

REVIEWS.

The Expression of the Emotions in Man and Animals. By CHARLES DARWIN, M.A., F.R.S. London: John Murray. 1872.

SINCE the painter Le Brun published, in 1667, his "Conférences sur l'Expression des Différents Caractères des Passions," many different authors have been moved into giving to the world their theories of the manner in which the various passions and emotions are expressed; and the best known of those works in England is probably Sir Charles Bell's "Anatomy and Philosophy of Expression," which we suppose is even still read by some, though the first edition of it was published in 1806, and the third nearly thirty years ago—a very long time in this breathlessly busy and book-burdened nineteenth century. The subject has always excited great interest, though some of our great physiologists even, have regarded it as inexplicable. Müller, for instance, says—"The completely different expression of the features in different passions shows that, according to the kind of feeling excited, entirely different groups of the fibres of the facial nerve are acted on. Of the cause of this we are quite ignorant." Mr. Darwin began his observations on expression in the year 1838; and as he was "already inclined to believe in the principle of evolution, or of the derivation of species from other and lower forms," he was of course dissatisfied with such teaching on the subject as he could then find, and especially with statements like Sir Charles Bell's—"that man had been created with certain muscles specially adapted for the expression of his feelings." It appeared to him that "the community of certain expressions in distinct though allied species, as in the movements of the same facial muscles during laughter by man and by various monkeys, is rendered somewhat more intelligible if we believe in their descent from a common progenitor." Let it be admitted that the structure and habits of all animals have been gradually evolved, and the whole subject of expression appeared in a new and interesting light; it "had to be viewed under a new aspect, and each expression demanded a rational explanation." Hence this work of Mr. Darwin's—a work which will command a multitude of readers, and excite great admiration and approval, from very various and distinct causes. Many will take it up chiefly because it is by the Mr. Darwin, and partly because they expect therefore to find amusing and curious stories in it; and they will find it "Charming; so nice, you know, the way in which he watches his dear babies, and tells you at what age they first cried and first smiled; and never talks of them as weeks old or months old, but as 122 days or 139 days old—isn't it funny? and so accurate! he's so scientific, you know." Fond mothers, too, will read with delight how the little Darwins first really wept at different ages, and how one "smiled much more broadly and plainly" when sixty-five days old than another did, and "even at this early age uttered noises very like laughter," while one achieved "incipient laughter" only at the age of 113 days; and they will say, "See how a really clever man can appreciate babies, and can note how the little darlings differ, while most men stupidly think all babies are alike!" On the other hand, a great number will equally welcome the book as Mr. Darwin's, but also as a scientific work, and will study it for the sake of instruction and enlightenment. But all readers will be delighted with it, for it is a full storehouse of interesting information and curious observations, and is worthy of Mr. Darwin's reputation as a man of learning and untiring industry, and his pre-eminence as an acute, accurate, and curious observer.

It would lead us far beyond our purpose to attempt to criticise the principles which Mr. Darwin lays down, and which he regards as not essential to confirm "the conclusion that man is derived from some lower animal form; for," he remarks, "as far as my judgment serves, such confirmation was scarcely needed." But we may note that he says, "I have endeavoured to show in considerable detail that all the chief expressions exhibited by man are the same throughout the world. This fact is interesting, as it affords a new argument in favour of the several races being descended from a single parent-stock, which must have been almost completely human in structure, and to a large extent in mind before the period at which the races diverged from each other;" and he holds, for instance, that "we may confidently believe that laughter, as a sign of pleasure or enjoyment, was practised by our progenitors long before they deserved to be called human." Whether we agree with his conclusions or not, we may thank-

fully accept his labours as an effort to help us "to understand, as far as is possible, the source or origin of the various expressions which may be hourly seen on the faces of the men around us, not to mention even domesticated animals." And no doubt those who come to the perusal of the work with minds properly trained to believe in the general doctrine of evolution will think that they derive from it real help in understanding the source and origin of the various expressions, etc. But we fear that not a few readers may say that after all they do not see that they get much nearer the real root or origin of expressions than before. Thus with regard to Mr. Darwin's second principle—"the principle of antithesis"—which is as follows:—"Certain states of the mind lead to certain habitual actions, which are of service, as under our first principle (*i.e.*, in order to relieve or gratify certain sensations, desires, etc.). Now, when a directly opposite state of mind is induced, there is a strong and involuntary tendency to the performance of movements of a directly opposite nature, though these are of no use; and such movements are in some cases highly expressive." We can imagine some people thinking that all those words explain mighty little, and only state in a greater number of words that different emotions or states of the mind are expressed in different ways, and that they may say that they knew that before; and will perhaps even add that it appears to them that any movement that is "highly expressive" is of use. Mr. Darwin says, indeed, that "even such words as that 'certain movements serve as a means of expression' are apt to mislead, as they imply that this was their primary purpose or object. This, however, seems rarely or never to have been the case." A large majority of his readers will, we suspect, differ from him. He himself allows that expressive movements may serve to relieve or gratify certain sensations, desires, etc., and so they are of service to the individual who voluntarily or involuntarily uses them. But they may surely be thought to be still more largely intended to be of use as a means of communication between man and man, or between animals whether human or not. And Mr. Darwin himself eloquently describes this use in nearly the last paragraph of his work:—"The movements of expression in the face and body, whatever their origin may have been, are in themselves of much importance for our welfare. They serve as the first means of communication between the mother and her infant—she smiles approval, and thus encourages her child on the right path; or frowns disapproval. We readily perceive sympathy in others by their expression; our sufferings are thus mitigated and our pleasures increased, and mutual good feeling is strengthened. The movements of expression give vividness and energy to our spoken words. They reveal the thoughts and intentions of others more truly than do words, which may be falsified,"—and so on; and as language may be used to conceal thought, so movements of expression may be more or less successfully suppressed to conceal emotions, or simulated in order to deceive.

Mr. Darwin anatomises the expressions, and is down upon every muscle that takes part in each to know why it so acts, and is contented only when he can make out that its action serves some other purpose besides a share in the movement of expression. He does not very often succeed in this, but in one instance, at least, he is made perfectly happy. Noticing that the contraction of the muscles round the eyes "is indirectly a fundamental element in several of our most important expressions"—as during screaming, loud laughter, coughing, sneezing, shouting, and other analogous actions—he demands, *Cui bono?* Sir Charles Bell had explained that the firm compression of the eyeball by the fibres of the orbicularis muscles supports and defends the vascular system of the interior of the eye, etc. Mr. Darwin moves Professor Donders to examine if this is true, and is able to "safely conclude from Sir C. Bell's observations, and more especially from the more careful investigations by Professor Donders, that the firm closure of the eyelids during the screaming of children is an action full of meaning and of real service." Happy orbicular muscles, *sua si bona noverint!* they have the hearty and unqualified approval of Mr. Darwin.

Mr. Darwin draws a very large inference from the fact that very young infants do not weep. He has not himself seen tears run down the face before the age of 10½ days, though he "has been positively assured that in one instance this happened at the unusually early age of forty-two days," and hence he concludes that "it would appear as if the lachrymal glands required some practice in the individual before they are easily excited into action, in somewhat the same manner as various inherited consensual movements and tastes require some exercise before they are fixed and perfected. This is all the more likely with

a habit like weeping, which must have been acquired since the period when man launched off from the common progenitor of the *genus homo* and of the non-weeping anthropomorphous apes." Of course this does not mean that the "habit of weeping" was originally, or is now, in infants, consciously and voluntarily acquired by practice, though it does rather sound like that; and one is half inclined at the first reading to admire the superior diligence of the baby that succeeded in weeping when only forty-two days old. But is not the simple truth that the lachrymal glands are more developed as the days roll on, and that they are sooner excited to free action in some babies from the unhappiness due to ill-health and other causes? Mr. Darwin is sometimes driven to really very amusing straits in his anxiety to discern the origin of signs—when seeking, for instance, to know why we give a vertical nod as a sign of approval, and shake our heads laterally when we disapprove. He observes, "With infants, the first act of denial consists in refusing food; and I repeatedly noticed, with my own infants, that they did this by withdrawing their heads laterally from the breast or from anything offered them in a spoon. In accepting food and taking it into their mouths they incline their heads forwards. It deserves notice that in taking or accepting food there is only a single movement forward, and a single nod implies an affirmation," etc. But, unfortunately for this beautifully simple explanation, "there is considerable diversity in the signs of affirmation and negation in the different races of man." Some even use opposite signs; thus the New Zealanders "elevate the head and chin in place of nodding acquiescence;" and this is very disappointing, though Mr. Darwin's ingenuity has enabled him to suggest that this New Zealand sign "may perhaps represent in an abbreviated form the upward movement of the head after it has been nodded forwards and downwards." Unhappily, when Mr. Darwin sent his questions round the world he did not think of asking if the babies of all races of men turn the head laterally away from the breast when they have had enough, or bend it forwards in accepting food.

We must venture, also, with great deference, to question Mr. Darwin's accuracy of observation now and then. Thus, he says—"The bristling of the hair along the neck and back of the dog, and over the whole body of the cat, especially on the tail, is familiar to everyone. With the cat it apparently occurs only under fear; with the dog under anger and fear." Who that has teased a cat has not noticed its tail enlarging, by the erection of the hair, as the animal gets angry, and taken it as a warning not to go too far? and before a pet cat flies at an intruding dog, does it not first bristle up all over? So, also, when cats quarrel and fight among themselves.

Mr. Darwin must allow us to take exception to the phrase, "Now, as men during endless generations have" done so and so. In a less exact writer the word "endless" might be allowed to pass as meaning simply an immense number; but Mr. Darwin is habitually so accurate and careful in the use of language that he cannot be expected to mean by "endless" anything not endless, and he cannot really mean that in the phrase we have quoted.

And now, after these small criticisms, we will offer Mr. Darwin a suggestion in explanation of the origin of an expression of contempt which he calls "an odd little gesture"—viz., "snapping the fingers." Mr. Darwin must be acquainted with the uncivilised and original, or perhaps we should say aboriginal, method of blowing the nose, and with the hand-gesture at the end for casting away the removed superfluous nasal secretion, and the rub together of the thumb and forefinger; we offer for his acceptance the suggestion that, as this action has been superseded by the handkerchief of civilisation, it has remained in an abbreviated form as an expression of contempt—of the casting away from one of a worthless, disagreeable, or even disgusting object.