marriage ceremony, which has survived to this day, as far as I know, only in the Court of Prussia. At least nothing corresponding to it will take place at the coming betrothal of the Austrian Emperor's daughter to the Prince of Bavaria. Probably the dance is a symbolical conducting home by torchlight of the bridegroom and his bride, and I recommend it to the attention of Sir John Lubbock for a future edition of his chapter on the marriage customs of our savage ancestors. The Prussian Ministers and ex-Ministers, twelve in number, bearing long wax candles, precede the bride and bridegroom round the hall, to the funereal sound of a solemn march, played by 50 trumpets. When the first dance is concluded the bride courtesies to the Emperor, who leads her round the hall, and then the bridegroom bows to the Empress and leads her round, and each Prince and Princess of the Royal House joins in the dance, one at a time, according to age, rank, and precedence, always preceded by the twelve solemn lucifers, and to the sound of the same ancient march. Last night the sacred dance had to be repeated thirty-two times, and each walk round the great hall took from three to four minutes.

There is a bridal chamber in the palace in which all princes of the Royal House since the foundation of the Prussian monarchy have to pass the first night after their marriage, to the door of which the bride is conducted by the ministerial torchbearers at the conclusion of the last dance, and here the bride pauses to doff the Crown Jewels, which have been lent to her for the occasion, and to return them to the Keepers of the Royal Treasure. The first day's ceremonies end by the barbarous custom of the distribution of the bride's garter, which is superintended by the Mistress of the Robes, Countess Keyserling: a rather savage observance I recommend to the study of our prehistoric archæologists at home, and which, I believe, survives only among the minor orders in France, where the capture and distribution of the bride's garter is a privilege reserved to the best man, or "garçon d'honneur." The so-called garter has become an emblematic riband of sufficient length to satisfy the demands of the numerous princes who are entitled by their birth and rank to aspire to a fragment, and which the mistress of the robes, who cuts it up and distributes it, professes to have obtained from the happy bridegroom. Thus end the revels of the first day. On the following morning the young pair go to church, and at one o'clock partake with the Royal family of a *déjeûner dinatoire*, as the meal is officially termed in the printed programme. I fancy Voltaire would have corrected this locution as well as *diner en retraite* in Frederick the Great's MSS., and the patriotic press of Germany is bold in its protests against the French denominations which still prevail at Court and in the army. At seven on Sunday evening the young Prince and Princess hold a levee in the old palace, which is attended *en robe de cour* and *gala-uniform*, and are expected to find something pleasant to say to everybody as they walk round the circle. On Monday there will be a *gala-diner* at three in the White Hall of the Schloss, and the manner in which the knights of the many Prussian orders are to wear their collars, bands, and stars is detailed at length in the programme. At seven there is a grand gala-representation of Glück's "Iphigenia" in the illuminated Opera, to which no one is admitted unless in uniform. The performance ends with a levee in the crush-room, and on Tuesday morning the young pair are at last released from the constant gaze of observers, and are permitted to begin their honeymoon.

"THE EMOTIONS IN MAN AND ANIMALS."*

It is strange to reflect how different the social life of man would be from what which it is if the emotional states of the mind were limited to the same modes of manifestation as those by which the intellectual faculties find outward vent. If another person is to become cognizant of the train of reasoning which is passing through a man's consciousness, the intellectual states must be expressed by means of signs with which that other person has learned to associate those intellectual states. Such signs may either be vocal sounds, or pictorial images, or those telegraphic movements of the body and limbs which are called gestures. Without prejudice to the possible influence of onomatopœia in the first formation of language, the association of a thought with a vocal sign—in other words, the attachment of a meaning to such a sign—is an arbitrary process, the result of habit, for every speaker of an existing language. There is obviously no reason save the habit of the parents why an English child should call a certain quadruped "dog," while a French child calls it "chien," and a German "hund." In like manner, the meaning of the pictorial signs which constitute the letters of the alphabet must be admitted to be no less arbitrary, though hieroglyphics and pictures expressive of action show that visual language has its onomatopœic side; while Mr. John Evans has recently almost persuaded us that the letters of the alphabet themselves, purposeless scratches as they look, are merely modified and abbreviated pictures of the things, by the names of which the powers of the letters were well exemplified. Gestures, finally, so far as they are capable of expressing thoughts unmixed with emotions, are, to a great extent, a natural meaning, a signification which is independent of previous explanation. Offer a bit of biscuit to a savage, and, at the same time, go through the motion of eating, and he will at once understand that the biscuit is good to eat and will proceed to devour it. Pretend to strike him, on the other hand, and he will at once show that he knows what that means. Gestures are such clumsy artificial signs that they are but little employed for purposes of intellectual expression by those who are in possession of the faculties of speech and hearing. But, among the deaf and dumb, gesture signs become as complicated and as completely artificial as those which are spoken or written.

For merely intellectual purposes, therefore, it may be said that all we have to express might be expressed just as well as it is at present, and understood just as well as it now is, if the human head were a mere post-office pillar with a slit in it, such as Mr. Wemmick's was feigned to be. But what a dull affair the daily intercourse of mankind would be if the emotions could be manifested in no other way than by words, or writing, or gestures, significant as these last sometimes are. Suppose that envy, hatred, malice, and all uncharitableness were invisible until they took the form of set propositions; suppose tenderness obliged to harden itself into talk and nine-tenths of coquetry abolished—no smiles, no blushes, no frowns, no tears; what a weary, wooden sort of a life we should all lead! It is as hard to keep up a lively conversation in the dark as to enjoy a cigar under the same circumstances; and one feels that the impossibility of getting any one to sympathize with his humours must have been a grievous part of the punishment of the Man in the Iron Mask. The face, in fact, is the dial-plate of the emotions—a sort of anemometer showing the direction and force of the gales of the soul; and this mere patch of more or less hairy skin, two palms breadth, in virtue of the way in which it wrinkles and the shapes which its five apertures assume, is a better guide to what is going on in the underworld of passion than all speech and all writing. Familiar as the fact is, it is none the less perplexing when one thinks about it. It seems almost absurd to inquire seriously why the face should be thus favoured; why, when a man is merry, the corners of his mouth go up and he makes a series of forced expirations; why, when he is sad, the corners of his mouth go down, and he gets rid, by an apparatus lodged in the orbit, of a quantity of water which, so far as one can see, might just as well have been eliminated in other ways. But the cardinal belief of science is embodied in Leibnitz's axiom that "everything has a sufficient reason." The dictum of human law, "De minimis non curat lex," is reversed in the high court of nature; indeed, it is the power of accounting for minute and obscure phenomena which is the best testimony to the validity of a natural law. And the hypothesis which has done so much towards giving us a "reason why" for the occurrence of stripes on the legs of dun ponies and for the endless caprices of form of orchid blossoms need not shrink from attempting the explanation of the phenomena of emotional expression. This is evidently Mr. Darwin's view; and his book contains the first serious attempt that has ever been made to deal with the phenomena which constitute emotional expression as a whole; and to explain them, or at any rate, show which are explicable and which are not so, in the present state of our knowledge.

Mr. Darwin treats but lightly of the fundamental problems—Why does emotion manifest itself in involuntary bodily changes? And, further, why are the changes which accompany some emotions exactly contrary in their character to those which accompany others? In respect of the former inquiry he adopts Mr. Herbert Spencer's view, that all emotion is accompanied by a generation of nerve force, which must expend itself in some way or other, and ordinarily vents itself in contractions of the most easily moved muscles. No doubt the "shock" felt in astonishment and the "fit-to-burst" feeling of laughter and of rage, testify very strongly to the explosion of nerve force which accompanies some kinds of emotion. But it is not so clear that any such nervous explosions accompany the emotions of either love or sadness, which, nevertheless, are intense enough in their way. Moreover, if these explosions occur, why should they sometimes affect one set of nerves and sometimes another? The answer to such questions as these is doubtless to be sought in a better knowledge of the mode of operation of those wonderful nerves (such as the branches of the vagus and sympathetic which go to the heart) the function of which is to hinder or accelerate the action of other nerves; and in the ultimate unravelling of the processes by which some emotions excite and accelerate the ordinary working of the organs, while others depress and hinder that working. That pleasurable emotions exhilarate, and painful ones depress our bodily frames are, for the present, ultimate facts, as little explicable as the existence of pleasure and pain themselves. Granting, however, the postulates that emotion tends to give rise to explosions of nerve force, and that the course of the nerve force thus generated is more or less determined by the organization of the nervous system, (which is Mr. Darwin's "principle of direct action on the nervous system"), what he endeavours to show is, that all expression is explicable by calling in the aid of two other principles—that of "serviceable associated habits," and that of "antithesis." In other words, given the general fact that emotion tends to give rise to movement, and that the organization of the nervous system more or less determines the direction of this movement, expressions are of two classes. Either they are actions which are useful to the organism under the influence of the emotion expressed, or which have been useful to the organism so influenced at an earlier stage of its development; or the acts which constitute the expression are not useful and never have been useful to it in this sense, but they are actions which are the physical contraries to those which accompany that emotion which is the opposite of the one which they express. Thus a cat, in a rage, crouches ready to spring, unsheathes his talons, bares his teeth in readiness for biting and scratching, and growls so as to make his adversary afraid. All these movements in the cat are expressive of rage, and they are obviously directly subservient to the passion by which the animal is inspired. So when an angry navvy starts up, and, swinging his arms about and clenching his fists, expands his chest and plants his feet firmly on the ground, these expressive movements are plainly enough explicable by the principle of "serviceable associated habits;" the body is doing its best to satisfy the mental emotion by preparing to destroy the object of rage. But why, at the same time, does our navvy lay bare his gnashing teeth and set his jaws by the firm contraction of the biting muscles? He is going to fight with his fists, not to fasten upon his adversary with his teeth. This is an associated habit which is not now serviceable. True, says Mr. Darwin, but there was a time in the history of our ancestors when it was serviceable—so serviceable, in fact, that the trick of biting has not got worked out of us in all the ages that have elapsed.

* "On the Expression of the Emotions in Man and Animals." By Charles Darwin, M.A. F.R.S. (London: John Murray. 1873.)

and is, even still, exhibited as an instinct by young children, who all bite until they are broken of the habit. Among cultivated men, anger is not shown by a challenge to fisticuffs; nevertheless the tendency to bite, so venerable in its antiquity, is not quite eradicated, but remains in the sneer, which is to a bite exactly what "a twitching of the fingers to be at him" is to a blow; it is a twitching of the muscles which lay bare the fangs. But why does the navvy scowl and the man of the world frown, when angry? It is possible that the scowl may be directly useful from its bringing the eyebrows down over the eyes, thus shutting out extraneous light and enabling vision to be more directly concentrated on the object of attack. We always tend to frown when we look intently at anything. But it is also possible that the frown may partly depend upon the fact that anger is, to a certain extent, pain, and that pain and frowning become associated in our earliest infancy. Mr. Darwin's speculation as to the manner in which pain thus becomes associated with frowning is one of the most ingenious suggestions of a mind fertile in ingenuities. Pain causes an infant to cry, and crying means strong expiratory acts, with consequent congestion of the vessels of the eyes. To diminish this congestion and counteract its effects, the eyelids are shut—the more closely the more vehement the cry. But the action of the muscular fibres which shut the eyelids involves that of those which cause a frown, as may be readily seen in the face of any one who shuts his eyes tightly. Hence frowning and pain become so intimately associated together that the existence of the emotion at once calls up the muscular act. And, in this aspect, as under the other, the frown of anger is explicable on the principle of "serviceable associated acts."

There can be no doubt that this principle is capable of extremely wide application, and probably covers not only all the cases which Mr. Darwin brings under it, but many more. The principle of antithesis is harder to grasp, and possibly more open to question in its application. Undoubtedly Mr. Darwin shows that, in dogs and cats, the muscular acts which express pleasure and affection are, as nearly as may be, the contraries of those which express pain and rage. The cat which crouches, writhes, slowly waves his tail, and snarls when he is angry, stands up with tail as stiff as it can be, and, with arched back and shut mouth, rubs himself against his master, or the nearest object, when he is pleased; while, on the contrary, the dog who makes himself as tall as possible, and holds his tail stiff when he is angry, crouches, writhes, and wags his tail vehemently when he is pleased. In the same way the man who clenches his fists and throws himself back into an attitude of defence when he is angry, bends forward and with open palms inclines towards that which pleases him. No doubt, therefore, as to the existence of the antithesis. The question is how this antithesis is brought about. Mr. Darwin states his view of the matter as follows:—

> As the performance of ordinary movements of an opposite kind under opposite impulses of the will has become habitual in us and in the lower animals, so when actions of one kind have become firmly associated with any sensation or emotion, it appears natural that actions of a directly opposite kind, though of no use, should be unconsciously performed, through habit and association, under the influence of a directly opposite sensation or emotion. On this principle alone can I understand how the gestures and expressions which come under the present head of antithesis have originated.

The "Expression of the Emotions" resembles Mr. Darwin's former works in the fulness of its observational basis and the ingenuity with which the beads of fact are strung upon the thread of theory; but, so far as we recollect, neither the "Origin of Species" nor the "Descent of Man" contained so good a story as the following:—

> A small dinner party was given in honour of an extremely shy man, who when he rose to return thanks rehearsed the speech, which he had evidently learned by heart, in absolute silence, and did not utter a single word, but he acted as if he were speaking with much emphasis. His friends, perceiving how the case stood, loudly applauded the imaginary burst of eloquence whenever his gestures indicated a pause, and the man never discovered that he had remained the whole time absolutely silent. On the contrary, he afterwards remarked to my friend, with much satisfaction, that he thought he had succeeded uncommonly well.

How one wishes that after-dinner speakers, in general, were "shy men" of this sort, so that we might sip our claret undisturbed by platitudes, while they might be made just as happy as they are now!

NEW BOOKS AND NEW EDITIONS.

"For Liberty's Sake." By John B. Marsh. (Strahan and Co.) The hero of Mr. Marsh's fiction is Robert Ferguson, the Judas of Dryden's "Absalom and Achitophel," who took an influential part in the Duke of Monmouth's rebellion, and obtained a free pardon. When King William came to the crown he received a good appointment in the Excise, but he plotted against William as he had plotted against Charles, and was led "to ally himself with those who secretly sought to restore James to the throne." The man by all accounts was honest, but he was by nature restless and intriguing, and can scarcely be said to have rendered any essential service to the cause of liberty. Mr. Marsh, we suppose, thinks otherwise, for he calls Ferguson "one of the most celebrated men of the age," and having discovered in the State Paper Office several letters addressed by him to his wife, and also a MS. in Ferguson's handwriting relating to the Rye House Plot, he has made use of these materials in the construction of his tale. We venture to think Mr. Marsh has made a great mistake. The story as a story is dull, and the statements made by Ferguson in his MS. lose the only value they can possess when surrounded by the mist of fiction. The letters inserted in the tale show that Ferguson was an affectionate husband and had a good wife; but beyond this there is no special significance in them, excepting that they contain nothing to corroborate Lord Macaulay's opinion that he was the deliberate betrayer of his friends. Mr. Marsh, by the way, describes with some spirit the cruel persecution of the Nonconformists; but forgets that when the Puritans had the upper hand, their forbearance was by no means conspicuous. If Richard Baxter was badly treated, so also was Chillingworth.