

BOOK-REVIEWS.

Logic; or, The Morphology of Knowledge. By BERNARD BOSANQUET. 2 vols. Oxford, Clarendon Pr. 8°. (New York, Macmillan, \$5.25.)

THIS work is an attempt to reconstruct the science of logic. The author is attached to the German school of philosophy, and acknowledges his obligations to Kant, Lotze, and Hegel. The work is divided into two parts, the first and larger part treating of judgment; the second, of inference. Mr. Bosanquet holds that the function of the intellect is always the same, whether in conception, judgment, or reasoning, and consequently that the common logic, which treats these as distinct forms of thought, is all wrong. Judgment he regards as the fundamental form of thought, the other so-called forms being either varieties of this or included in it. He recognizes the difference between judgment and inference, and defines the former as the immediate reference of an idea to reality, while in the latter this reference to reality is made mediately. One consequence of this theory of the intellectual functions is, that the author does not clearly distinguish the different parts of his subject, and treats some of them insufficiently. Thus, he holds that conception takes place only in an act of judgment; and hence he gives but little attention to conception as such, and leaves us in great doubt as to what his views of it are. Some other topics, too, that fill a large space in the common treatises, receive but scant notice in this work. The syllogism, for instance, is not treated systematically until the last chapter but one, and then it is rather discussed and criticised than elucidated. On the other hand, some subjects are introduced, such as the nature of infinity, which are not usually treated in logical works.

It will be seen, therefore, that Mr. Bosanquet's work differs quite largely from what he calls 'the traditional logic.' What is the real value of his theories we shall not undertake in this brief review to say, though they do not appear to us so original as the form and phraseology in which they are expressed might appear to indicate. But the work is suggestive, both as a whole and in special passages, and will doubtless give rise to much discussion. The contribution of an individual thinker to any branch of philosophy often consists, not in the discovery of new principles, but in the adoption of a new point of view; and this merit the treatise before us unquestionably has.

But, whatever may be the ultimate verdict on Mr. Bosanquet's theories, it is impossible not to condemn his style, which is one of the most obscure in English literature. Take, for instance, the following sentence at the beginning of the chapter on modality: "Modality, if it exists at all, is simply the degree in which individual judgments participate in the certainty of that permanent and all-embracing judgment by which the individual intelligence sustains those qualifications of the real which for it constitute reality." This is an extreme case; but there are many other passages scattered through the work that are not much more intelligible. Moreover, the author uses some phrases, such as 'really real,' and 'the ideal fabric of reality,' which to our mind convey no meaning at all. If the new logic is to become popular, it will have to express itself in plainer terms than these.

Sound, Light, and Heat. By MARK R. WRIGHT. London and New York, Longmans, Green, & Co. 12°. 80 cents.

THIS text-book by the head master of the Higher Grade School, Gateshead, a manufacturing town in the county of Durham, England, is one that will prove very suggestive to the teacher of elementary physics in our schools and colleges. It is written in a somewhat categorical style, and might prove wearisome in the classroom; but wherever it is possible to have this book at hand while performing the readily carried out experiments, it will surely prove a valuable guide. In addition to the numerous experiments, which the author deems it essential should be performed, numerous examples are introduced, the author's belief being that "science has been slow in following arithmetic in this matter." The object is to induce the student to gain by experiment, always recognizing the limitations set to the accuracy of his work, such results as he may be able to use in the solution of the problems set. The experiments demand no very large supply of apparatus, descriptions of

that used being given either with the text or in the appendix. Little space is given to theoretical considerations, "a beginner's time being best spent in examining the facts of science," which facts are set down, as said above, in possibly too categorical fashion to please all.

The Spirit of Beauty. Essays Scientific and Aesthetic. By HENRY W. PARKER. New York, John B. Alden. 12°.

THE intelligent reader will wonder that the same author had written the first and the last essays in this work, so great is the difference between them in their real scientific conception. The first three chapters, making more than half the volume, have some scientific interest and value; rather, however, as criticism than as a contribution to the subject. They discuss the evolution of the beautiful, mind in animals, and the moral in nature. The author is a naturalist, and is quite familiar with the facts and views of Darwin, Spencer, and Haeckel; and whatever restrictions he may make upon them, he has made as a man who has studied the subject from the inside. But the important criticism to pass upon his strictures of evolution is, that it is the complaint of a mind which has not the courage to reconcile itself with the new environment which that doctrine has created. It is an illustration of that wide and revolutionary influence upon human thought which Darwinism will exercise, when, like the theory of gravitation, it has penetrated the lower intellectual strata of life. The observation of facts in the organic and inorganic worlds is good; the appreciation of the realistic tendencies of science is clear enough; but the reflection of sentiments and beliefs from an earlier period fortifies the judgment against taking in the full scope of the conclusions of the scientific spirit. Every thing is admitted, and even asserted as undeniable fact, except the one thing needed to give these chapters a strictly scientific value. The bias of preconceived opinions comes in to intrude views that are irrelevant, as well as doubtful and unimportant. Yet we could heartily recommend this part of the author's work to amateurs who want some criticism and interpretation along with their facts, and who wish to move cautiously amid the bewildering maze of phenomena presented in the study of animal life. The scientist will derive less benefit from it, but he will not find it without value.

It is in the last two essays, on the rainbow and life transfigured, that the most singular part of the work presents itself. It is allegory and mysticism,—the antipodes of science. They are conceived after the manner of Drummond's 'Natural Law in the Spiritual World.' They are worth noting as illustrations of that peculiar psychological constitution which is partly due to the education and prevailing beliefs before Darwinism appeared, and partly to that persistent tendency in many minds to mistake a feeling for a fact, a subjective experience for an objective reality. They may do to suggest æsthetic ideas; but it is as great a mistake to pursue the emotions aroused by beautiful analogies as if they were facts, as it is to look at poetry as science. Both science and art are the losers by it. We believe the book would be of more value without these chapters. It would certainly exercise a greater influence upon the scientifically disposed mind. The author should not have made the attempt to combine æsthetics and science in his discussion. The analysis and classification of phenomena, and the investigation of causes, are an encumbrance to æsthetics, because art is content with the relations of things, and is not interested in their explanation. Ruskin would not have committed this error; and the author is an admirer of that great art-critic.

How to study Geography. By FRANCIS W. PARKER. Englewood, Ill., The Author. 12°.

FOR a number of years the attention of geographers has been directed to improving the methods of teaching geography. This movement originated in Germany. Since the rapid growth of the science of geography, the necessity has been felt of including it in the course of studies of the universities. Towards 1870 professors of geography were appointed at various universities, and at present it is taught at all the great German universities. Most of the students who studied geography became, in course of time, teachers at higher schools; and thus a class of educationists, well versed in the science of geography, grew up, and to these we owe the fun-