a few errors, which, though trifling in themselves, have given us a distrust of the whole book, and especially of that portion dealing with modern history.

The first sentence is from p. 295, and is as follows: "John (surnamed Sansterre or Lackland, a name given to younger sons who died before they were old enough to hold fiefs) was chosen king." Of course, this statement is absurd. It is singular that Professor Fisher should not have seen it; for the definition is correctly given by Miss Thompson, whose admirable 'History of England' the author seems to have read with some care: "John, surnamed Sansterre or Lackland (a name given to younger sons whose fathers died before they were of age to hold fiefs)." Then, again, take the following from p. 315. The author has been speaking of Llewellyn, and goes on to say, that, "when a rebellion broke out several years later, Wales was conquered, and the leader of the rebellion executed (1273)." Now, of course, the author knows that Llewellyn was killed in a chance skirmish, and that it was his brother David who was executed in 1283, not 1273; but he should have said so. Then, too, on the very next page (316), the date 1292, which is assigned to the defeat of Warrenne by Wallace at Stirling Bridge, should be 1297; while on the following page (317) Isabel is said to have returned from France, bent on the overthrow of her husband, Edward II., in 1325, instead of 1326. Now, here, on three successive pages, are three dates — and three very important dates — wrongly given. No doubt they are misprints, or mere slips of the pen; but the greatest care should have been taken to prevent just such errors. It must not be supposed that such failings are confined to this part of the book, or to English history, as, in whichever direction we have turned, the same want of care has been observed. In American history, in European history, and even in ancient history, similar errors have been found.

The sections devoted to the history of the people — to the literature, theology, art, etc., of the different periods — are good as far as they go. The maps of classical times are mainly printed from the same plates as those in the 'Standard classical atlas,' issued by the same publishers (*Science*, vii. p. 51): those relating to more modern events, while not so large, are clear and fairly accurate. The most serious omission in this part of the book is the lack of a map showing the partitions of Poland. Taken altogether, the maps add something to the value of the work. So, too, do the various genealogical tables; while the little bibliographies, though very general, will serve to start the inquiring student in the right direction. It is to be regretted that an insufficient index impairs whatever usefulness as a work of reference the volume might otherwise have had.

COMPARATIVE DISTRIBUTION OF JEWISH ABILITY.

THE pronounced racial characteristics of the Jewish people, with their remarkable persistency of type, have always rendered them a favorite subject for ethnological study. The peculiar environments in which they have been placed, and the almost constant persecution to which they have been subjected, have certainly given their impression to the mental characteristics of the race, and in many respects we see these as sharply portrayed as the peculiar physiognomic cast.

Mr. Joseph Jacobs has recently published (Journal of the anthropological institute of Great Britain and Ireland, February, 1886) an analysis of the characteristics of more than thirty thousand eminent men with especial reference to the Jewish race. The conclusions he arrives at are of the greatest interest, and in some cases unexpected from the crude inductions of common experience.

Jews have no distinction whatever as agriculturists, engravers, sailors, and sovereigns. They are less distinguished than Europeans generally, as authors, divines, engineers, soldiers, statesmen, and travellers, but approximately their equal as antiquaries, architects, artists, lawyers, natural scientists, political economists, scientists, and sculptors. They seem to have superiority as actors, chess-players, doctors, merchants (chiefly financiers), metaphysicians, musicians, poets, and philologists. One would, however, have expected a much larger contingent of lawyers and political economists than is actually found, and art is better represented among them than one would suppose. The sciences also, both biological and exact, show a greater equality than most people would expect. As regards the former, of course Jews have no Darwin. It took England a hundred and eighty years after Newton before she could produce a Darwin: and as the Britishers are five times as many as the Jews, even including those of Russia, it would take, on the same showing, nine hundred years before they could produce another Spinoza; or even, supposing the double superiority to be true, four hundred and fifty years would be needed. But, even in the lower ranks of biology, Jews have done and are doing good work. Bernstein, Cohn, Remak, Rosenthal, and Valentin as physiologists, Cohnheim, Hirsch, Liebreich, Lombroso, and Traube as pathologists, will be recognized; while F. Cohn is perhaps the third greatest botanist in Germany. It

is in abstract science, mathematics and astronomy, that Jews show to more advantage. The history of pure mathematics during this century would show large blanks if the names of Jacobi, Sylvester, Kronecker, and Cremona, were removed. In astronomy we have the cluster of Herschels, Goldschmidt (who discovered fourteen asteroids in the 'fifties' and 'sixties,' when such discoveries were not an every-day occurrence), and W. Meyerbeer (brother of the musician, and author of the first great chart of the moon). Altogether, then, we must conclude that Jews take their full share in the scientific work of the day. In Sir John Lubbock's 'Jubilee speech at York,' we find eight Jewish names out of the two hundred and eighty-nine who are mentioned as contributing to the last fifty years of science: this is considerably above their proper proportion, even when including the Russian Jews. Again: in M. de Candolle's book, 'Histoire de science,' there are ten Jews holding sixteen out of the eight hundred and twenty-four chairs as foreign members of the scientific academies, which fact he uses as a test of scientific ability. This is just the right proportion, the Jews of Europe being seven out of three hundred and thirty-three million.

Less surprise will be felt at the subjects in which Jews seem to show superiority. In acting, a profession better recognized on the continent than here, — and the same may be said of medicine, — in Austria, one may say *ubi tres medici duo Judaei.* The Jewish merchants who get into the dictionaries are, of course, the great financiers. But it is chiefly in music and philology that Jewish superiority is most marked: in music there seems to be six times, and in philology nine times, as much Jewish talent as European. For the former, besides the great names of Mendelssohn, Halévy, Meyerbeer, and Rubinstein, already mentioned, we have many lesser lights, like Sir Julius Benedict, Sir M. Costa, F. Cowen, Joachim, Pauline Lucca, Moscheles, and Sir A. Sullivan. English music, to say the least, would be almost non-existent without these Jewish names. Even more striking is the number of Jewish names distinguished in philology. These are not alone connected with oriental and Semitic philology, like Benfey and Oppert; but they count a goodly number of classical scholars, — Bernays, Bernhardy, Lehrs, Friedländer, and H. Weil, to whom we may add Freund, the author of the Latin dictionary, which is the basis of all those used in England. The names of Lazarus and Steinthal are known wherever the principles of philology are studied. In modern languages, too, Jews have done good work. Sanders has done for German what Littré did for French; and a Jew, the well-known Ollendorff, may claim to have taught languages to the largest number of people by the clumsiest method of teaching.

If we may venture to inquire into the causes of the Jewish superiority established on these somewhat hypothetical grounds, there are various reasons which can be given. We have to take account of their residence in cities, always more conducive to the life intellectual. From this, too, follows their addiction to commerce as distinguished from industry; and as the former implies headwork, and the latter handicraft, mental capacity must be aided by this fact. The care Jews give to their children's education is well known, and must help. All Jewish boys have hitherto had to learn Hebrew, as well as the vernacular, and this must further mental progress. Dissenters generally seem more intellectual, because they have early to think out their differences from the generality. In the case of Jews, persecution, when not too severe, has probably aided in bringing out their best powers: to a high-spirited race, persecution, when there is a hope of overcoming it, is a spur to action. The solidarity of Jews, and the aid they willingly give to young men of promise, assist in developing whatever talent there may be in the community. The happy home-life of the Jewish people, and the practical and undogmatic character of their religion, together with the absence of a priesthood, have contributed to give the *corpus sanum,* and thus the *mens sana.* Jewish reason has never been in fetters; and finally the weaker members of each generation have been weeded out by persecution, which tempted or forced them to embrace Christianity, and thus contemporary Jews are the survival of a long process of unnatural selection, which has seemingly fitted them excellently for the struggle for intellectual existence.

Turning from these general causes, it would be of interest to discover the reasons for the special ability of Jews in music, mathematics, metaphysics, philology, and finance. The chief cause of the musical pre-eminence of Jews, lies, in all probability, in the home-character of their religion, which necessarily makes music a part of every Jewish home; this, too, was the only direction in which their artistic sensibilities could be gratified. Jewish philology is in part due to their frequent change of country, and also to the fact that they have had an additional sacred language besides the vernacular. As regards finance, the Jews have had their greatness thrust upon them: the world forced them to become financiers centuries before finance became a power, and must not complain if Jews now profit by their start in financial experience. Altogether, the productions of Jewish

intellect strike one as being predominantly abstract, — a result, doubtless, of their long life in cities, and exclusion from nature on the one side, and from the education which lies in handicrafts on the other. We may expect great mathematicians and philosophers from them, but not great inventors, biologists, or painters, till they have had time to throw off the effects of their long seclusion from nature.

RECENT CHALLENGER REPORTS.

Report on the Schizopoda (vol. xiii.). By Prof. G. O. SARS. London, *Government*, 1885. 4°.

THE Schizopoda and Cumacea collected during the voyage of the Challenger were placed in the hands of Professor Sars of Christiania for examination and description, and very wisely, for he had done more to elucidate these groups than all other authors combined. This report, by far the most important addition yet made to our knowledge of the Schizopoda, more than justifies the English authorities in intrusting certain portions of the Challenger collections to foreign naturalists. Fifty-seven species of Schizopoda, representing twenty-one genera, are here fully described and very carefully and elaborately figured by the author himself, who says very truly that the collection "has turned out extremely rich, and of very special interest;" but this result is undoubtedly very largely due to the great care with which Professor Sars has examined the miscellaneous material collected in surface-nets, and submitted to him. Forty-six of the fifty-seven species were first made known by the Challenger expedition, and the elaborate working-out of this large number of new forms from widely different regions and depths affords most important new material for discussing the proper subdivision of the Schizopoda and their relation to the other Crustacea.

Professor Sars, I am glad to see, regards the Schizopoda as a suborder distinct from but closely allied to the Decapoda proper, and retains with them the Euphausiidae, in spite of Dr. Boas' arguments that they should be regarded as a distinct order. He also shows that the genus Eucopia, which has been referred to the Penaeidea by Dana and Bate, is a true schizopod, though representing a distinct family. Thus we have four families of Schizopoda: Lophogastridae, Eucopiidae, Euphausiidae, and Mysidae.

The Lophogastridae, which, previous to the Challenger expedition, was represented by a single genus, is here augmented by the remarkable genus Gnathophausia and two new genera. Of Gnathophausia, which was first made known by Willemoes-Suhm during the progress of the expedition, and contains the largest known schizopods, no less than nine species are here described, one of them over six inches in length. The anatomy of the genus is carefully worked out, and its affinities to Lophogaster well shown. All the species of the family appear to be inhabitants of deep water.

The account of the Euphausiidae is the most important and interesting part of the work. Nearly all the species of this family are pelagic in habits; and Professor Sars' careful examination of the surface collections made on the expedition has not only added largely to the number of species made known, but has enabled him to bring together and describe many of the post-embryonal stages of several of the forms. Twenty-eight species representing eight genera of the family are described, and twenty-three of the species and four of the genera are new. The entire anatomy of several species is worked out, and the articular appendages of nearly all of them are figured in detail. Under the genus Euphausia, the peculiar eye-like organs situated on or between the bases of the legs are very carefully described, and apparently well shown to be luminous, and not visual organs. Although many of the species of the family are often taken in the greatest abundance, egg-bearing females are only very rarely seen; and, until very recently, nothing was positively known in regard to the manner of carrying the eggs, a single long-ago-recorded observation of Bell being somewhat doubtful. Professor Sars, however, has now found species of several different genera, carrying masses of eggs beneath the body in the same position as in other Schizopoda, though not enclosed in a pouch formed of lamelliform appendages, thus confirming Bell's observations and those of the present writer, published in 1884.

In the chapter on the development of the Euphausiidae, post-embryonal stages of species of Nyctiphanes, Euphausia, Thysanopoda, and Nematosceles, are carefully made out, and fully described and figured; and this is all accomplished with what is usually regarded as the refuse from the surface-collecting net. These investigations fully confirm the observations of Claus, Sars himself, Metschnikoff, and the present writer, and show that the typical Euphausiidae are hatched, like barnacles and copepods, as true nauplii, with unsegmented body, no compound eyes, and only three pairs of appendages, and that they pass through a long series of intermediate stages to the adult condition. Sars regards this nauplial development as characteristic of all the Euphausiidae, which seems somewhat doubtful when we consider the small number and