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A R E P L Y

TO

SIR DAVID BREWSTER'S

STRICTURES ON

PHYSIOGNOMY AND PHRENOLOGY.

BY

E. M'G.

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J. Campbell

Middlebury College

Bennington, Vt. W

Ballyvaughan June 9th / 63

Sir

It affords me great pleasure to think that you are pleased with my article in the "Anthropological". If there be any profits the writers will be paid but I doubt much if there be any at least of the first number as the subjects treated are not as yet sufficiently popular to give any sanguine expectations however I am well satisfied if what I have written meets with the ap-

pronal of those who know and
appreciate and admire science
supposing there is no money got
for it. The worship of Minerva
is much nobler than that of
Mercury although it would be
want of both wisdom and
prudence to neglect the latter
I send you herewith a copy
of my "Reply to Sir David
Brewster's 'Strictures on Physi-
ognomy and Phrenology'" which
at the request of friends in Glas-
gow I have consented to be pub-
lished in the form of a pamphlet
which I hope you will accept
It has been printed by Sinclair
and the Gaelic initials of my

name are attached

I am Sir

Yours Sincerely
Hector McLean

Errata in "Reply to
Sir David Brewster's 'Strictures
on Physiognomy and Phrenology'.

p. 11. line 6. For "renouated,"
read remunerated.

p. 11. line 29. For, "to India," read
for India.

p. 24. For, "on marble," read, "in
marble"

p. 28. line 41. For, "favourable,"
read unfavourable.

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N O T E.

THE following pages were written in answer to some remarks on Physiognomy and Phrenology contained in Sir David Brewster's address to the Edinburgh Students at the opening of last Session. The manuscript, in the author's absence, lay for some weeks in the hands of a friend. Sir David Brewster in the meantime published an article in the January number of "*Good Words*" in which he propounded the same views on Physiognomy and Phrenology he had hitherto before professed to hold, and which he had warmly recommended to the Students in his inaugural address. It was not however deemed necessary to make any change in this pamphlet. Sir David's treatment of Physiognomy and Phrenology being precisely the same, in his address and his article, the present paper may be taken as the author's answer to both—although he makes direct reference only to the former. This is but a little work on a subject which the author has studied, though not professionally, for many years and which he considers of some importance. Such as it is it is now offered with the wish that those who take any interest, on the one side or the other, in the question discussed in it, may be stimulated to examine into it impartially and pore at large for themselves.



A REPLY, &c.

SIR DAVID BREWSTER is certainly a very eminent scientific man. His discoveries in optics entitle him to a highly honourable position, while his capacity for the pursuit of physico-mathematics is hardly to be surpassed. But Sir David has tried his hand at several other subjects, and in these he, by no means, displays the same amount of superior ability. His inquiries into the authorship of Junius do not display much critical acumen; in his life of Newton he has shown his profound knowledge of physical science, but decidedly a very ordinary power of delineating and analysing character. That work is a failure, and the biography of the prince of mathematicians is most assuredly yet to be written. It is said that some great men are sometimes fond of being complimented on subjects in which they do not excel. Richelieu liked to be thought a poet; Sir Humphrey Davy dabbled in literature and wished to shine in the ball-room; Sir Isaac Newton thought himself a theologian; Gibbon and Burke aimed at wit; both Byron and Napoleon would be dandies, though both had too much brain-ballast for the movements and manners of such light, airy, fantastic animals; and Sir David Brewster would appear, from his late address at the opening of the University of Edinburgh, to be imbued with a similar propensity; for, instead of having something from him on those glorious departments of science in which he has himself so pre-eminently and successfully laboured, we find him rambling from physiognomy to patents, and from patents to war, from Dr Carus to James Watt, and from James Watt to Sir William Armstrong. The speech is but a string of vapid sentences, altogether unworthy the veteran philosopher, whose fame, most certainly, would have suffered nothing had it never been delivered, and had he, on this occasion, added another to the list of the glorious mutes. How different from Lord Brougham's speeches on similar subjects, whose vigorous and concentrative mind presents his hearers with an epitome of a vast range of knowledge, the essence of which he extracts, so as to render his discourse a concise, clear, and comprehensive philosophical treatise,—a charming, vast intellectual diorama.

Sir David finds great fault with the peculiar spirit of this age, of which he says, "every year even in this eventful age is characterised by principles and opinions which startle us by their extravagance, or marked by events or outbursts incompatible with the progressive amelioration of our species."

This is rather a queer remark, and many, most unquestionably, would be inclined to consider it as *marked by its extravagance*. A large proportion of the enlightened people of this age firmly believe that the *events and outbursts* which *mark this age* are, instead of being *incompatible* with, highly favourable to the progressive *amelioration of our species*. If Sir David alludes to the wars and revolutions that have agitated Europe and other quarters of the world, for the last twenty years, it is to be hoped, he is egregiously mistaken with respect to their final results as bearing on human happiness and prosperity. What rational man can doubt that the wars in the East with Chinese and Hindoos will, ultimately, prove beneficial to those nations themselves, by breaking down their exclusive and unprogressive political systems, and paving the way for enlightenment and intellectual and social advancement. The Crimean war has checked for ever the advancement of Sarmatian barbarism towards the south and west of Europe, and has rendered totally impossible that which Napoleon anticipated, the invasion and conquest of the west by hordes of Cossacks. It has saved Constantinople from being a Muscovite capital, and prevented the Mediterranean from being covered with a Russian navy manned by Greek sailors. This is retarding barbarism, and consequently advancing the amelioration of the human species. The changes in France since 1848 have, undoubtedly, been violent, but the result of all those changes in that great nation has been to bring about such a vigorous system of administration and government as has highly favoured the social and commercial advancement of the country. Our own war in India has been attended with fearful cruelties, but it has terminated gloriously, and led to a new system of Indian government which must rapidly accelerate the civilisation and enlightenment of the deluded and fanatical natives. America cannot be said, for a long time, to be otherwise than morally and socially diseased; and the present war has exposed clearly to view phases of social character that are anything but praise-worthy. No person who thoroughly studies her present social and political condition can think that this war was not required to develop a higher moral and political

tone, which no thinking man can doubt will be the case. The end of the war most certainly will be the splitting of the union, and that splitting will be attended by greater progress and a higher social development.

“Were we asked to characterise the age in which we live, (says Sir David) we should describe it as remarkable for its love of the mysterious and marvellous, its passion for the supernatural, and its morbid craving for what the eye cannot see, nor the ear hear, nor the judgment comprehend.”

When an orator is afflicted with dearth of matter, he generally ascribes qualities to an age or individual which are, in fact, common to numerous ages and individuals. This seems to be the case in the present instance; for in what respect is this age fonder of the marvellous and mysterious than former ones? No age can be blamed for loving either the mysterious or marvellous; for mysteries and marvels abound both in the physical and intellectual world.

“There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy,”

is the remark of one who had a keener and profounder insight into human nature than the principal of the University of Edinburgh. As mysteries and marvels are, therefore, presumed to exist, they are proper subjects for human contemplation, and no age can be blamed for prying into their nature, or endeavouring to unravel them. This curiosity for the wonderful and hidden is a strong incentive to scientific inquiry, and has frequently led the way to useful and important discoveries. All phenomena are wonders and mysteries till they are explained, and when that happens they cease, to a great extent, to be such. Even those mysteries which are beyond the comprehension of human intellect, such as the essence of substance and supernatural things, are still noble themes for human reverence and meditation. As for false marvels and mysteries, they are not, certainly, more sought after in this age than in preceding ones; but are, on the contrary, daily giving way; and extravagant theories that abound at present may be easily paralleled by those of former times. The immense amount of superstition that abounds in all countries, and has abounded everywhere at every period of the earth's history, the numerous supernatural tales that have been related in all quarters of the world from time immemorial, and are still related, though much less in this age than in former ones, prove, to a certainty, that this age is not one jot fonder of

the supernatural than other ages have been. It would certainly be an extremely grovelling age that would limit its speculations to what the eye can see, the ear hear, and even the judgment comprehend; and that this age has aspirations beyond the senses tells very much in its favour. There have been certain sceptical periods during which some philosophical thinkers limited the mind to the range of the senses, but the human race, as a whole, have, to their credit, demurred, and never accepted such a narrow material code. The eye can neither see the mind nor its qualities; it cannot see the ultimate atoms of which matter is supposed to be composed; it cannot see the ether which is supposed to be diffused everywhere, and the vibrations of which are said to constitute light. It can neither see the principle of magnetism nor of electricity. It cannot follow light through a crystal and discover how it is refracted and modified by the peculiar structure and arrangement of the minute molecules. Does the judgment comprehend everything even in the exact sciences. Does it very well comprehend a mathematical point or line,—that which has no parts, and length without breadth? Can the eye see a mathematical point which has neither length, breadth, nor thickness; or a mathematical line which is length without breadth? Were science to be entirely limited to what the eye can see, the ear hear, and the judgment comprehend, it would, most unquestionably, become very tame and uninteresting, and would hardly be deserving of the name of philosophy; and were the range of man's inquiries so circumscribed, science, literature, and art would be deprived of much of that which constitutes their chief grandeur and elevation.

In referring to the morbid craving of the age, Sir David says he does not allude to clairvoyance or spirit-rapping. Clairvoyance can scarcely be placed in the same category with spirit-rapping. It may be a false theory, an absurdity; but as an hypothesis it is decidedly more rational than the other. Spirit-rapping is easily explained and refuted; not so clairvoyance. If by means of light a person is capable of seeing the far-off heavenly bodies; why may there not be another influence, and a certain condition of the eye, by which certain individuals may see that which is distant and which is not visible by the agency of ordinary light? and if ordinary light passes through glass and other transparent substances so as to enable an individual to see through these

that which is beyond them; why may not substances opaque to light be transparent to some other medium extending between the eye and distant objects? Clairvoyance may be entirely false, or partially true; but from the nature of the hypothesis it requires to be refuted, if false, by a *scientific investigation*, and not by the dogmatic denunciation of a scientific man.

Still, it is not to spirit-rapping or to clairvoyance that Sir David alludes, "but to more specious extravagances;" and as these characterise the age in which we live, we are led to think that they far excel the extravagances of former ages, of which some celebrated men that flourished in them had their due share. Dr Johnson believed in the second sight, and in the Cock lane ghost, while he doubted the authenticity of Ossian; Locke believed in the existence of a rational parrot possessed by a certain prince on the continent; Bacon believed in magic and witchcraft; Johanna Southcote had followers and believers, and that among intelligent people too, in the age immediately preceding this one; both Byron and Scott were guilty of believing in supernatural extravagances; no man ever believed in greater extravagances than Kepler, and few have rendered greater services to science; Woulfe was impelled by his belief in marvellous extravagances to render most important services to chemical science. The extravagance which transcends all those enumerated, Sir David will describe in his own words:—

"I refer (says Sir David) to the so-called science of physiognomy, but more especially that morbid expansion of it called the physiognomy of the human form, which has been elaborated in Germany, and is now likely to obtain possession of the English mind."

Probably there never was an age in which physiognomy, in some form or other, was not both believed and studied. Words illustrative of this are found in most languages. A large head on a wise man, and a hen's head on a fool, is a Gaelic proverb. The same language associates good and bad qualities with certain forms of the lip, mouth, eye, and nose. A certain curl on a certain part of the head is called a whirl of fretfulness; a chief is spoken of in one ballad as having much hauteur in his nose. Such terms might probably be collected from popular language in all countries. There is in the figure and features of every person much character which the acute observer does not fail to see; and it is absolutely impossible to associate some forms but with certain

characters. Can the character of Jupiter be associated with the figure of Bacchus, or the figure of Bacchus with the character of Jupiter? Would the character of Venus suit the statue of Diana, or the statue of Diana the character of Venus? Even alter these partially, and the character is changed. Lower and lengthen the head of Jupiter, and he no longer excites the same reverence. Shorten the nose, and hollow it in the middle, and the same admiration for intellectual greatness is no longer felt. Were not form associated with character the principal charm of art would be taken away, and a statue would hardly be anything more than a pretty doll. Music is but sound, but it is capable of expressing every feeling and passion of the human heart; and the voice, as well as the walk and attitude, reveal character. All the parts of the body are related to each other, and as the sum total of the physical frame, so is the sum total of the mental character. Physiognomy alone speaks for some people and gains them influence before they have exerted themselves in the least to acquire it. Every part of the body speaks, expresses something of the mind within, and produces its effect on others.

Character is read by some persons with wonderful quickness, and this is the case with savage as well as with civilised nations. The power is possessed in very different degrees by different individuals, and the American Indians are said to be highly endued with it.

There is nothing extravagant in supposing the human frame to be expressive of individual character. The frame of every species of animal corresponds with its instincts and character; and as the intellect and character of man are vastly superior to those of any of the lower animals, so is the organisation of his body also superior. As, therefore, a different animal organisation corresponds with different instincts and character, difference in the formation of the various parts of the human body agrees with difference of mental and moral qualities. As the head, eye, hand, and foot of one person differ from those of another, so also does his character differ. There is certainly nothing of morbid extravagance in all this, but, on the contrary, the whole is supported by a large amount of evidence based on very extensive observation. There is nothing incomprehensible in a man's body being made to suit his mind; nothing at all incomprehensible in fine hands and feet accompanying delicacy of sentiment and a naturally fine taste.

New theories, though true and supported by a fair amount of evidence, have been frequently rejected by men of profound mind and extensive learning ; and have invariably been rejected and opposed by those who have gone on in the beaten track of established science or have followed time-honoured but renovated error. The Copernican theory of astronomy appeared extravagant to Bacon, and he accordingly rejected it ; for Copernicus had no inductive proof to give for his theory any more than Carus has for his. Columbus was not supported by the learned of his day, and Dr Harvey was persecuted and denounced by the Medical profession for teaching that the blood circulates, although he gave clear proof of the truth of his theory. A theory is not surely to be rejected although a complete inductive proof of it cannot be given. It can hardly be said that there is a complete inductive proof for the atomic theory of the constitution of matter ; yet hardly any scientific man denies it, although he cannot test it by sight. If atoms exist, the eye cannot see them. Does Sir David consider the atomic theory one of the extravagances of the age? Copernicus's eye did not see the revolution of the earth upon its axis ; Newton verified it mathematically, but did not see it ; the genius of Foucault has made it visible. Had the human race obstinately refused to believe but what the eye did see from the days of Copernicus downwards, it would still remain in error, and the labours of Kepler, Galileo, and Newton would have been all in vain ; nor is it likely Foucault's experiment should ever be performed. Columbus believed that the earth was round, and, relying on that belief, sailed westward to India, and so discovered America. Magellan, entertaining the same belief, circumnavigated the earth. Had these navigators and others limited their belief and scientific speculations merely to that which the eye can see, it is doubtful if the earth had yet been circumnavigated. Truth, therefore, is conceived and discovered before it is proved ; and had not this been the case our knowledge would be exceedingly circumscribed.

Bold speculation on the unknown has very generally led the way to the acquisition of knowledge, and progress in science would be extremely slow were it not for men endued with a cast of mind for such pursuit. Speculations on the physiognomy of the human frame are by no means new or peculiar to Germany, but have been also pursued in other countries by many persons, and also in other ages preceding

this one, as the writings of Helvetius clearly shew. Lavater reduced the physiognomy of the face to a science. This work is not without errors, but it embodies a large mass of truths which stand the test of careful and correct observation. Lavater's views are now very much modified; errors have been corrected, and the theory has been very much improved and extended. A distinguished Frenchman, D'Arpentigny, has greatly enlarged the subject by his treatise on the hand, in which he points out a remarkable connection between the form of the hand and the character of the mind. Carus has carried out the same views and confirmed them by numerous individual instances, which some, not so rigid in their logic as Sir David, consider to be sufficiently inductive proof, and probably there is no part of the frame more descriptive of character than the hand. The character is also stamped upon the foot, but this organ is not so easily observed as the hand. The Countess of Blessington mentions in her *Idler in Italy* the case of a phrenologist and of one who told character from the foot who arrived at similar conclusions after having operated on the same person. The results of Dr Carus' researches on the head very nearly agree with the phrenological theory, although he has arrived at his conclusions by a different method of investigation. "The opinions of Sir T. Brown, Addison, Cowper, Fielding, Southey, and others, men quite incapable of carrying on a scientific investigation, are all marshalled in its favour, and the student is thus prejudiced, at the commencement of his inquiry, by the authority of great names." If Sir Thomas Brown, Addison, Cowper, Fielding, and Southey were incapable of carrying on a continued scientific investigation, still they were acute observers of human nature, and, most certainly, they were highly capable of investigating human character and manners, and, on this account, much better authorities on such a subject than men capable of carrying on a continued scientific investigation in mechanics, astronomy, or optics. He who wrote *Tom Jones* "the prose Homer of human nature," and he who portrayed the inimitable character of Sir Roger de Coverley, should certainly be fair judges of whatever subjects connected with human nature they turned their attention to—subjects of which many who devote most of their lives to the pursuit of physical science know but little. Sir Walter Scott in one of his novels talks of some one being as ignorant of human nature as a Dutch professor of mathematics, and

when Sir Walter made use of this expression, it is probable that he had some *savans* in view not so far off as Amsterdam or Leyden. Fielding, Addison, and Sir Thomas Brown, were much more likely to understand something of physiognomy than either Sir Isaac Newton or Sir Christopher Wren. Men of weak passions and cool characters may shine in physical science, but are never likely to excel in literature, or to be profoundly versed in the intricacies of human nature. Probably Sir Isaac Newton was the profoundest mathematician that ever lived; if not, he was one of the profoundest, but of human feeling and passion he knew but little; on all other subjects except physics his writings are but ordinary; art he could not appreciate; statues he called stone dolls, and pictures patches of dirt. Here is one who could carry on a scientific investigation, but it seems, had he given an opinion on physiognomy, Sir David Brewster would have valued it more than that of Fielding, or Addison, men who could see something more in a statue than a stone doll. Shakspeare, with his "inspection keen through the deep winding of the human heart," seems to have been a thorough physiognomist:—

“ Look here upon this picture, and on this,
The counterfeit presentment of two brothers.
See what a grace was seated on this brow,—
Hyperion curls, the front of Jove himself;
An eye like Mars to threaten and command;
A station like the herald Mercury
New lighted on a heaven-kissing hill.
A combination and a form, indeed,
Where every god did seem to set his seal,
To give the world assurance of a man.”

From these lines the reader can unmistakably learn that no German has gone further in this kind of morbid extravagance than the great English dramatist. The *combination* and the *form* to which every god did set his seal, gives the world assurance of the man; in other words, the different parts of the physical frame and their combination, reveal the character of the individual.

Sir David says, “that those who use such arguments do not propose to make an inductive comparison of a certain number of well measured forms with the well-ascertained mental phases with which they are associated.” Sir David is surely fully aware that such measurements carried out minutely are difficult to make, that it is only to the head they are applicable; the form and not the size being the principal thing with regard to the features and other parts

of the body; that with respect to the head numerous experiments have been made by phrenologists, which are carefully recorded and brought forward to confirm the truth of this theory. That which constitutes a striking difference in any feature is so small as not to be estimated by any instruments, but these differences the practised eye can readily and easily detect. Indeed, the practised eye can perceive minute differences in the features for which language has no terms, and with such minute differences essential points of character are connected.

“Were such experiments to be made (Sir David says) no two physiognomists would agree with respect to the character of the patient.” True, there might be differences between them; physiognomy is not a perfect science, but it has principles which, when applied, lead to fairly correct results, though not to perfect accuracy. Were Sir David to put himself to much trouble on the subject, he would probably find among the students of the University of Edinburgh many who would arrive at almost identical conclusions were it proposed to them, separately to give their opinion of a person’s character, whom they did not know, from his physiognomy, granting these students have not even yet studied the so-called science, or followed any other rules than those common to most people who judge from the *tout ensemble*. Men who try experiments come to different results in sciences which are supposed to be nearly perfect. Physiognomists differ in opinion on some points; so do geologists; so do physiologists; so do astronomers; so do those who cultivate Sir David’s favourite science, optics; so do political economists; and, certainly, so do politicians; the differences being more keenly disputed the nearer the subject is connected with human interest and feeling.

“Without any inductive evidence of this symbolism, we are asked to believe that large brains and ample foreheads are found in certain individuals of high intellectual capacity, but we never hear of the small brains and narrow brows of men of equal talent, or of the opposite class of imbeciles who have heads and brains like those of their neighbours.”

Sir David lays great emphasis on the term inductive evidence; but what is inductive evidence? Are we to believe no hypothesis, unless the evidence is such as some philosophers choose to call inductive evidence? Are we to believe Sir David’s own discoveries based on sufficiently strong inductive evidence? His experiments on light and his analysis of the

solar spectrum, are very ingenious ; but neither his analysis, nor that of his great predecessor, Newton, is perfectly demonstrative ; and the experimentalists who restrict their belief to that which the eye can see, and the ear hear, have yet to give a rational reply to Goethe's argument on this interesting, but rather mysterious question. With respect to large heads and ample foreheads being connected with intellectual superiority a very great amount of evidence has been adduced, and, as already stated, phrenologists have carried out numerous and striking experiments in connection with this inquiry. These are all but conclusive with regard to the matter in debate. These measurements have usually been conducted in a very scientific manner. The circumference of the head is measured, the length over the crown, from the root of the nose to the occiput, the distance over the forehead from the opening of one ear to that of the other. This has been done with individuals of every degree of mental capacity and of every shade of moral character, and in every instance the theory has been borne out in full. The investigation has, at least, taken place, and if there are errors in the method of procedure Sir David would have served the cause of truth better by pointing these out, and refuting them, than by giving utterance to vague and equivocal assertions on the subject. The observations of phrenologists support the hypothesis of physiognomists that large heads and ample foreheads are always significant of power. An ample large forehead implies prominence in advance of the ear, and prominence in advance of the external angle of the eyebrow. If this is not the case with the forehead, it is not large, either in a physiognomical or phrenological sense. When the forehead does not project beyond the outer angle of the eyebrow, it is merely a wall, however broad or high, but not a forehead in the phrenological sense of the term. But neither physiognomists nor phrenologists lay the whole stress on the size of the forehead. The peculiar shape, in particular, attracts their attention. A good forehead is well arched, and the arching is well marked. When a forehead is well developed it appears to stand out of the head like a portico, and its upper and lower divisions are separated by a hollow line. A forehead, not so divided, does not augur well, according to Carus, and such a line of demarcation, according to phrenology, implies that both reflective and perceptive faculties are large. How many highly intellectual men from the earliest times to the present day have been

distinguished by "*foreheads villainous low*"? If there have been such, why does not Sir David point them out? and why did not the ancient sculptors carve the statues of the gods with such foreheads? Why have they not carved Minerva with a narrow brow? Why do we not find small heads and narrow brows among the busts of ancient men of genius? If Sir David knows any number of men of small brains and narrow brows who are intellectually eminent, he ought to specify them for the benefit of those who have never known them. Certainly a sage lecturing to so many young men eager for knowledge, should have enlightened them further on this topic, and not have left it such a mystery, however fond the age may be of the mysterious. Narrow brow does not quite contrast with ample forehead; the opposite term is small forehead, and it is small, not narrow foreheads that physiognomists and phrenologists contrast with large ample foreheads. This is altogether unfair and specious reasoning. The "imbeciles who have heads and brains like those of their neighbours," must be a queer class. They are perfectly unknown to physiognomists and phrenologists, and, as Sir David knows something of them, he should enlighten the world on such a *mysterious* question, and avoid being guilty of the fault which he ascribes himself to the present age. But this he cannot do, for such imbeciles do not exist; for when an imbecile is found with features resembling those of his wise neighbour, these features will be found, on close inspection, to be merely a caricature; and nature does produce caricatures. But as from the sublime to the ridiculous there is but one step, so in those imbecile foreheads differences are observed in the arching and development which fully account for the intellectual inferiority; as for an imbecile having a head like his wise neighbour, it is purely ridiculous to talk of it; such is not the case. Close observation always discovers a striking difference between the head of an imbecile and that of a person of talent.

Dr Carus has not given his views to the world without having made previous extensive observations, and his anatomical and physiological attainments well qualified him for the task. He has ascertained, as phrenologists have, that certain forms of head correspond with certain mental talents; that the anterior portion of the brain corresponds with the intellect; the upper and coronal region with moral feeling and sentiments; and the back and lower portion with the

passions and will. The backhead he divides into upper and lower. The upper corresponds with the controlling, the lower with the impulsive will. Now, according to phrenology, the upper backhead is the region of firmness and self-esteem; the lower that of combativeness, adhesiveness, philo-progenitiveness, and amativeness. Here, then, are two theories, which, when tested by observation and experiment, lead to almost identical conclusions. According to Carus, a large high forehead implies a strong intellect, capable of being applied in one direction or to one subject; according to phrenology, individuality, eventuality, and comparison are large when the forehead is large and high; and these are the organs that enable a person to apply himself powerfully and successfully to one subject. A large broad forehead, according to the same person, is capable of great variety of application; persons with such foreheads having a large variety of ideas. Now, according to phrenology, large, broad foreheads mean large perceptive faculties, large causality, and large constructiveness. Men with such foreheads have a large stock of ideas which the perceptive faculties supply, and a great number of plans which are framed by causality and constructiveness. So far then, Dr Carus' physiognomy and phrenology agree. Men with large high foreheads, therefore, have more directness than power, and men with large broad foreheads have more power than directness. "A head large behind evinces practical ability and characterises a race that will give birth to great historic names." This quite agrees with phrenology, for the intellectual faculties, according to this theory, receive power and intensity from the propensities; and in the back head are placed those which give a love of home, friends, and children, as well as those which give persistency, and a love of overcoming difficulties and obstacles. Patriotism, love, friendship, and courage are placed behind; and no poet or musician can express these; no literary man can delineate them; and no artist can represent them, unless he has the organs that correspond with them largely developed; and these are combativeness, inhabitiveness, concentrativeness, adhesiveness, philoprogenitiveness, and amativeness. A person with large combativeness and strong intellect, sees quickly and clearly all bold and daring methods by which purposes may be accomplished. Combativeness and concentrativeness combined give great power of application and continuity. Those who have these large never flag; difficulties, disappointments,

and dangers, far from daunting them, spur them on with increased vigour. Those who have large amativeness, philoprogenitiveness, and adhesiveness, combined with strong intellect, are exceedingly clear and brilliant on every thing social. As poets and orators they are unrivalled for pathos; as artists for expression; as philosophers for profound insight into human feeling and passion. A large forehead therefore indicates talent but not genius; both a large forehead and back head indicate genius, and on this point phrenologists and physiognomists agree.

A man is a soldier in proportion as he possesses large combativeness, concentrativeness, and destructiveness; a general in proportion as he possesses large cautiousness, firmness, and secretiveness along with these. Wellington's head is a remarkable instance, the upper back head is unusually high in him, this is, firmness and self-esteem. Cautiousness, secretiveness, and veneration are also large in him; and whatever might be his faults, perhaps no man ever possessed more rational respect for real and true worth than he did; and this, along with his other qualities, greatly favoured his advancement. Inhabitiveness and adhesiveness give character to the statesman and patriot. Phrenology therefore confirms the view of Dr Carus, that a head large behind evinces practical ability, and that it characterises races that will give birth to great historic names

Sir David continues,—“That the emotions of the past and present leave permanent traces on the human countenance is doubtless true, and to that extent we are all physiognomists, often very presumptuous ones, and, excepting accidental coincidences, always in the wrong, when we infer from any external appearance the character and disposition of a neighbour.”

The permanent traces left by the varying emotions of the past and present on the features are but a part of the subject matter of the science of physiognomy; but if the varying emotions leave permanent traces there these may be estimated, and the character of the individual may be so far judged by their means, while a definite relation exists between mind and features. If indignation, pride, covetousness, candour, benevolence, leave their traces on the countenance, these traces are proportionate to the amount of the others which is found in a person, and thus there is a criterion that enables the observer to arrive at tolerably correct conclusions concerning the good and bad qualities of his fellow-man.

The walk, movements, and attitudes of the body are affected by the various emotions and passions of the mind as the features are, and so is also the intonation of the voice. As is the mind so are the expression of the features, the intonation of the voice, the gestures, attitude, and walk. These relations between mind and body are indeed observed by mostly all persons, and to them the fine arts, music, and acting owe their principal charms.

“In that respect (says Sir David), we are all physiognomists.” Very true, for mostly all men judge one another by their appearance suddenly and instinctively, and this propensity in themselves they cannot resist, however much they may restrain themselves from giving utterance to the opinions thus quickly formed. When they err, it is in consequence of taking the changeable physiognomy unconnected with the unchangeable one, and assume the momentary and changeable expression to indicate the permanent character. Individuals are different at different times, and have their surly and pleasant moods, their moments of philanthropy and misanthropy, of cleverness and dulness, of fretfulness and good temper. There are moments when rogues regret their dishonesty, oppressors their cruelty, misers their greediness, and philanthropists their benevolence; and during these moments the expressions of the parties enumerated correspond. These, seen for the first time, are judged by the expression which the prevailing mood gives for the moment to the features by those who have studied physiognomy but little, but the experienced physiognomist looks deeper, and catches the fixed lines and traces which are permanently impressed on the countenance, and from these he learns the fixed character of the person. In this power of judging men from their features people differ widely from each other. It is certainly a distinct native talent possessed in various degrees by different individuals; and there are many practical men who undoubtedly owe no inconsiderable share of their success to possessing this instinct in a strong degree. Persons who have studied physiognomy scientifically will meet with numerous individuals in society who are remarkable for their quickness in ascertaining character from the expression and features, though they know nothing of the rules of the science. Sir David says, with regard to this matter of judging character from features and expression, that, excepting accidental coincidences, we are always wrong. Now, there are many persons who maintain that they are seldom

wrong in this respect, and who, no doubt, firmly believe what they assert. Sir David knows whether he is right or wrong himself, in the greatest number of cases; but, supposing him to find himself wrong, is he justified in asserting that all others are so because he is? Has he proved this inductively? Although Sir David is a great scientific man, it does not, however, necessarily follow that every other person is almost always invariably wrong on this subject because he is.

Phrenologists tell us that there is such a thing as an organ of human nature, placed at the top of the forehead between benevolence and comparison, which enables those who are possessed of it to know character quickly from the expression. The American Indians are said to have it large and to be able to penetrate character with wonderful sagacity. Judge Hallyburton the distinguished author of the *Clock-maker*, has this organ small, and in judging character from expression he is said to be almost invariably wrong.

“The repulsive aspect has proved to be the result of physical suffering, of domestic disquiet, or of ruined fortunes; and bland and smiling countenance, a heart deceitful and vindictive, and ‘desperately wicked,’ has often been found to be concealed.”

No person who has bestowed much attention on physiognomy confounds the repulsive aspect, that is the result of physical suffering, domestic disquiet, or ruined fortune, with the repulsive aspect, that is the index of a deceitful, malicious, or villainous character. Suffering physical, or mental, imparts a harshness to the countenance, but the physiognomist sees not a vicious character in that harshness, for that harshness in many cases, is to his eye the sure sign of fortitude; sometimes the harshness is a lofty scorn which a long experience of worthlessness and baseness in others has stamped upon the features. The noble-minded, who have been soured by encountering ingratitude and hollowness, have a harshness of expression which reveals to the physiognomist lofty moral dignity, mixed with stern contempt of meanness. All the fine feelings, when over exerted, impart more or less of harshness to the features; while the pleasing, smiling aspect indicates that these feelings are active but not over wrought. The sensitively benevolent man whose soul is grieved with, “Man’s inhumanity to man,” has often a harsh rather than a pleasing expression. The sternly just, unswerving man has frequently an austere and repulsive look.

The honest and lofty-minded person who finds life a hard battle, but will fight nevertheless, and though overcome won't succumb, has not generally an inviting countenance. Yet in none of these cases is an able physiognomist ever deceived. The harshness imparted to the features by honest suffering and poverty, or by hard work or study, or by bitter disappointment, or by stern moral rectitude, or by extremely sensitive feelings, is quite different from that which is impressed upon them by vindictiveness, malice, envy, deceitfulness, or fraud; while the pleasing aspect that is intended to conceal bitter hatred, sordid avarice, and vile deceit, is quite distinguishable from that serene, benign, and fascinating look which gives the world assurance of a refined, magnanimous, and benevolent individual.

The expression alters with circumstances certainly, but on all occasions it discovers the actual state of the mind. But says Sir David, "groups of individuals, under the same circumstances, display similarity of expression." So they do indeed; and this, so far, proves the relation of the physical to the intellectual; for the influence of similar circumstances has produced a similarity of sentiments and habits of thought.

"In the haunts of vice, within the precincts of the jail, in the stock-exchange, and in the marts of commerce, we shall find the same variety of form and expression, and the same difficulty in discerning vice or virtue in the outer man."

Not many will coincide with this statement. There is not certainly any great difficulty in discovering vice in the countenances of large numbers in the haunts of vice. No. In the haunts of vice, evil is written on the faces of numbers with a pen of iron so plainly and legibly as not to be mistaken; the same in the precincts of the jail. In the stock-exchange, and in the marts of commerce, the cunning, the roguish, and the avaricious, are easily marked out by those who have made the human features their study; indeed, the marks of Mammon are so conspicuous on the frames and features of many there that an ordinary physiognomist has little difficulty in reading their character.

"The criminal in the dock, charged with murder, will often bear an honourable comparison with the functionary who prosecutes him, the advocate who defends him, or the judge who tries him."

This is altogether wrong so far as physiognomy is concerned, but it may be correct enough so far as regards a pleasing or

interesting expression. The person who has committed crime, and is accused of it, is seldom without some degree of remorse. The unhappy position in which the individual is placed tends to arouse his better feelings. This frame of mind impresses itself on the face for the time being, and, may deceive those who are not in the habit of analysing physiognomically the different features; the lines which are permanently, and those which are transitively traced on them. On the other hand, the functionary who prosecutes him, and the judge who defends him, are impressed with a painful sense of duty, a duty, however, which must be performed, however repulsive to benevolent feelings. The more benevolent the judge and prosecutor are the more moral courage do they require to exercise, and, consequently, the sterner must be the expression of their countenances; while the advocate who knows he defends a guilty person, though acting according to law, feels himself some way in a false position, and has for the time being to exercise all his deceptive powers. He does exercise, in fact, legal dissimulation, and for the time he does so his expression partakes, to some extent, of that of the rogue or hypocrite. The lawyer's business, though necessary and called for by duty and justice, is painful, from its very nature, to the finer feelings. He has usually a weighty and stern duty to perform, so that when he is possessed of a high moral nature, as is to be hoped is generally the case, the conflict between humane sentiments and conscience imparts an austere and chill expression to the face, and distinguishes him by the *eye severe* which Shakspeare ascribes to him.

Sir David asserts "that there is no expression whatever in the human eyeball, consisting of transparent cornea, a coloured iris, with the pupil in its centre, and the white sclerotic coat, you may as hopelessly search for expression in a watchglass as in the cornea, as hopefully in a coloured wafer with a hole in the centre as in the iris, and as well in a piece of white kid leather as in the sclerotic coat."

This is a piece of most glaring dogmatism, and contradicts the experience of the most ordinary observer. The living tissue of the human eyeball is a very different thing from an inanimate piece of crystal, and far from being without expression is full of it. The glances of the eyeball convey to us every shade of the emotions of the mind within, the intellect flashes through the eyeball; turbulent and vehement passion flames from it; its various degrees of lustre correspond with the various states of feeling. How ex pres-

sive is the glance of the rogue's eye. The lustre of the eyeball and its peculiar position tell a true tale of an individual's character. The iris is a different thing from painted wax ; for the lustre of the iris is variable, which is not the case with the painted wax , and the sclerotic coat is different from white kid leather, for the same reason. The colour, form, and shape of the eye are connected with the character of the mind ; but, with respect to the colour, the peculiar lustre tells more than the kind.

“ He who dippeth his hand with us in the same dish may be studying in the taper of our fingers, or the configuration of our nails, the proofs of imbecility, or the indications of crime.” By the hand man effects what the mind conceives. The hand, then, is the material organ that more particularly represents the mind. Without the hand, the mind could exert no important influence over the material world ; and without certain forms of hand certain casts of mind and certain talents would be of no service. What signified a genius for art, or a musical performance to a person with a thick coarse palm, and short, stumpy fingers, with square tips, having little sensitiveness ? What signified a finely-shaped, delicate hand, with tapering, elastic fingers, to an individual of no taste and poor intellect ? The inquiries of intelligent men into the relation between the mind and the hand have brought forward numerous instances in support of their theory, which leave little room to doubt that there is an intimate relation between the shape of the hand and the mental character ; while all great works of art confirm the views of physiognomists on this matter. The hand of the philosopher is different from that of the poet ; that of the artist from that of the engineer ; and that of the sentimentalist from that of the cool, matter-of-fact man. How different the hand of Cromwell from that of Milton, and that of Locke from that of Pope ? Four types of hand are pointed out by writers on this subject. The elementary, the sensitive, the motive, and the psychical. The first is like the child's hand, the fingers short and stumpy, with square tips, the palm coarse, thick, and shapeless, the thumb small and stumpy, and turned outwards. The sensitive hand is rather small, smooth, and delicately shaped, the fingers somewhat long, with rounded, soft tips, joints small, so that the different parts of the fingers form oval segments. The character of the individual is soft, tender, and feminine ; and, if an orator, is more distinguished for pathos than for force or

vehemence. The motive hand is large and strongly developed. The palm is large and square, with a considerable hollow in the middle, owing to the strong muscular development. The thumb is very large, with the muscle at the root very strongly developed. Fingers strong and square, with prominent joints; tips large, somewhat squared, with square nails. Frame, bony and muscular. Persons with this hand are very opinionative, and are but little disposed to toleration. They love law and order, to which they are disposed to subject reason; are well constituted for military organisation, and are good soldiers. As orators, they are excellent declaimers, and possess much vehemence, but no pathos. Exceedingly polite, they sincerely respect degree and place. This hand is said to abound among Celts, to be found in the Highlands and in France; but it is not frequent on the coast of Argyleshire, and is hardly to be met with in Islay, Colonsay, and others of the Hebrides, where the spatular hand is more frequent. The psychical hand is of moderate size and finely shaped. The palm is long and well rounded, the fingers are long, smooth, and tapering. The tips are tapering and pointed, the nails elongated. Persons with this hand are full of enthusiasm, and delight in lofty and elevated subjects. As a rule, they shrink from the practical, and detest the grovelling and sordid. They pant for perfection in all things; for which they are ready to sacrifice everything else.

Intermediate between the psychical and motive are the philosophical hands. The artistic hand combines the motive, the sensitive, and the psychical. It has tapering and elastic fingers, the tips of which have the softness of the sensitive, while the joints, though not prominent, have something of the strength of the motive. This hand is capable of imitating everything beautiful in nature, be it sound, form, or colour. The mind is like the hand, it catches everything beautiful in nature, and desires to imitate and represent it, either on marble or on canvass, or else to express it in music or in poetic language.

“To desire more knowledge of our neighbour than is shown in his daily life, is to seek an unenviable privilege, and to gratify a dangerous curiosity. Society could hardly have existed had such a power been conferred on man, and if it is impertinently assumed, every exercise of it is either an offering to vanity or a calumny against virtue. Nor is it less dangerous in the intellectual learning. If the soul of

man is inwrought into every point of his corporeal frame modifying its outline and moulding its form—the body the woof, and the spirit the warp—the fabric cannot be otherwise than material. In the interest, then, of truth and morality, in the interests of religion, we warn you against speculations thus fraught with danger.”

Unfortunately people in general do seek more knowledge of their neighbours than is shown in their daily lives, and form opinions of them good or bad very different from what they really are; and this curiosity, however unenviable, is shared by the majority of the human race. How frequently do false reasoning and prejudice lead one man to form an inferior estimate of another? How frequently are actions traced to selfish motives which proceed from truly generous ones? and when this is the state of matters were it not really desirable that there were some science which would enable mankind mutually to know one another. Certainly this would be no disadvantage to the best, while society should by its means possess a safeguard against the worst. There is no doubt that every person has faults and failings that he would not like to be known; but should it not be better for any person to have these known rather than have innumerable vices ascribed to him of which he is entirely innocent? And where is the individual, who has to any extent studied the human race, who does not know that there are numerous neighbours to be found in all quarters of the world who represent one another as being much worse than any phrenologist or physiognomist ever pronounces them to be.

Sir David Brewster may rest assured of this, and he may also rest assured that however great his fame, or however excellent his moral character is, that were he to use as ingenious means to ascertain what some of his neighbours thought and said of him as he has done to advance scientific discovery, he should learn, to his astonishment, that some were not satisfied with knowing of him what they learnt from his daily life. He would, perhaps, learn that both his virtues and merits were doubted, his faults exaggerated, and vices ascribed to him of which he knew nothing. He would thence learn that a knowledge of the worst of human nature could not bring society to an end; for he would learn that people who heartily hated and despised each other, and who thought each other not much better than murderers, thieves, and robbers, nevertheless contrived to live pretty comfortably in one another's neighbourhood;

expressed the kindest regards to one another ; affected to sympathise with one another ; praised one another to another's friends, and slandered one another to one another's enemies. Sir David Brewster need not be alarmed at the appalling fact of the inner life of man being made known by physiognomical science ; human nature, bad as it may be in reality, is not nearly so bad as it is pronounced to be when parties prejudiced against one another speak of one another. On the contrary were there such a science as physiognomy enabling us to know accurately one another's characters without doubt or dispute, far from disorganising society, it would tend to improve and strengthen it by supplying the means of refuting and preventing misrepresentation and slander.

But why talk of such power being impertinently assumed ? Granting that it is a wrong theory it is hardly fair to pronounce it impertinently assumed. Why reason here by "*ifs*" ? If Sir David is acquainted with instances in which it has been impertinently assumed let him produce them. He must have a strange opinion of the intellects of the Edinburgh students if he thinks his "*ifs*" will satisfy them in place of facts and instances. But when this power is assumed why is every exercise of it either an offering to vanity, or a calumny against virtue ? This supposes that the person who assumes the power, and believes the theory, is without virtue himself, and so flatters, or slanders as he finds it his interest to do so. It follows therefore that all physiognomists are impostors, and that they never act conscientiously, but give their decisions as it may suit their purposes. Certainly before giving utterance to such an expression Sir David should have been sure of his ground ; and as there are numerous individuals who believe that they can exercise this power, and do exercise it, Sir David should, at least have given some argument for his statement. Surely Sir David must have some system of logic, not very well known yet, through which he infers that a person who judges character by means of physiognomy does not apply that theory fairly, or else that the theory is such that in all cases in which it is favourable it is false, and is merely a theory flattering to the vanity of individuals ; while in all cases in which it is favourable it is also false and calumniates virtue. What a wonderful theory is it if this be true ! In this case it must be really a science, and a certain one too ; for if in its present application it flatters vanity by pointing to supe-

rior talents and qualities where they do not exist, and to vices where virtues abound, all that is required is to reverse the system of applying it and then we have truth. Hence by Sir David's own reasoning the science is true, it is merely misapplied.

Supposing the soul to be inwrought into every part of the frame—the body the woof, the spirit the warp—how does it follow that the soul cannot be otherwise than material? The soul is united with the body, and being so, how can it be material by being united to all the parts any more than to one part? If being united to all parts of the body makes it material, it follows clearly that being united to any one part of it makes it so, were that part nothing more than an atom of the brain. But physiognomy does not assume that the soul is united to every part of the body; on the contrary, it takes nothing to do with that metaphysical and mysterious question; it offers no theory of the nature or substance of mind; it merely points out relations between the different parts of the body and the character of the mind; and shows how by the knowledge of such relations the character of an individual may be ascertained. It commits itself to no metaphysical theory, and takes nothing to do either with spiritualists or materialists. The physiognomist insists on every part of the body having reference to the mind. Whatever be the character of the mind, what can be more reasonable than that every part of the body is in conformity with that character.

Sir David sees great danger in such speculations, and warns the students against them as fraught with danger; yet he has given no argument to show in what the danger consists, unless assumptions and unwarrantable inferences be considered as such. Sir David has no occasion to warn the students against these speculations; for, far from being fraught with danger, they are fraught with much benefit and interest to the student of human nature.

The human mind has been hitherto studied to no great effect, and all theories that exist with respect to its nature and constitution are visionary and unsatisfactory; if therefore any light is to be thrown on the subject at all it is by studying it in connection with the form, structure, and functions of the physical frame. The phrenologist, according to Dr Whately, has given a much more satisfactory theory of the human mind than the ablest and most reputed of our metaphysicians have done, and thus argues strongly in fav-

our of the truth of their system. Dr Carus by totally different methods, has arrived at conclusions with respect to the form of the head in relation to the character of the mind, nearly identical with those of phrenology. Physiognomy greatly aids phrenology by enabling the phrenologist to judge of the strength and activity of the organs with more precision ; for according to physiognomy as is the development of the features so is that of the brain ; as is the brain so is the whole body, hand, foot, chest, neck, eye, and nose.

