

again he told me in full the folk-tale of the Mesa Encantada. No student of ethnology or of men, looking at that fine old face, listening to that voice, could ever have been so flippant as to suggest that he was telling 'a tall story.' He was repeating, word for word, the scriptures (we would say for a parallel) as he had learned them at his father's knee, and as they had been 'told down' from father to son through centuries. These folk-stories are not told to careless strangers, nor to careful ones either. How difficult it is to get them in full has been amply recorded by Bandelier and Cushing, and is fully understood by all who have genuinely gathered Indian folk-lore.

The matter of precedence is not vital, but since Mr. Hodge's workmanlike achievement the final 'round-up' of the rock of Katzimo seems to be on, and it is well to have all the mavericks duly marked. The Indian tradition is vindicated, and under circumstances that, in any less rigorous court than that of science, would be deemed dramatic.

CHAS. F. LUMMIS.

LOS ANGELES, CAL.

#### SCIENTIFIC LITERATURE.

*Philosophy of Knowledge.* An Inquiry into the Nature, Limits and Validity of Human Cognitive Faculty. By GEORGE TRUMBULL LADD, Professor of Philosophy in Yale University. New York, Charles Scribner's Sons. 1897. Pp. xv+614.

Professor Ladd's most widely known work has hitherto been done in the field of psychology. His *Elements of Physiological Psychology*, published ten years ago, was the first systematic account in English of the methods and results of that science. Since that time there have appeared from the pen of the same author, *Outlines of Physiological Psychology*; *Psychology, Descriptive and Explanatory*; *Philosophy of Mind* (an essay on the metaphysics of psychology); besides a work entitled *Introduction to Philosophy*. It has all along been evident to readers of Professor Ladd's works that his main interest is in those ultimate problems of theology and philosophy which are concerned with man's nature and destiny, and which demand for their

answer some theory of his relation to other beings and to the ground of all reality. The author's procedure, however, as well as numerous explicit statements scattered throughout his writings, make it clear that he has considered it necessary to approach the discussion of these problems after a thorough study of the concrete facts regarding the nature of the human mind and its relation to the bodily organism. Professor Ladd's psychological labors thus furnish the basis for his philosophy. Having laid the foundation, he now proposes to see what structure can be erected upon it; or, as he himself expresses it, to show what is 'implicate' in the fact of human experience. It is the main business of the present volume to discuss the problems of knowledge; ontological questions are, in the main, reserved for future treatment. Nevertheless, as is pointed out, it is not possible to separate entirely ontology and epistemology. "Something as to the nature of the really existent is interwoven inextricably with the conscious life of the cognitive subject" (p. 348). Even in the present work, then, as we shall see later, a theory of reality is foreshadowed.

Before examining any of the doctrines of the book, it seems necessary to say a word regarding its spirit and purpose. The author's interest appears throughout to be practical quite as much as theoretical. "I have striven constantly," he says, "to make epistemology vital,—a thing of moment, because indissolubly and most intimately connected with the ethical and religious life of the age" (p. ix.). And it seems to him of the utmost importance to refute what he considers false and dangerous theories of knowledge. "The agnostic or despairing attitude towards the problem of knowledge itself lies, both logically and in fact, at the base of all other agnosticism, and of manifold forms of despair" (p. 28). If this conviction has sometimes led the author to adopt the language of a moral teacher or preacher, rather than that of an investigator, it has doubtless rendered his presentation more vigorous and his book more interesting, from the standpoint of the general reader, than would otherwise have been the case. It is probable, too, that in the author's consciousness of a mission is to be found the explanation of the remarkable statements in the

preface that 'there are no modern works in English from which any help is to be derived in the treatment of epistemological problems,' and that the present volume 'asks and should receive the treatment due to a pioneer work' (p. viii.). It is perhaps psychologically inevitable that the reformer should regard himself as standing alone, that he should be unable to see that there are other knees which have not bowed unto Baal. It will no doubt be encouraging to Professor Ladd to learn that, in spite of his conviction that no help is to be found in Mr. Hobhouse's recent work since it deals with logic (*vide*, note p. viii.), he may discover there a theory of knowledge similar in many respects to his own. There are also several other modern books on logic which cannot fairly be accused of treating the nature of thought in a merely formal way, and in which the fundamental conceptions which Professor Ladd himself uses are very clearly laid down. And among psychological writers there are surely several—Ward, James, Stout, to mention but three names—from whom some assistance might be derived in a discussion of the nature of cognition. My own opinion is that philosophers at the present day have some ground for encouragement and congratulation, in the fact that substantial agreement has been reached on so many important points connected with this very subject. While gladly acknowledging the independence and value of Professor Ladd's treatment, I should still say that it has been largely made possible by the work which has appeared in English during the last twenty years.

The first chapter of the volume is occupied with a discussion of the nature of the problem, while the two following chapters contain an excellent, though somewhat summary, account of historical theories of cognition. "The fundamental problem of the philosophy of knowledge is an inquiry into the relations between certain states of consciousness and what we conceive of as 'the really existing'" (p. 10). "It accepts as its problem cognition including all its necessary implicates" (p. 17). Among these implicates is that of an extra-mental reality different from the knowing subject. "To know is to make an ontological leap, a spring

from the charmed circle of pure subjectivity into the mystery of the real" (p. 22). If we ask, now, how it is possible to guarantee the validity of knowledge, we find that it is impossible to discover any outside standard by means of which it may be tested. "Critical analysis of the nature of experience, with a view to certify it, ends in the discovery of aspects, or factors, or implicates, of every exercise of cognitive faculty which are self-certifying" (p. 105).

A point upon which great emphasis is laid is the objective nature of cognition. "It is the very reverse of truth to say that knowledge is *merely* subjective; for till the stream of consciousness, the state or the activity of the knowing subject, has become also objective, cognition has not taken place" (p. 115). Judgment, in which the cognitive activity involved in thinking culminates, "is not genuine judgment without a trans-subjective reference, an implication of the actual connection of different 'momenta' in a really existing world" (p. 149). Professor Ladd also strongly insists that knowing is not an affair of any one set of faculties, but involves the whole mind. Feeling and willing are implied in every cognitive act, and belong to the very nature of knowledge. Two chapters (Chap. vi., Knowledge as Feeling and Willing; and Chap. xvii., Ethical and Æsthetical Momenta of Knowledge) are devoted to enforcing and illustrating this doctrine, which is so often forgotten by those who discuss the nature of knowledge. "In the formation and criticism of every alleged cognitive judgment, the entire mind of the subject, whose is the judgment, takes part" (p. 502). "The different aspects or sides of human nature do not stand apart, as it were, from the ordinary working of cognitive faculty. \* \* \* The rather must they all be considered as factors, or 'momenta' essentially present and effective in the integrating process that gives the object as a totality to the mind, and that shapes the actual synthesis in which the cognitive judgment consists" (p. 503).

The author finds, further, that the reality of both subject and object, and also that of a relation between the two, are 'implicated' in every act of self-conscious experience. But how shall

we conceive of this relation? In cognition an obvious distinction of subject and object is presupposed. But their complete incomparability is denied, and their actual unification in some form is affirmed (p. 206). This unification can take place 'only if the conception of one of the two—either of thing or of self—can be so extended in a valid way as to provide an explanation for the other, and for the relation of knowledge between the two' (p. 216). The concept of the Self, the author finds, is alone capable of such extension. It furnishes the key or interpretation to all that we know about things. That is, it is only when things are conceived as in some sort analogous to the Self that they can be known at all. Our knowledge of the Self is direct and intuitive and has the highest degree of certainty. Indeed, it is because we fail to attain the same perfection in knowing, when dealing with things, that we become dissatisfied with the limits, etc., of our knowledge (p. 252). The author's doctrine on the nature of our knowledge of the Self requires further elaboration to render it perfectly clear. He seems, however, to believe that we here get beyond the antithesis of subject and object, and are, in a sense, face to face with reality. He himself sums up his chapter on the knowledge of Things and of Self as follows: "While the knowledge of Self may attain an intuitive penetration to the heart of reality, the knowledge of things remains an analogical interpretation of their apparent behavior into terms of a real nature corresponding, in important characteristics, to our own" (p. 226).

This conception of the Self as the central point of knowledge determines, to a very important extent, the character of the discussions which follow. The meaning of Identity and Difference and of the principle of Sufficient Reason are found in the nature of the Self. And, similarly, the author's conclusions regarding the teleological character of knowledge, and the necessity of employing teleology to understand completely the nature of things, follows directly from the doctrine that knowing is an interpretation of things by the Self in the light of what it knows about its own nature. The author's discussion of Experience and the Transcendent (Chap. xi.) is extremely interesting.

We cannot, he argues, know anything that is not somehow implicate in our experience. But every experience implies the existence of conditions which transcend it as mere fact. Hence to know is just to reach beyond the mere factual aspect of experience to its underlying conditions (pp. 325-35).

The theory of reality outlined in the present volume shows marked traces of the influence of Lotze. No meaning can be given to the concept of related things "unless things are conceived of as self-active beings, with their various modes of behavior interdependent and yet united under a framework, so to speak, of immanent ideas" (p. 360). In the same way, the relation between the individual and the ground of reality is conceived as a relation of minds or selves. "Human cognition is all to be understood as a species of intercourse between minds. In all man's knowledge the real being of the finite Self is in actual commerce with the absolute Self. The relation of an intercourse between Selves is the one fundamental and permanent conception under which may be truthfully included all the particular forms of relation of which we have experience in the development of the life of cognition" (p. 558).

J. E. CREIGHTON.

CORNELL UNIVERSITY.

*Elementary Geology.* By RALPH S. TARR, B. S., F. G. S. A., Professor of Dynamic Geology and Physical Geography at Cornell University. New York, The Macmillan Company. 1897. Price, \$1.40.

Occasion for the publication of another elementary text-book on geology, in addition to the number of good works previously available, is found in the 'need of a geology in which more stress is placed upon the dynamic aspect of the subject than is commonly given.' It is the author's opinion that stratigraphic geology—that is, as the term is used in this work, the history of the earth's development—contains too much abstract fact for the average high school student, whereas structural and dynamic geology, which treat respectively of the materials composing the earth's mass and the forces affecting it, may be presented in simpler form. "Here the body of fact necessary for