to the Society, for their inspection, previously to offering it for sale to the public. The Society having examined the Bust, and found the Organs to be correctly delineated, expressed their approbation of the manner in which it is executed, and instructed the Secretary to return thanks to Messrs O'NEILL & SON for their present. (Signed) PETER COUPER,

"*Secretary Phrenological Society.*"

31. J. Thurtell, executed at Hertford for the murder of Mr Weare.
32. Peter Heaman, executed at Leith for piracy and murder.
33. John Gibson.
34. Anne Ross.
35. R. B. Sheridan.
36. S. Percival, assasinated by Bellingham.

CASTS OF MASKS FROM THE FACE.

1. The Companion of Dr Gall, whose configuration led to the discovery of the Phrenological System.—Dr S.
2. A specimen of Language—Dr S.
3. Mental Calculating Boy of Bath—Dr S.
4. Mental Calculating Boy of Vienna.
5. Mental Calculating Boy, Master Zehro Colbourn—O'N.
6. Mental Calculating Boy, Master George Bidder—O'N.
7. Sir Isaac Newton, astronomer.
8. Sir William Herschell, astronomer.
9. Sir James Edward Smith, President of the Linnean Society, London.
10. Edwards, an engraver.
11. Toussaint, who pretended to be the son of the St Domingo Chief; Secretiveness large.
12. A Frenchman: Individuality large.
13. An Artist.
14. Haydn, musical composer, taken from a bust at Vienna.
15. Humboldt, brother of the traveller; Number and Language large.
16. Mr Roscoe, late of Liverpool.
17. Oliver Cromwell.
18. Brunel, the celebrated machinist.
19. Fraser, a Scotchman resident in London; Individuality large.
20. M. De Voltaire; Language and Wit remarkable.
21. John Wilkes, late of London.
22. Alderman Wood of London.
23. His late Majesty George III.
24. His present Majesty when 30 years of age.
25. His Royal Highness the Duke of Sussex.
26. Haydon, historical painter.
27. David Wilkie, artist.
28. Wordsworth, poet of Cumberland.
29. John Hunter, anatomist, late of London.
30. Benjamin Franklin, from a bust by Oudon of Paris.
31. John Nelson, itinerant Pandean musician—O'N.
32. Professor Young, late Greek Professor of Glasgow College.

33. Henri Quatre, taken 10 years after death.
34. Illustration of Colour large.
35. Illustration of Colour deficient—Mr M.
36. A Musical Amateur—O'N.
37. J. P. Curran, M. P.—Dr Abell.
38. Mr Newenham, artist—Dr Abell.
39. Burke.
40. William Shakespeare.
41. Lawrence Sterne.
42. Illustration of Size deficient.
43. Illustration of Locality remarkable.
44. Mr Pitt, taken after death.
45. Dr Samuel Johnson.
46. Sir Joshua Reynolds.
47. Buchan, M. D.
48. Scott, shot in a duel.
49. John Horne Tooke.
50. Mrs Siddons *sen.*
52. Mary, Queen of Scots.
53. Charles Edward Stuart.
54. Alexander Pope.
55. M. Haye of Paris; Hope large.
56. The late Dr Cullen.
57. Maclachlane; Size large.
57. Mr Douglas.
58. Dean Swift.
59. Mr Sloan.
60. Jacob Jervis.
61. Richard Robert Jones.
62. Mr M. Dunn.
63. Mr Critchley.

CASTS OF SKULLS.

1. King Robert Bruce, as discovered at Dunfermline Abbey.
2. A Skull having Veneration well marked—Dr S.
3. A Milliner of Vienna; Constructiveness large—Dr S.
4. La Fontaine, French author—Dr S.
5. Raphael de Urbino, Italian painter.
6. Dr Hette, remarkable for Benevolence, Conscientiousness, and Love of Approbation, large; Amativeness small.

7. A Mummy
8. Do.
9. Do.

—Dr S.

10. An American Indian.
11. Do. do.
12. A Brazil Indian.
13. Hippolite, a Charib chief.
14. A Charib Chief.
15. Do.
16. Do.
17. Do.
18. A New Hollander.
19. Do.
20. Carnimbeigle, a New Holland chief, described by Sir George Mackenzie, Bart.
21. An Esquimaux.
22. A Negro.
23. Do.
24. A Turk.
25. A Gentoo, Hindoo tribe.
26. A Long Skull, Celtic tribe.
27. An old Woman; shape remarkable.
28. A German; remarkable shape.
29. A Cunning Debtor. See Dr S.'s works.
30. Gordon, murderer of the pedlar boy at Eskdalemuir.
31. Haggart, murderer of Mr Morrin, the Dumfries turnkey.
32. Hussey, a murderer.
33. Nesbet, a murderer.
34. Bellingham, who shot Mr Percival.
35. Lockey, a murderer.
36. A person executed at Nottingham for murdering a child.
37. Buchanan, executed at Glasgow for murder.
38. Clydesdale, do do. do.
39. Rotherham, murderer, shewing interior and exterior of the skull.
40. A Buffoon to Emperor of Austria; Wit large; a person of superior talents.
41. A Caffre.
42. Cast of outside of a skull,
43. Cast of inside of ditto, } shewing the correspondence.
44. Christian Sinclair, executed at Edinburgh for child murder, —Mr Blyth, surgeon.
45. An Idiot of Suabia; see Head of ditto, No. 18.
46. Skull, organs marked by Sir George Mackenzie, Bart.
47. A contrast to No. 46., having Organs large where No. 46. is deficient.
48. An Idiot of Vienna.
49. Cast of the Brain, shewing the Convolutions.
50. Madeline Albert of Moulins in France, who murdered her mother and several other members of the family.

51. Brain of an Idiot Girl.
52. A Circassian.
53. George Buchanan.
54. Kapitapole, Kandian chief.
55. A Hindoo.
56. A Chinese.
57. An Old Woman who served all her life in the dragoons, and who died in the Hospital des Femmes at Paris—M. Royer.
58. Mercier, who assisted at the murder of four women, for the sake of a small sum of money, VIII. larger than IV., see Gall's works, vol. iv.—Mons. Royer.
59. A Woman of the Sal-petriere, Paris—Mons. Royer.
60. Hindoo.
61. Do.
62. H. Griffiths, murderer.
63. Cast shewing the Bones of the Skull, with a description.

Societies and individuals desirous of procuring a collection of Casts illustrative of the Phrenological Organs, are frequently at a loss which to select; and even after procuring many of them, they are not informed which of the organs they elucidate. The following notes, therefore, may prove not unacceptable.

1. Amativeness—The organ *large* in *busts of Dean, Mitchell, Macinnes, Thurtell, John Sparrow*, and in the *skull* of *Raphael*;—it is *moderate* in the *busts* of *Pitt, Rev. Mr M.*; and *small* in the *skull* of *Dr Hette.*
2. Philoprogenitiveness.—The organ is large in the Negro skulls and Charibs, and in the bust of Mrs H.
3. Concentrativeness.—The organ is large in the bust of Pitt, and very small in the American Indians.
4. Adhesiveness.—Large in Mrs H. and Mary Macinnes.
5. Combativeness.—Large in Charibs, King Robert Bruce, David Haggart, Mary Macinnes, Maxwell; moderate in Rev. Mr M.; small in most of the Hindoos.
6. Destructiveness.—Large in the busts of Dean, Mitchell, Mary Macinnes, Pallet, Thurtell, Heaman, and in the skulls of Bruce, Gordon, Hussey, Nisbet, Bellingham, Buchanan, Rotheram, Albert; small in most of the Hindoos.
7. Constructiveness.—Large in Raphael, Milliner of Vienna, Brunel, Williams, Haydon, Herschel, Wilkie, Edwards; small in New Hollanders.
8. Acquisitiveness.—Large in Heaman; full in Rev. Mr M.; moderate in Bruce.
9. Secretiveness.—Large in Bruce, Raphael, La Fontaine, American Indians, Cunning Debtor, Haggart, Hindoos, Gibson, Clara Fisher, Mary Macinnes; moderate in skull with the organs marked.
10. Self-Esteem.—Large in Haggart, Hindoos, Dempsey; moderate in Dr Hette and American Indians.

11. Love of Approbation.—Large in Bruce, Dr Hette, American Indians, Clara Fisher, Mary Macinnes; deficient in Haggart and Dempsey.

12. Cautiousness.—Large in Bruce, Raphael, Hette, the Mummies, and the Hindoos; moderate in Bellingham, Mary Macinnes, and Negroes.

13. Benevolence.—Large in Jacob Jervis, Henri Quatre, Raphael, Hette; very small in Bellingham and the Charibs; moderate in Bruce and Gordon.

14. Veneration.—Large in the Negroes, Raphael, Bruce, Kapitapole, Martin; small in Dr Hette.

15. Hope.—Large in Raphael; small in Dr Hette.

16. Ideality.—Large in Raphael, Voltaire, Wordsworth, Wilkie, Burke, Haydon, Henri Quatre, François Cordonnier; small in New Hollanders, Mr Hume, Bellingham, Haggart, Gordon.

17. Conscientiousness.—Large in Hette, Mrs H.; small in Bruce, Haggart, Bellingham, Gibson, and in the skulls of most of the savage tribes.

18. Firmness.—Large in Bruce, Haggart, American Indians; small in Mrs H. and Gibson.

19. Individuality.—Large in Sir J. E. Smith, Roescoe, Fraser, Henri Quatre, Swift, Macinnes; moderate in Voltaire and Haydon.

20. Form.—Large in King George III.

21. Size.—Large in Brunel, Williams, Douglas; small in Ferguson.

22. Weight.—Large in Maclachlane.

23. Colouring.—Large in Wilkie, Haydon, Williams, Douglas; small in Mr James Milne and Mr Sloane.

24. Locality.—Large in Companion of Dr Gall, Williams, Strath, Douglas; generally moderate in females.

25. Order.—Large in French M. D., in Mask named "Order large," and Humboldt the traveller.

26. Time.

27. Number.—Large in Bidder, Humboldt, Z. Colbourn; small in French M. D.

28. Tune.—Large in Haydn, Macvicar; small in Sloane and Ann Ormerode.

29. Language.—Large in Companion of Gall, Sir J. E. Smith, Humboldt, Voltaire; small in Fraser.

30. Comparison.—Large in Raphael, Buffoon, Roscoe, Edwards, Pitt, Henri Quatre, Burke, Curran, J. Hume, Hindoos; deficient in Charibs.

31. Causality.—Large in Franklin, Voltaire, Haydon, Burke, Brunel, Wilkie; moderate in Pitt, Sir J. E. Smith, J. Hume; very deficient in Charibs and New Hollanders.

32. Wit.—Large in Sterne, Buffoon, Voltaire, Henri Quatre; moderate in Sir J. E. Smith, J. Hume, Hindoos.

33. Imitation.—Large in Raphael, Clara Fisher; small in Jacob Jervis.

The preceding are among the most interesting of the illustrations, and, with the following,—

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Pitt		

SKULLS.

Raphael	Nisbet	La Fontaine
Dr Hette	Bellingham	American Indians
Negroes	Buchanan	Cunning Debtor
Charibs	Rotheram	Skull with organs marked
Bruce	Albert	Mummies
Haggart	Hindoos	Kapitapole
Gordon	Milliner of Vienna	Buffoon
Hussey	New Hollanders	

MASKS.

Brunel	Roscoe	Humboldt
Williams	Fraser	Bidder
Haydon	Swift	Colbourn
Herschel	King George III.	Haydn
Wilkie	James Milne	Macvicar
Edwards	Douglas	Sloane
Jacob Jervis	Ferguson	Curran
Henri Quatre	Maclachlane	Franklin
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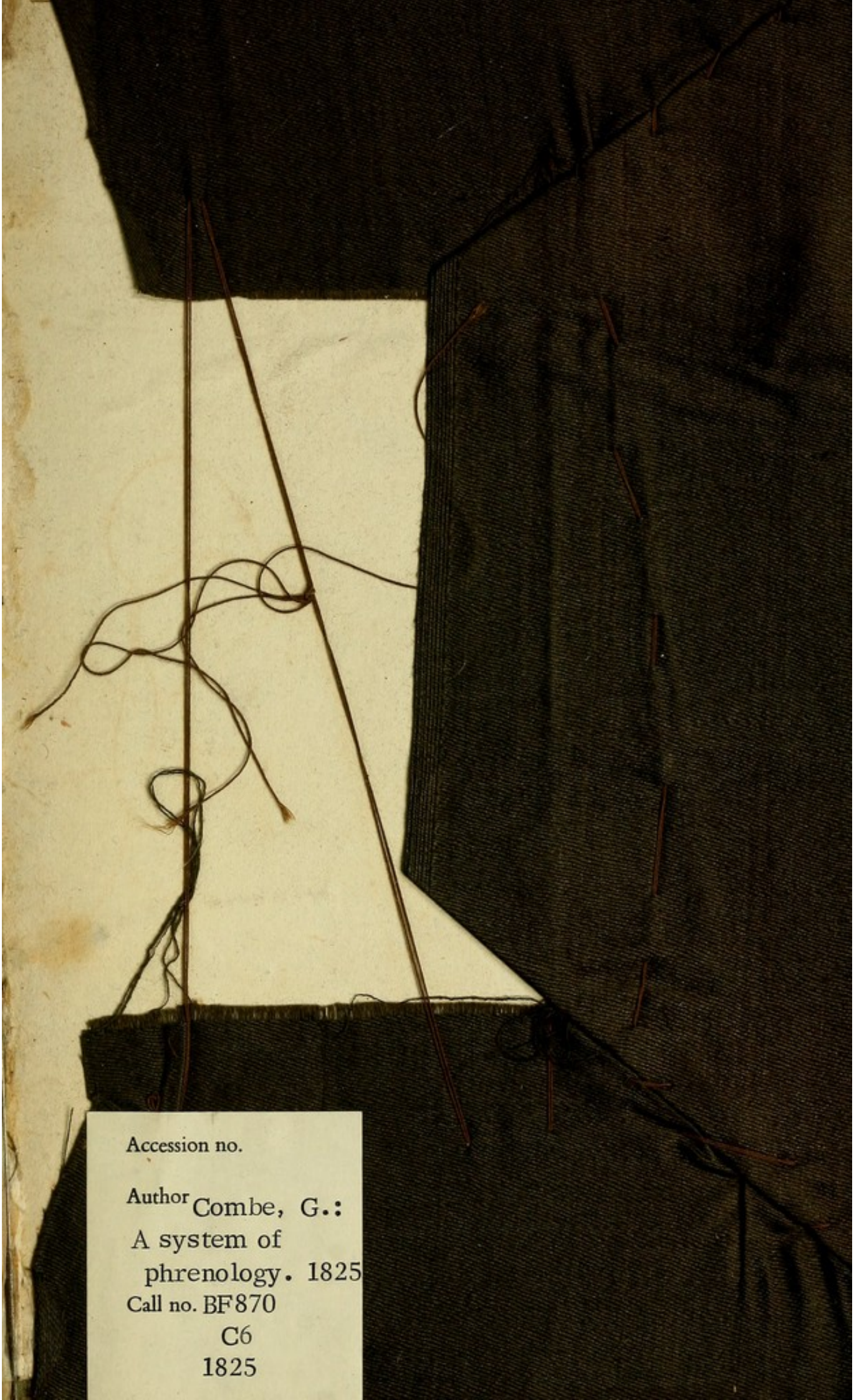

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