

present, and thus forms the general conception which represents that class. The general idea of a man, horse, or sheep is a distinct conception of the parts and proportions which are essential or invariable with a more indefinite and shadowy conception of the parts and proportions which are variable.

This process is imitated by Galton's composite portraits, which record with great accuracy this physical generalization much as it is done by the faculties of perception and memory in man. Thus it may give us an average conception of the physiognomy of consumption or of certain cutaneous diseases, but its scope is limited by the difficulty of blending objects which are not commensurate or which differ too widely.

The human mind with its larger grasp of conception and synthesis can generalize in a wider field, and acquire by observation conceptions of the physiognomy of diseases and of character which no optical arrangement could approach; for these conceptions embrace not only forms but moving life, expression and the psychic emanations of the eyes.

Still it is wonderful and interesting to see how much Mr. Galton has achieved, and his methods will enable us to make artistic records of expression, which will be valuable in studying the physiognomy of character and of disease.

This morbid physiognomy is already fixed in the mind of every physician of extensive experience, as the physiognomy of crime is fixed in the minds of veteran policemen. But the physician is unable to convey this conception to the mind of his student by description, and at present it has to be acquired by the student through clinical observation in hospitals. The composite portraits may thus become a valuable adjunct to clinical lectures as well as a great assistance to artists and students of human nature.

In illustrating comparative phrenology I have obtained some hundreds of sketches of heads of quadrupeds, birds, reptiles, and fishes. The contrasts of the herbivora and carnivora are as striking as could be imagined, and the illustration of character derived from contrasted brain development is more remarkable than among men. Even the different grades of intellectual development among animals can be recognized.

Data such as these could not be handled easily by Mr. Galton's method, but the pencil of the draughtsman could easily combine in identical magnitudes the outlines of animals in a way that would exhibit the general character for example of herbivora and carnivora. The lion, tiger, wolf, panther, lynx, hyena, and polar bear would blend in an outline which would signally contrast with the blended outlines of the sheep, lama, camel, horse, reindeer, giraffe, gazelle, and vicuña.

The suggestion that sarcognomy or the science of corporeal development could be illustrated in a similar manner is quite practicable.

Sarcognomy is to sculpture as anatomy to surgery. It shows all the elements of expression in the human form, which have been so concealed by the dress adopted in our northern climates that very few have any clear ideas on the subject. And yet the human form is almost as significant as the countenance and head. The head is full of expression which is readily interpreted by a correct system of phrenology; but this is almost entirely unknown to those who have not studied the science in nature as well as books. The head is generally covered with hair, but the face being exposed to view, all mankind have convictions as to its expression.

The expressiveness of the body as a criterion of cha-

acter is very great, but is chiefly derived from its sympathy with the master organ, the brain, in which character resides.

Character resides absolutely in the soul, but the brain is so intimately connected with the soul as its residence and instrument that brain development usually expresses the character of the soul, since no faculty can be manifested in this life without its apparatus in the brain, and when the whole brain is compressed as by a depressed piece of bone or by pressure with the finger or by effusion of blood, all the faculties are incapable of expression, and we see no evidence of mind. But there is a limit to this parallelism of brain and soul, for character may undergo great and sudden changes by education or by strong convictions in religion or in personal intercourse and the calamities of life. As the cranium undergoes very few and very slight apparent changes, the form of the head does not indicate these changes of character, and the brain does not change its configuration except slightly and in long periods of time. Hence craniology or the application of phrenology to the study of the head, though very practical and interesting generally is quite fallible in reference to characters modified by circumstances such as intemperance, disease, evil association, and false opinions.

Where phrenology totally fails and misleads us if we should rely on the form of the cranium, psychometry which reaches the soul character within is a sure reliance and reveals a great deal that is entirely beyond the reach of craniology. This is very signally shown in the psychometric opinions of Mrs. C. H. Decker, of 205 East 36th street, New York, and of good psychometers generally. At the present time there are more psychometers than practical phrenologists in this country, and I believe psychometry will almost entirely supersede craniology as a guide to the portraiture of character, the latter ultimately becoming chiefly a study of medical scientists, as an assistance in the study of temperaments, disease, and insanity. I have witnessed a great many of the descriptions of Mrs. Decker and know how often they reveal matters which could not be reached by craniology.

The expression of character in the body, interpreted by sarcognomy, is due to the same law which secures its expression in the brain by the growth and development of all organs in proportion as they are used by the soul for the manifestation of its powers. The use of the intellectual faculties develops the front lobe of the brain, and the use of the animal energies develops the posterior inferior region of the brain, the cerebellum, the spinal cord and the muscles.

All the cerebral organs have corporeal instruments which are associated with them in exercise and development. Thus the perceptive faculties use the eye, and alimentiveness uses the stomach. The cerebral power uses and develops the bodily instruments, which waste away when deprived of their nervous supply. Thus muscles when cut off from the brain by section of their nerves, either waste away and disappear or are converted into a fatty tissue. The body therefore expresses the action and character of the soul like the brain, but as it is less intimately associated, communicating with the soul only through the brain, it is not quite so exact an exponent of its conditions. Still we cannot interpret the soul character correctly without including the body in our survey, as a part of its instrument, unless we rely upon psychometry which measures the soul directly, independent of the study of its organs.

The character study of the body will be a matter of great interest to artists hereafter, and one which may be assisted much by Mr. Galton's combinations; but my theme is too extensive for one essay, and I must postpone what I have to say of sarcognomy -

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