

We have dwelt perhaps with undue weight on the question of fundamentals, because this seems to us a matter which should be put right. But the present work, supplemented by a proper treatment of those fundamentals, certainly constitutes an excellent course in the general theory of thermodynamics.

### Dialectic.

*Studies in the Hegelian Dialectic.* By Dr. John McT. E. McTaggart. Second edition. Pp. xvi + 255. (Cambridge: At the University Press, 1922.) 15s. net.

IT is curious that a book which professed only to be a study of Hegel, and deals with criticisms of the Hegelian method and principle current more than thirty years ago, should be reprinted to-day and present the same freshness and vigour to the reader now as it did then. This is the feeling with which one who read Dr. McTaggart's book on its first appearance now lays it down, having read it again from beginning to end. It contains the best exposition of the dialectic, and the best defence of the dialectic, and the best criticism of it by any living writer. The conclusion Dr. McTaggart reaches would be accepted probably even by the most convinced Hegelians, namely, the conclusion that the logic is of permanent value and the dialectic sound, but that the metaphysics is unsatisfactory and cannot be final. His own view would seem to be that the ultimate reality is a unity of personalities, but that this unity is not itself a personality. Most of this book was originally presented in papers read and discussed at the Aristotelian Society in the early 'nineties and published in *Mind*, for at that time the Society did not publish Proceedings. It is a living work to-day because, more than at any previous time, the problem of the methodology of science is in the forefront. Mathematical discoveries, which have caused a revolution in our mode of conceiving the physical universe, and the discoveries of the new psychology, which have profoundly changed our mode of conceiving the mind, have necessitated a reconsideration of what is implied in the experimental method. We have found a need for dialectic, for the logic of philosophy. The stone which was set at nought by the scientific builders of the nineteenth century is become the head of the corner.

In the thirty years which have elapsed since Dr. McTaggart's book was written there have been some notable attempts in philosophy to reform and advance the Hegelian dialectic. It would be interesting to know Dr. McTaggart's attitude towards them. In section 120 he seems almost to anticipate Croce's criticism of Hegel as failing to differentiate between "opposites" and "distincts." Also one would like

to know how far he considers that Gentile, in the theory he has worked out of the identity of philosophy with its history, has met his objection to the place assigned by Hegel to philosophy in the supreme triad of absolute mind. Dr. McTaggart's own recent work, "The Nature of Existence," gives the impression that he has himself moved away from the position of these early studies and has fallen under the spell of the opposite method to that of the dialectic, the method which is known as logistic and has its home in his college. It may be, however, that he is illustrating in his own mental development the dialectical advance through negation. In any case we can say that this republication of his early work is of the greatest value to those who are endeavouring to follow the constructive work in which he is now engaged.

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### The Methods of Ecological Investigation.

*Geobotanische Untersuchungsmethoden.* Von Prof. Dr. Eduard Rübel. Pp. xii + 290. (Berlin: Gebrüder Borntraeger, 1922.) 16s. 8d.

IT is now seventeen years since the first appearance of Prof. Clement's work on "Research Methods in Ecology," written at a time when this branch of knowledge was still in its infancy and its methods for the most part yet to be devised. Since 1905, however, considerable advances have been made, particularly in the two directions of intensive study of the habitat factors and the extensive study of the plant community.

The growth of the subject is indicated by the establishment, both in this country and in America, of specialised journals devoted to this field alone, and this growth has naturally been accompanied by the development of a definite technique for the study of plant societies. We therefore welcome the work before us, in which Prof. Rübel has aimed at giving us a survey of the present position of ecological methodology on the botanical side.

Broadly the subject matter falls into two sections corresponding to the two main lines of progress already mentioned. Of these the consideration of the factors of the habitat, climatic, edaphic, biotic and orographic, with the methods of their measurement, occupies nearly half the text.

The climatic section contains a useful account of several American types of atmometer, methods of measuring light intensity under water, etc. The section treating of edaphic factors is regrettably short, especially having regard to the extensive development in this direction. For example, details might usefully have been furnished of the freezing-point depression methods of estimating the concentration of soil solutions