as the temperature on our planet on which our life depends. Neither has he (or Darwin) really disposed of the opposite alternative, viz., that the fact of progress may be due to an intelligent guidance which *creates* by providing a suitable supply of 'accidental' variations, and utilizes natural selection to adjust an *already existing* adaptation to the change of circumstances. Thus a sufficiently refined doctrine of creation not only need not fear the evolutionism of Darwin and Mr. Huxley, but can actually exploit it. That theologians have not perceived this possibility and have allowed themselves to be panic-stricken by Darwinism, merely proves the lack of progressiveness in their thought.

F. C. S. SCHILLER.

Marvin, F. S. Editor. *Science and Civilization.* Unity Series VI. Humphrey Milford, Oxford University Press. Pp. 350. 12s. 6d. net.

MR. MARVIN in an indefatigable *entrepreneur*, and it is wonderful how he gets his Woodbrooke Lecturers not only to talk upon the subjects he prescribes, but also to deliver the goods, to wit their MSS., in a printable shape. In this volume his readers listen to Prof. J. L. Myres on the Beginnings of Science, Dr. Charles Singer on Ancient Medicine, and on the Dark Ages and the Dawn, Prof. Arthur Platt on Aspects of Biological and Geological Knowledge in Antiquity, Dr. J. L. E. Dreyer on Greek Mathematics and Astronomy, Prof. A. N. Whitehead on the first Physical Synthesis, Prof. C. H. Desch on Science in the Industrial Revolution, Prof. J. A. Thomson on the Influence of Darwinism on Thought and Life, Mr. A. E. Heath on Science and Education, Dr. F. G. Crookshank on Science and Health, Mr. J. S. Huxley on Science and Religion, and the Editor himself on Science and Human Affairs. As is commonly the case with such team-works, the essays differ considerably in interest and value, and those of Professors Myres and Thomson and Dr. Singer rather stand out, while Dr. Dreyer gives a singularly lucid account of the puzzles of Greek astronomy. Most of the subjects do not easily lend themselves to references to eugenics, but the eugenic gleaner can nevertheless find something to applaud in Prof. Thomson's warning that our sentimental tenderness in protecting undesirables means cruelty in the future (p. 214) or in Mr. Huxley's emphasis on our ability to guide our own evolution (p. 296). The Editor on the other hand, like the old-fashioned democratic positivist he is, still refuses to take alarm at the social contra-selection now practised in civilized societies. He thinks that "the children of the lower middle or upper working class are being constantly improved" and refuses to believe that they are not "capable in due time of acquiring the good qualities—in manners, &c.—which we associate with the old upper class" (p. 345), and will not abandon faith in "a general law of progress" (p. 349). It is refreshing to contrast with this sort of cant the very trenchant and outspoken pronouncement on Science and Health by Dr. F. G. Crookshank. He at least is perfectly clear about the dangerous folly of our present social organization, and his description of the situation (p. 269) could not be bettered. After

treating many thousands of patients at many great hospitals he records his conviction that there are "few cases of disease to be seen at these places which would have occurred, had there not been, on the part of the patient or his immediate progenitors, some lack of patient persistence in right and ordered habits of physical, mental and moral life." And he warns social reformers that not even the most perfect sanitation enforced for a generation "will achieve anything that will not be destroyed by six months of war involving the organization of a nation in arms."(p. 276). It is to be hoped that all health officers are as enlightened as Dr. Crookshank!

F. C. S. SCHILLER.

Pearson, Karl; F.R.S., Professor. *On the Relationship of Health to the Psychical and Physical Characters in School Children.* Pp. 77. 15s. C.U. Press. 1923.

IN this Memoir Professor Pearson gives the results of an investigation made from data collected from middle-class schools between 1898 and 1903. About 2,000 boys and 2,000 girls were brought within its scope. We are first shown the correlations between Age and various psychical and physical characters; these are for the most part negligibly small. In particular Health shows extremely little, and Intelligence, as distinct from acquired knowledge, positively no association with Age; during the school years, it would seem, neither doctor nor schoolmaster can, on the average, alter the physique or mentality of the child. Two other characters discussed at some length are Athletic Power and Popularity. Athletic Power shows a correlation, for boys, with Health of .443, with Vivacity of .353, with Popularity of .351, and with Intelligence of .214. In other characters too, the athletic boy is above the average; in no respect is he below the average. Clearly the athlete is neither fool nor oaf. But this fact does not absolve the public schools from the charge of laying too much emphasis on games. The rather mysterious character of Popularity is found to be most closely associated, for boys, with Conscientiousness, Athletic Power, Good Temper and Intelligence, in that order. The figures for girls give the same general result, though differing in details. Rather strangely, the boy with red hair and the girl with wavy hair are much above the average in Popularity.

The correlations of Health with various psychical and physical characters are shown in detail. They are surprisingly small. Health is associated most closely with Athletic Power (boys .443, girls .397), and appreciably also with Self-assertion, Vivacity, Popularity, Good Handwriting, and Intelligence, the correlation of Health with Intelligence being for boys .099, for girls .144. Neither Temper nor any of the purely physical characters exhibit a correlation as high as .1 with Health for either sex. Professor Pearson concludes that Health is not, in spite of general belief, a governing factor of temperament.

There is one serious objection to our taking the conclusions of this Memoir as universally valid. It is that the children in question were at middle-class schoo s, not at elementary schools, and were therefore a selected group. Professor Pearson himself suggests the possibility of a higher correlation between Intelligence and Health in elementary