of the latter: these are 35,691, and 32,645 million marks respectively. Of this amount, our own country, fourth in the race, furnishes about one-tenth; Great Britain leads with one-fifth; while France and Germany hold the intermediate positions. By such tables the work supplements and often corrects Mulhall's statistical volumes, and is more satisfactory in so far as Dr. Scherzer is more generous in stating his authority for statistics, which are necessarily more or less a matter of dispute. This literary accomplishment is one not yet acquired by Mr. Mulhall. Especially desirable are such references when the statistics of gold and silver are given. Not a little of the confusion of the present discussion concerning the merits of bimetallism is due to the conflicting statistics of gold and silver production; and all writers on the subject should be careful to state their authority when using such figures as a basis for argument. Here Dr. Scherzer follows Neuman-Spallart and Soetbeer. The work is scholarly and painstaking, and will be of service to all students desirous of new statistical conclusions or verification of others' work.

CONN'S EVOLUTION OF TO-DAY.

THIS book is defined by the author as "a summary of the theory of evolution as held by scientists at the present time, and an account of the progress made by the discussions and investigations of a quarter of a century." The book, however, deals chiefly with the evolution of animals. Inorganic evolution is dismissed with some few words about the nebular hypothesis, and, partly in statement and partly by implication, the author expresses the view that inorganic evolution is scarcely worthy of treatment by scientific methods and by scientific men. In so doing, he ignores the entire field of geology. In a manner equally curt, the subject of vegetal evolution is passed over, and the author begins his theme proper, which is a discussion of the nature of the evidence for and against the doctrines of animal evolution. He nowhere gives a clear and comprehensive definition of evolution, though the introduction is largely devoted to a discussion of the term, and to a denial that evolution is equivalent to Darwinism. Throughout the book an evolution of animal forms is maintained, but the doctrines taught by Darwin, as understood by the author, are, in general, though rather vaguely, denied. The reader is made to feel, that, in the author's mind, Darwinism is the name of something wicked that good people must disavow; and, while the author reaches the conclusion that evolution is probably true, he wishes it to be understood that there is no taint of Darwinism in his beliefs.

Evolution of to-day. By H. W. CONN, Ph.D. New York, *Putnam*, 1886. 8°.

The first chapter treats of the mutability of species, in which various facts, arguments, and opinions, *pro* and *con*, are briefly set forth, and an attempt made to derive an average therefrom; as if a mean result of contradictions could be used as a proximate truth, in the same manner that a mean of instrumental observations is used as an approximate determination. The same error, but in a minor degree, lurks in the remaining chapters.

In the second, third, fourth, and fifth chapters, the author reviews the arguments for evolution derived from the principles of classification, the paleontologic succession of forms, the development of the embryo, and the geographic distribution of animals. In these four chapters he skilfully and fairly characterizes four lines of inductive reasoning by which the specialization of a multiplicity of forms is demonstrated, and also, though not quite so clearly, shows how progress towards higher forms results therefrom. This part of the book, which is the body of the work, has great merit as a popular and fair discussion of the subject of the evolution of animals. It is reasonably devoid of technical terms, while broad facts and general principles are happily stated and explained to the understanding of intelligent readers who are themselves not specialists in zoölogy. In this respect the book is timely; and the general reader can gather therefrom a very good conception of the doctrines of animal evolution, and the status of development-opinions among scientific men, and of the new problems connected therewith that are arising through expanding research. The author has made as successful an exposition of this subject as, perhaps, is possible by this method of treatment, which is a characterization of facts and arguments, in lieu of a grand marshalling of the facts themselves, — it being the plan of the author to write for the general public rather than for the smaller body of scientific men.

If the reader of Mr. Conn's book could have a preliminary study of some one order of plants or animals, or of some line of embryologic development, or if he could study the origin and structure of some mountain-range, or the geology of some river drainage-system, so as to be able to fully appreciate the multitudinous facts that are gathered into some simple induction by the patient labors of modern scientific research, the general characterizations of the author would have a profound effect. Perhaps no man may have a very clear comprehension of what the

doctrine of evolution is, until he has had an objective study in at least some narrow field of research.

The new questions and accessory principles which are rapidly springing up about the central doctrines of evolution are pretty well set forth in the seventh chapter, entitled 'More recent attempts to explain evolution.'

The last chapter is on the evolution of man, and it is altogether unsatisfactory. It seems to have been written as a logical complement to a work on animal evolution, but it deals rather more with moral and metaphysical speculations than with the facts of the science. So far as it treats of human evolution, aside from its speculations, it refers simply to the animal man in his zoölogic relations. Human evolution, that is, the development of those characteristics which make man *man*, — the growth of human activities, — is ignored, and yet this is the largest subject in the literature of the world, embracing, as it does, the evolution of arts, the origin and development of institutions, languages, philosophies, or opinions, and all modern scientific psychology.

But a very small part of human evolution is embraced in theories of man and monkey kinship. The origin and growth of the humanities, i.e., those things which characterize humanity, have always been the subject of history; and all history is now in process of reconstruction upon a sounder theory than any which has hitherto obtained, and every writer in his own field postulates evolution by discussing the origin and development of the art, the institution, the language, the philosophy, or the psychic operation of which he treats.

J. W. POWELL.

SIDGWICK'S HISTORY OF ETHICS.

THIS little book by Professor Sidgwick is a reprint of his article on ethics in the 'Encyclopaedia Britannica,' with considerable alterations and additions. As originally published in the encyclopaedia, it was necessarily quite condensed in style, and it still retains that character to a great extent, thus presenting a much greater quantity of matter than is usually found in books of the same size.

The work is designed especially for students, and it seems to us admirably adapted to its purpose. The compression of the style is perhaps a defect from a literary point of view, but this is of little consequence in a text-book. The work is divided into three parts, treating of Greco-Roman, Christian, and modern ethics respectively. It is evidently based, as the author himself says, on a thorough study of the original authors, only certain small portions, chiefly in part ii., being written at second-hand. It is marked, too, by almost perfect impartiality, — a merit of the first order in an historical work, but at the same time one seldom found in so high a degree. The author has been engaged in controversy with many ethical writers, and it might have been thought that a history of ethics from his pen would partake of the same character. On the contrary, it is devoted almost exclusively to the work of exposition, with only occasional criticisms when they seemed really required to point out serious defects in the systems described.

In the first part, attention is mainly directed to the three great ethical philosophers of ancient Greece, — Socrates, Plato, and Aristotle; and, though less than fifty pages are devoted to them, their modes of thought, their leading doctrines, and their relations to each other, are very clearly brought out. The author also traces the connection between all the Greek ethical systems, and shows in an interesting way "how, from the spring of Socratic conversation, flowed the divergent streams of Greek ethical thought." The second part of the book is much shorter than either of the others, as it should be; for, whatever may have been the influence of Christianity on practical morality, it can hardly be said to have contributed much to ethical philosophy. In treating of modern ethics, Professor Sidgwick confines himself in the main to English philosophers, on the ground that his work is intended for English readers, and that English ethical thought has developed itself, for the most part, independently of foreign influence; to which he might have added, that English ethical philosophy is by far the most important that has appeared in the world in modern times. The doctrines of the various English philosophers are briefly but clearly outlined, and special care is taken to point out the positive contributions of each thinker to the ethical thought of the world. Professor Sidgwick's book can be heartily commended to all who wish for information on the important and fascinating subject of which it treats.

Outlines of the history of ethics for English readers. By HENRY SIDGWICK. London, *Macmillan*, 1886. 12°.

THE PSYCHOLOGY OF REASONING.

M. BINET, a prominent member of the Society of physiological psychology in Paris, has been busy for many years in experimenting upon hypnotic subjects, who seem to be so abundant and interesting in France. He has formed one of a small band of workers, with Charcot as their

La psychologie du raisonnement, recherches expérimentales par l'hypnotisme. PAR ALFRED BINET. Paris, *Baillière*, 886. 12°.