

one who was well trained in habits of observation, and accustomed to the drudgery of making daily notes of what he saw. The remarks on the peculiarities of the Samoyedes are valuable from their originality, and are an important contribution to the ethnology of Siberia in Europe. The value of the ornithological appendix is in strong contrast to that in Mr. Jackson's book; but it must always be remembered that Mr. Trevor-Battye is himself an ornithologist, and travelled at a time of year when the country was full of birds. Mr. Jackson makes no pretension to any knowledge of ornithology, he travelled at a season when birds were very scarce, his mind was occupied with other thoughts, and he had the misfortune to entrust the few skins he brought home to hands as inexperienced as his own.

Mr. Trevor-Battye's account of the way in which the Samoyedes surround the geese when most of them are unable to fly, because they are moulting their quills before migrating to the coasts of Western Europe to winter, is most graphic.

On the south-east coast of Kolguef the sea is shallow, and at low tide there is much sand exposed within the line of the outer barrier of piled-up ice, which lies some three miles out to sea. In this lagoon thousands of geese retire towards the end of July to moult their flight feathers. When they are in this more or less helpless state, the Samoyedes slip down in their boats through the fog and get behind them, and gradually drive them on shore, where a decoy net has been staked out to receive them. Once inside this trap they are slaughtered without mercy to provide food for the winter. The day's bag was 3300 brent geese, 13 bean geese, and 12 white-fronted geese. Fortunately for the two species of grey geese, they moult a little later than the black geese, so that most of them were able to fly. The Samoyedes told our travellers that the bernacle goose nested at the north of the island.

Mr. Trevor-Battye was fortunate enough to obtain eggs both of the grey plover and little stint. Mention is made on page 209 of the capture of two examples of the curlew sandpiper, but curiously enough this bird does not appear in the ornithological appendix.

There is an interesting appendix on the flora of Kolguef. The cloudberry, one of the most delicious of fruits, which is found on the highest summits of the Peak of Derbyshire, and on the Craven Mountains in Yorkshire, was in flower by the second week of June, but the fruit did not ripen before August 25.

Both Kolguef and Waigatz have an island climate, very different from that of continental Siberia; and it might be said of both of them, as is frequently said of Lapland, that they have eight months winter, and four months no summer. The frequent rains are no doubt very favourable to the growth of many species of plants, but they sadly interfere with the pleasures of camp-life. When the north wind brings down fogs from the Arctic ice in June, and snow followed by rain in July, varied with thunder in August, and frosts in September, it requires some enthusiasm for birds or flowers to enjoy the fight with the storms. There are, however, some compensations. If there be little sunshine there is no night, and when the north wind blows the plague of mosquitoes is stayed.

HENRY SEEBOHM.

ANOTHER BOOK ON SOCIAL EVOLUTION.
The Evolution of Industry. By Henry Dyer, C.E., M.A., D.Sc., &c. (London: Macmillan and Co., 1895.)

THIS work contains much valuable suggestion, many admirable sentiments, and a selection of choice extracts from the best writers on social philosophy; but it is hardly what one would expect from its title. The idea of evolution is, no doubt, more or less present to the author throughout his work, and some of its main characteristics are referred to and illustrated by the phenomena of industrial progress; but there is a want of system and of logical connection in the treatment of the subject, and an entire absence of the unity of design, forcible reasoning, and original theory which were such prominent features in Mr. Kidd's work.

Dr. Dyer's book is an eclectic one, inasmuch as it adopts from previous writers such ideas and principles as commend themselves to the author. His frequent quotations are often followed by the remark—"there is much truth in this"—and it is sometimes rather difficult to determine what are his own conclusions. It would not be difficult for both individualists and socialists to find support here to their own views; but the general impression made by the volume is, that the author is profoundly dissatisfied with the present state of society, and is inclined to some form of socialism as the only effective remedy.

In the introductory chapter we find many of the objections to socialism very strongly put, though most of these are objections to particular details rather than to essential principles; yet in the same chapter we find statements of fact which answer many of these objections. Thus we are told (p. 21): "Among the co-operators, for instance, we find men managing, with the highest efficiency, concerns of great extent and importance for salaries smaller than those of bank clerks. They find their real salaries in the success of their work, and in the knowledge that it will lead, not simply to individual riches, but to the welfare of the community, and especially of the workers."

After quoting from the late Prof. Cairnes to the effect that no public benefit of any kind arises from the existence of an idle rich class, he adds: "From a scientific point of view, and therefore from a moral point of view, no man or woman, unless physically or mentally disabled, has any right to remain a member of a community unless he or she is labouring in some way or other for the common good. In every organised society, therefore, there can be no rights apart from duties" (p. 37). This principle is thoroughly socialistic, and would lead us very far indeed; but here, as elsewhere, the author seems afraid to carry out his own principles to their logical conclusions. Further on, he tells us that—"In some parts of the country as much as between 40 and 50 per cent. of all the deaths that occur are those of children under five years of age, a state of matters which is a disgrace to our civilisation"; and, after quoting some forcible words of Lady Dilke as to much of England's industrial greatness being due to her practically unlimited supply of the cheap labour of her women and girls, he concludes: "It is therefore evident, both from an economic and a moral point of view, that the individualist system of industry, by itself is not sufficient to bring about a stable social

structure." He describes hospitals as institutions "which are founded for the purpose of taking in some of the waste products of our industrial and social system, and for repairing, as far as possible, the injuries which they have suffered"; and he adds: "Such institutions are sometimes pointed out as the glories of our civilisation. They should, on the contrary, be looked upon chiefly as monuments of neglected duties, and the object of all social reformers should not be to extend them, but so to improve social and industrial conditions as to render them almost entirely unnecessary." This will be a new idea to many good people, but it shows that the author is far ahead of the average social reformer.

Again, he points out that the armies and navies of the world afford most instructive lessons in collective action, and that it would be equally possible to have armies of men organised for industrial work, and navies for carrying on such commerce as was essential for supplying the wants of the community; and in his chapter on "Industrial Training," he shows how necessary it has become to supplement the very imperfect means now afforded to apprentices to learn their business by some systematic and well-organised system under local or other authorities.

In the last chapter, on "Industrial Integration," suggestions are made as to the course of future legislation. The author thinks that it will be made increasingly difficult for people to live upon unearned incomes, while the equalisation of opportunities will reduce the rewards of extra ability. How this is to be effected is not made clear; but the author is decidedly of opinion that "the resumption of the ownership of the land by the community is a first essential to equality of opportunity"; concluding with the rather weak remark, that "the methods to be adopted to bring this about will require very careful consideration, and must be comparatively slow in their operation."

After quoting the opinion of the late Mr. Werner Siemens, that the progress of science will lead not to the increase of great factories, but to the return to individual labour, Mr. Dyer adds:—

"The factory system will continue, and no doubt be extended, for the supply of the common necessities of life, but the applications of electricity and other methods of obtaining motive power will enable large numbers of small industries to be carried on in country districts. This movement will ultimately bring about a society of integrated labour, which will alternate the work of the field with that of the workshop and manufactory. In order that the evils arising from unlimited competition may be avoided, these departments of work will all be so co-ordinated that a considerable region will, to a large extent, be self-contained as regards its requirements, and will produce and consume its own agricultural and manufactured necessities of life."

This conclusion has been reached by the present writer and some others, mainly from broad considerations of economy. But when it is set forth in a work which professes to trace and discuss "the evolution of industry," we expect to be shown that it is a logical and inevitable result of the evolution that has occurred and is now going on. This is nowhere done, and in this respect the book must be pronounced a failure, although there is much in it with which every friend of progress and every student of social science must heartily agree.

ALFRED R. WALLACE.

MAYAN HIEROGLYPHICS.

A Primer of Mayan Hieroglyphics. By Daniel G. Brinton. Publication of the University of Pennsylvania Series in Philology, Literature, and Archæology, vol. iii. No. 2. (London: Ginn and Co.)

ALL who are interested in American archæology (and especially those who do not read German) must feel greatly indebted to Dr. Brinton for his "Primer of Mayan Hieroglyphics," for in this little book he has brought together the result of work done during the last few years in America, England, and Germany, and his own extensive knowledge of the subject of which he treats gives the highest value to his selections and his comments.

That there has been a distinct advance made all along the line cannot now be doubted, and material for study has not only increased, but has been made more generally available to the student.

Dr. Brinton divides the Maya inscriptions into their three elements—mathematical, pictorial, and graphic, and proceeds to review them in that order. He first describes Prof. Förstemann's interesting investigation into the Maya notation for the higher numbers, and then enumerates the various divisions of time in use amongst the Mayas, and points out that the bringing of these irregular numbers into unison with the lunar and stellar years is the difficult task which lies before the investigator.

"We need not search" [in the inscriptions] "for the facts of history, the names of mighty kings, or the dates of conquests. We shall not find them. Chronometry we shall find, but not chronicles; astronomy with astrological aims; rituals, but no records. Pre-Columbian history will not be reconstructed from them. This will be a disappointment to many; but it is the conclusion toward which tend all the soundest investigations of recent years."

Whilst dwelling upon the elaborate and careful researches of what may be called the astronomical school of investigators, Dr. Brinton does not fail to give an instance of how far they differ from their rivals, by quoting the explanation given of a certain series of figures in the "Codex Cortesianus," which, in agreement with Förstemann, he supposes to represent the position of certain celestial bodies before the summer solstice, whilst Prof. Cyrus Thomas says of them, "It may be safely assumed that these figures refer to the Maya process of making bread"! Such differences of opinion would seem to indicate that the study of the inscriptions has not yet emerged from the stage of guess-work, and to a great extent this is undoubtedly the case; but it is satisfactory to mark how the happy guess-work of the last few years, and the criticism it has provoked, has led to a solid foundation of ascertained fact from which a fresh start can now be made.

Under the heading of "Pictorial Elements," Dr. Brinton gives us a list of the Maya gods and their attributes, gathered chiefly from old Spanish records. Regarding some of those deities, he has already published some interesting studies in "American Hero Myths." He then proceeds to discuss the cosmogony of the Mayas, and in the following pages deals with the pictorial representations of the Maya divinities, referring continually to the list published in 1892 by Dr. Schellhas in the *Zeitschrift für Ethnologie*.