

nothing else to do, but they show a very healthy development among a body of men who can more than hold the balance of moral and social power in the world, if only they have the knowledge on the one hand, and the courage on the other, to improve their opportunities.

Christianity in its inception was a moral and social reform, and not a body of dogmatic and traditional beliefs about either the past or the future. The foremost of the ministry are beginning to see this, and to return to the original conception of it, by what one author candidly though forcibly admits to be "in one sense a *backward* movement." Much is to be hoped for in this tendency, and it is worth recording here as a generous welcome to those who can appreciate the force and value of scientific truth, abandon their diatribes against science, and fall into line with the inevitable course of history, which usually has an optimistic outcome, unless nature has to avenge itself for the systematic pursuit of error and wrong.

The volume under notice consists of the 'Vedder Lectures' at New Brunswick Theological Seminary; and the keynote to the discussion is well expressed in the reason assigned for the present revolutionary tendencies, that "the actual inequality of possessions is regarded by the great mass as standing in direct opposition to the generally acknowledged equality of the individual rights of all men." In former times men did not have their equality or their rights admitted, and hence neither arguments nor force could avail to defend them. The author shows from Bockh that three-fourths of the population of Greece were excluded from the benefit and protection of the law; from Gibbon that one-half the population of Rome consisted of slaves, and that not more than 13.5 per cent of the population of Attica possessed real estate. The concentration of power which such a system required was enormous, and no wonder the liberation of the masses from its abuse is accompanied with alarming symptoms. But it is a pleasure to see the ministry recognizing the scientific methods of studying such facts, and not relying upon their speculations about baptism, inspiration, and the trinity to regenerate society. The author wisely treats socialism, whether legitimate or not, as an effect, a phenomenon to be accounted for, something having a cause for its existence, and not to be gotten rid of until its causes were removed. True to his profession, the views of the Old and New Testaments upon property are briefly outlined and candidly handled; but he frankly admits that "any attempt to construe out of passages of the New Testament a specific Christian idea of *property*, will always fail." This is not to exclude ethical from all relation with economical questions. It is acknowledged that we must reckon with the selfish instincts of human nature in all schemes of social government, at least until those instincts are modified. The discussion of the principles of Ricardo and the so-called 'Manchester school' is fair; and more is sympathetically narrated of Proudhon, Fourier, Karl Marx, Lasalle, Louis Blanc, and the whole history of socialistic movements, than most men of theological propensities have the will to read. But there is no disposition to espouse the vagaries of those men, although their agitation and beliefs receive the acknowledgment of being scientific facts which have to be studied.

The solution of the problem is a very good chapter, as admitting the place of ethical considerations along with economical in deciding the issue of the question. Here the author has the opportunity for urging the Christian aspects of the case, which is done in a way quite foreign to the usual homiletic method. It is made a purely scientific question of ethics and political economy. We cannot agree with him, however, that the socialism which he condemns has its support in atheism, and must be destroyed by uprooting the latter. It is a re-action against the traditional method of solving social and moral problems. The age of authority is past, and nothing but facts with reasoned scientific truth based upon them can meet the exigencies of the case. Atheism has its evils, but it will be harder to overthrow this than the system of socialism.

*Brief Institutes of General History.* By E. BENJAMIN ANDREWS. Boston, Silver, Rogers, & Co. 12°.

WE do not remember having seen any book which is of so much service to the advanced student of general history as this. As a guide to *seminar* work in history, it would be of the greatest value. It is dedicated to Professor Todt of Breslau, whose 'Geschichte

der Ethik' is well known to our students of philosophy; and there is no lack of congruity between the work itself and its dedication to a philosopher, for it is eminently philosophical, both in scope and in treatment. Professor Andrews calls his book a 'precipitate of general history,' and this describes it excellently. It is not an outline, and it is not a skeleton, but 'precipitate' seems to us a very happy designation.

The body of the work falls into eleven chapters, the first dealing with history and the study of history, and the last with Prussia and the New Empire. Each chapter is subdivided into short sections or paragraphs, and each of the latter is accompanied by bibliographical references of great minuteness and accuracy. In this way the student is enabled to hunt down any particular period or episode with great ease, and post himself fully before proceeding. Then each chapter is preceded by an elaborate and more general bibliography, the preparation of which shows wide reading and scholarly research.

The full value of Professor Andrews's volume cannot be appreciated by a cursory examination. We are sure that its excellence of arrangement and treatment will be seen best when it is in use. As a guide to the scientific study of history, or as a skeleton for *seminar* work, it is not surpassed by any book in the language.

*Nystrom's Pocket-Book of Mechanics and Engineering.* Revised by W. D. MARKS. Philadelphia, Lippincott. 24°.

AS the author remarked in his first preface, every engineer should make his own pocket-book, as he proceeds in study and practice, to suit his particular business. This work was accumulated in this way during the author's professional career, and was first placed before the public in 1854. The reviser has principally confined himself to corrections in the original text, but has added an elementary article on dynamic electricity, and also one on the expansion of steam; and in notes the reviser has taken occasion to express some differences of opinion, and has referred to the literature of topics which required more space than can be given to them in a pocket-book.

*Elements of Analytical Mechanics.* By PETER S. MICHIE. New York, Wiley. 8°.

THIS volume, as the preface states, is a revised edition of the text taught to the cadets of the United States Military Academy during the session of 1886-87. Together with a brief chapter on hydrodynamics, it is intended to comprise a four-months' course of instruction for students well versed in elementary mathematics. The subjects treated of, after the elementary chapters on matter, force, motion, the physical units, stresses and motive forces, and gravity, are those usually taken up in a treatise on this subject. The book closes with a theory of machines. The arrangement of the subject-matter, and method of treatment adopted, are such as have received the approval of several able scientific officers who have been associated with the author in the instruction of cadets.

*On the Conversion of Heat into Work.* By WILLIAM ANDERSON. New York, Van Nostrand. 12°.

THE Council of the Society of Arts invited the author of this work to deliver a course of lectures upon the conversion of heat into useful work; and these lectures, which form the basis of the present work, were delivered in the winter of 1884-85. The object of the lectures was to popularize the doctrine that in heat-engines the work given out is due to the conversion of the molecular motion of heat into the visible motion which it was desired to produce, and further to illustrate, by numerous practical examples, the applicability of the doctrine of Carnot to defining the limits within which improvement in the economical working of heat-engines was possible. In the hope of making the modern views with respect to the action of heat more real and practical, the author adopted the method of working out his investigations by means of numerical examples, and comparing the results with those obtained in actual practice. All those who are interested in the elementary instruction