

Fear. ANGELO MOSSO. Translated from the fifth edition of the Italian, by E. Lough and F. Kiesow. Longmans, Green & Co. London, New York, and Bombay. 1896. Pp. 278.

This book comes from one of the best known living physiologists. To Prof. Mosso the world owes some of the choicest methods and apparatus ever invented; his peculiar domain being the study of blood circulation, respiration and fatigue, with special reference to mental activity.

In attacking Fear, Prof. Mosso again shows his keen scent for crucial problems. Yet we must confess that the results, this time, revive our impression of how wonderful the inventor was within his old sphere, rather than excite us with valuable contributions for his new subject.

The first eight chapters deal with 'How the Brain Acts,' 'Circulation of the Blood in the Brain during Emotion,' 'Pallor and Blushing,' 'Respiration,' 'Trembling,' and kindred topics. In them the author has collated the principal facts now known regarding these matters, and has done so in language as simple as a child's fairy tale—and often as extravagant. The trouble, however, with this part of the book, from a scientific stand-point is, that late experiments of highest repute¹ explain the mysteries of blood distribution on simple principles which rob the Mosso school of investigation of their chief charm; namely their seeming promise to lead to a solution of the problems of emotion. These eight chapters, therefore, are now behind the times, and misleading if significance be given to them in the last mentioned sense.

Next follow chapters on 'Expression,' 'Phenomena Characteristic of Fear,' 'Fright and Terror,' 'Maladies Produced by Fear,' 'Hereditary Transmission,' and 'Education.' These are disappointing; they contain little that was new even at the date of appearance of the first edition, and by getting no further than did Darwin, Spencer, and Mantegazza, they emphasize how inadequate the conjectures of these great men were in this peculiar field. It is true that to-day very little is definitely known about fear; and this author has perhaps made as good a collection of the fragmentary suggestions currently supposed to have bearing on the subject as is to be found anywhere. But we had a right to expect more from a man of Professor Mosso's originality and rank.

The truth is, the book is full of careless statements and cheap hand-

¹ Shields, John Hopkins. First number of *American Journal of Experimental Medicine*. 1896.

ling of traditional themes. An example of this may be found in the author's so-called 'confirmation' of Mr. Spencer's theory of the origin of emotional expression; which theory is that, in emotional excitement, general waves spread through all the motor nerves, and effect the muscles proportionally to their bulk, and the inertia of the parts they move. In support of this Professor Mosso offers the fact that he stimulated the facial nerve of a dog electrically, and a weak current caused an attentive pricking of the ears; a stronger one gave a movement of the nose and eyes; then the lips and mouth opened; and finally, with a powerful current, the dog assumed the fierce expression of one about to attack—the conclusion being reached that, 'the mechanical part of expression is therefore much simpler than one thinks.' But can any careful man seriously suggest that our various emotional expressions may be arranged in a serial order dependent on the intensity of general nervous discharge! If so, at what point in a child do those for violent laughter pass over into the contortions of crying, or the reverse? And why not explain the movements of Paderewski's fingers by the same 'simple' plan, since they must be the most easily moved members of his body?

As another example of this sort of looseness, Professor Mosso attributes 'frowning' to sympathetic coördination with the eye muscles for purposes of scrutiny and attention. But why then, at the theatre, do persons in rapt attention and scrutiny of the comedian's antics raise the brows in the most open and expansive manner? And do we not scrutinize the marvellous as closely as the disgusting, yet with the brows set quite oppositely? We are not likely to arrive at any profound insight into emotion, until scientists are willing to guess at its problems a bit more searchingly than they would at a newspaper riddle.

Again, in the chapter on Heredity the doctrine of Acquired Characteristics is asserted as unquestioningly as if the great Weismann controversy never existed. Yet regarding its scientific aspect it remains to be said that the fundamental error of this book is the author's entire neglect of the psychologic side of his subject. Never once does he even try to approach it; and one should know, from the first, that a treatise on fear, with the psychology of fear left out, must be as unsatisfactory as an attempt at mint julip, which gets no further than the glassware.

In summary: The translators tells us that this is a 'splendid little work.' Rather it is a splendid little Vaudeville; a potpourri of all sorts of things, from Professor Mosso's Physiological Scrap Book, thrown together for the popular stage. The book is valuable, as any work from

this distinguished scientist must be ; but we feel that he stepped down to write it. It is good to bring science to the people, but in doing so one should never descend to tawdry, and much of the rhetoric of the present book comes near this. Scarcely does a cock-sparrow perform more preposterous antics at courting-time than does this author, in places, to drive his subject home upon the attention of 'popular readers.' (Pp. 36, 74, 200, for example.)

The work of the translators, Mr. and Mrs. Kiesow (formerly Miss Lough), is extremely commendable, and the type excellent.

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Evolution in Art: as illustrated by the Life-history of Designs,

By ALFRED C. HADDON, Professor of Zoölogy, Royal College of Science, Dublin. London. Walter Scott, 1895. Imported by Charles Scribner's Sons. Pp. XVIII, 364. \$1.25.

There is a great deal in the title given to a book ; and psychologists, interested as they are in all that relates to evolutionary doctrine, will I fear suffer some disappointment when they find that Professor Haddon's excellent treatise deals with little more than the indications that some art forms are developed by slow processes determined by the inheritance and the character of men as affected by their environment. But this disappointment is likely to be displaced by a sense of satisfaction, that they have been induced to read a work that might have been passed over had the title been more accurately descriptive of the contents.

Professor Haddon undertakes to study certain designs used in art, treating them as products of biological evolution ; and he succeeds in showing, rather by accumulation of indirect evidence than by formal argument, that the processes discoverable in the psychic life of man are adequate to account for the original use of the principal decorative designs, found amongst the savage tribes to which he turns his attention ; and that the persistence of certain of these forms, modified to a greater or less degree, is on the whole exactly what we should expect to find in consideration of our knowledge of the psychic life of man as, influenced by imitation, he passes through the normal processes of mental evolution.

Of the higher forms of decorative art the author, perhaps not unnaturally, has little to say ; for to him, as to all biological evolutionists, the genesis of man's capacities seems most clearly exemplified in the lives of uncultured barbarians.