

gust those who know the brilliant gifts of some who are thus afflicted. He states categorically that the mental improvement due to education is transmitted to offspring, and recommends late marriage of the highly educated in order that the effects of education may be more fully handed on. And neither Prof. Richet nor Prof. Lloyd Morgan seems to realise the extreme difficulty of eliminating an undesirable character if it is recessive in inheritance. In a stable population, if 1 per cent. show a recessive character, 18 per cent. will bear this character concealed by the corresponding dominant, and by preventing the reproduction of the 1 per cent. in which the recessive is homozygous, only very slow progress will be made in eliminating it. Prof. Richet is an enthusiast for eugenics, and has written an entertaining book, but one which is scarcely sufficiently abreast of modern work on heredity.

L. D.

OUR BOOKSHELF.

Essays in Common-sense Philosophy. By C. E. M. Joad. Pp. 252. (London: The Swarthmore Press, Ltd., 1919.) Price 8s. 6d. net.

If any man of science, perplexed at the disturbing challenge which philosophy throws down to the assumptions as to plain matter of fact on which science rests, wants comfort and support for his intellectual framework from within philosophy itself, he will find and certainly enjoy it in the delightfully clear essays of Mr. Joad. It is a somewhat unusual thing for a young writer to make his *début* in philosophy by rejecting every temptation to paradox and any attempt to startle the "plain man," and setting himself the apparently easy but really very difficult task of convincing the "plain man" that his views about the universe are not likely to be very far removed from truth. Yet this is what Mr. Joad sets out to do.

Mr. Joad is not a very trustworthy guide when he discusses famous philosophical theories. He adopts too easy a classification, with the consequence that we find ourselves in strange company. All philosophers, past and present, are in his view representationists, solipsists, or realists. But this does not in the least spoil our enjoyment of the concise and easy way in which the writer finds himself at home in philosophy, of the keenness of his wit, and of the dexterity of his cut and thrust. There is only one of us who comes in for unstinted praise—Prof. Dawes Hicks—and we believe he does not recognise his theory in Mr. Joad's exposition. The rest of us—Bergsonians, pragmatists, absolutists—are all alike well trounced.

There is one thing in Mr. Joad's own view, however, which is very puzzling, not to say disconcerting. He tells us that sensible objects exist "very much" as we know them. But why not altogether so? If there is any difference at all, why is he so confident it can only be a very little one?

H. W. C.

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Modern Engineering Workshop Practice: A Text-book for the Use of Engineering Students, Apprentices, and Engineers engaged in Practical Work. By Herbert Thompson. (Griffin's Scientific Text-books.) Pp. xi+328. (London: Charles Griffin and Co., Ltd., 1919.) Price 9s. net.

THIS book is an attempt to give a fairly comprehensive view of modern engineering workshop practice, and includes sections dealing with general methods and machines, and others dealing with special processes and machines, such as turret lathes, spiral milling, grinding, hardening, tempering, annealing, autogenous and thermit welding, and soldering and brazing. The author is quite at home in these branches. The descriptions are clear, and whilst many of the illustrations are half-tone reproductions of photographs of machines and appliances, there is a sufficient number of line drawings to enable the reader to understand the construction. The author is not so happy in chap. i., which deals with materials. Thus, on p. 3 we read, under the paragraph heading "Malleable-iron Castings": "If an iron casting, made out of the right kind of pig iron, be heated to a red heat in an iron box surrounded by some carbonaceous material for from 12 to 24 hours, the surface of the material becomes converted into a form of steel. The casting then has lost its extreme brittleness, and becomes more or less malleable. The castings are generally embedded in red hæmatite." In view of this statement, it is of interest to note that later on (p. 229), in dealing with case-hardening, the author shows that his knowledge is sound, as regards both the process and the changes which take place during the progress of case-hardening. Despite blemishes of this kind, the young engineering student will find much that is instructive and of interest in the book.

Science and War: The Rede Lecture, 1919. By the Rt. Hon. Lord Moulton. Pp. 59. (Cambridge: At the University Press, 1919.) Price 2s. 6d. net.

LORD MOULTON'S lecture gives a striking picture of the manner in which the methods of warfare have been transformed by the application to military purposes of the results of the rapid growth of chemical and physical knowledge and the advances in engineering and medical science during the last half-century. Not unnaturally, a considerable part of the discourse is devoted to the subject of explosives, on which the lecturer can speak with special authority, and the warning which he gives as to the importance of establishing the manufacture of nitric acid from atmospheric nitrogen in this country is one that deserves serious attention. Lord Moulton's final conclusion is that man, "endowed with all the powers that science has given him, will be self-destructive unless his social instincts . . . become sufficiently strong to induce him voluntarily to submit to those powers being fettered." "It is easy to criticise the League of Nations, but let us never forget that some combined action of that type is necessary."