quate, but they and Einstein differ concerning the new theory that must arise. In other words, the facts of science at the present time do not point unambiguously and obviously, as they did with Galileo and Newton, to the validity of one specific theory of the first principles of science. An analogous situation can be found only in the Greek world when scientific evidence led to the three different philosophical theories of Leucippos, Plato, and Aristotle.

Furthermore, when we get down to the bottom of the different conceptions of science which Einstein, Eddington, Weyl, and Whitehead are implicitly or explicitly proposing, we find them to be precisely the same three basic theories which Leucippos, Plato, and Aristotle outlined. To be sure, there are marked differences in the way these modern conceptions work themselves out as to details, but at bottom, as far as fundamental philosophical principles are concerned, they are essentially the same as their respective Greek analogues. It happens to be the case, therefore, notwithstanding the advances of modern science, that we have not really gone beyond the fundamental basic problem of science and philosophy which the Greeks discovered and faced. The only difference is one of words. They were concerned with the problem of the relation between matter and form, whereas the fundamental problem, to which the relativity theory has given rise, is that of the relation between matter and space-time. One has but to note that space-time structure is mathematical relatedness, which in turn is what the Greeks called form, to discover that the difference is purely verbal. The plain fact is that, when one considers first principles, the Greeks are eternally modern.

This relevance of the past to the present does not end here. We have indicated that Einstein's work has given rise to a problem rather than provided a solution. This point must be grasped, if we are not to be misled concerning the certainty of much that our scientists are writing. It cannot be too strongly emphasized that the answer to the question of the first principles of science is not something absolutely established, which can be glibly read off by any physicist or mathematician who understands

The question at issue is of such r and involves questions of hing kind, that much more than is suggested by contemporary physics is necessary for its solution. When first principles are in question, nothing except bare fact can be taken for granted. One must begin at the very beginning. This means that a knowledge of Greek science is a necessity. For only with the Greeks do we have the privilege of getting back behind all our scientific theories to the facts from which they were derived. Only when we combine their evidence with ours can we be sure of a truly scientific and non-question-begging solution.

This may seem to be very strange counsel. We must remember, however, that the conceptions which Einstein has brought into question are those which have been longest taken for granted. They were established back at the beginnings of science in Greece. If they are wrong, then a mistake was made back there. No alternative remains but to reconsider Greek evidence and inferences in the hope of finding the original error. As Whitehead has emphasized, we must re-examine the foundation of all scientific knowledge. We have no choice, therefore, but to review the history of Greek science and philosophy.

Hence, the appearance of a book on "Greek Thought and the Origins of the Scientific Spirit" is most opportune. It is fortunate also that the timeliness of the book is equaled by its soundness. The author, Professor Robin of the Faculty of Letters of the University of Paris, brings to his task all the erudition for which the best scholars of his country are famous, and the experience which only an author of an established authoritative study of Plato can possess.

There are many good books covering parts of this period. It is doubtful, however, if any exists which succeeds in embracing the entire period from Thales to and including Plotinus, while keeping us continuously aware of the available textual sources of our knowledge, as does this one. It could have been written only by a scholar who has so mastered his material as to become at ease with it. One can be sure, for the most part, of a readable survey combined with a sound account of the details.

Only one counsel must be given. This book should be read after, or in conjunction with, Dr. George Sarton's "Introduction to the History of Sci-

ence."* The latter monumental work will not be found to provide light reading. It is essentially a reference work. But if anyone is really interested in getting at the truth concerning the Greeks, and in gaining the insight into our own difficulties which they can give, the use of Sarton's book is a necessity.

For only as one brings its review of the history of the technical sciences of mathematics, astronomy, medicine, and biology into conjunction with Robin's account of the work of the Pre-Socratic philosophers does one find the real origin of the scientific spirit and the source of the philosophical conceptions which Robin treats. Failure to include the technical scientific background of Greek philosophy, which Sarton portrays, has made all our books on Greek thought positively misleading. Two errors always arise. The philosophical conceptions of Plato and Aristotle are robbed of the empirical and technical scientific evidence upon which they rested; and Greek science is pictured as viciously speculative rather than genuinely inductive and technically empirical. Only if one follows Robin in conjunction with Sarton can these two errors be avoided.

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It is not beside the point to add that the time has come for the modern world to realize that something more than a knowledge of Greek stems and an interest in poetry is necessary for an understanding of Greek thought. The greatest enemies of the classics, in our educational institutions, are not the scientists but the classicists themselves, too many of whom suppose that one who is indifferent, or even opposed, to science can understand the Greek spirit. Nothing is more ridiculous than an understanding of the Greek view of life without scientific knowledge and the scientific attitude of mind.

Plato did not tell the educators of his day that a knowledge of poetry and the Egyptian language would produce an educated man. Instead, he said, in the "Republic," with all the emphasis and dramatic eloquence of which he was capable, that no one need regard himself as educated, or prepared to live the good life, until he has mastered mathematics, astronomy, and dialectic, or deductive logic. No such fallacious idea as the modern notion that scientific knowledge must be counteracted by ethical teaching or a study of the literature and the wars of the past ever entered into the best Greek thought.

For it, there is no such thing as a good act apart from a scientific knowledge of the facts which the act in question involves, and a consideration of those facts in the light of the first principles of science. Technical knowledge must be combined with dialectic. The good life is not something to be attained by being continually reminded that one has a soul, or by an act of faith which is supposed to bring that soul into a privileged relation with the Deity. No such easy roads to the good life were ever offered by Plato and Aristotle. Only the person who understands the science of his day and has climbed the dialectical ladder, and undergone the conversion of soul which the discipline of its scientific methods entails, to discover the basic first principles of science which reveal the details in the light of the whole, can lead the good life. Sertainly this is sound sense. For only one who can think in terms of first principles can draw the distinction between that which is primary and that which is secondary, which the idea of the good involves.

Before the Greek spirit can become completely intelligible to us it must be taken out of the hands of "scientific historians" and placed in the hands of historians who know science. Robin's knowledge of the philosophical texts and his understanding of Greek philosophy must be combined with Sarton's knowledge of Greek technical science.

It must be remembered, in the last analysis, that the Greek philosophers wrote in the Greek language, not primarily to use Greek stems, but to express certain facts and indicate their consequences. If this be true, then a recreation of the scientific background in which they worked, as well as a study of the roots of their language should provide a clue to their meanings. When this background is discovered an intimate connection between technical science and the philosophy of Plato and Aristotle will be revealed, an insight into the peculiarities of our own situation will be gained, and the Greeks will be discovered to be as eternally modern as the Moderns are eternally Greek.

A New Life of Ibsen

IBSEN, THE MASTER BUILDER. By A. E. Zucker. New York: Henry Holt & Co. 1929. \$3.50.

Reviewed by J. RANKEN Towse

N his preface to his work the author says that "its chief purpose is to present a portrait of the I man (Ibsen) painted largely from materials furnished by men and women who actually knew him." That this purpose has been practically fulfilled, in somewhat striking fashion, may be admitted promptly and unhesitatingly. There is no good reason for doubting that this latest study of the character and personality of the eminent Norwegian is as accurate as it is vivid, since notwithstanding its more elaborate finish and accumulated details it, in effect, only serves to deepen very general impressions long ago established. It should be said, however, at the outset, that Mr. Zucker, although not particularly gifted with the graces of literary style or any notably keen critical faculty, deserves every credit for the breadth and carefulness of his research, his evident conscientiousness as a collector and reporter of facts, and his unfaltering adherence, sometimes in disregard of such facts, to his own preconceived ideals. As a biographer, doubtless, he is entirely trustworthy. It is only in his estimates of the genius and actual accomplishment of his subject, that his zeal outruns his discretion and exposes him to challenge. By the comparatively small group of fanatical Ibsenian worshippers his book, probably, will be hailed with acclamation as an unassailable gospel. In it, apparently, he subscribes to the dictum of Pirandello that "Ibsen as poet and dramatist ranks next to Shakespeare." One is tempted to ask why Pirandello should be selected as arbiter in a question of this kind, but that, perhaps, does not much matter.

If the book, inevitably, has scarcely anything to tell that is startlingly new or of fresh significance it is interesting because of its observance of minor details illustrative of the personality and mentality of Ibsen, his self-centered, resolute, and cynical individuality, the hardening and restricting of it by circumstances and environment, and, especially, by its almost uncenscious manifestation of the influence of an intellect and character, thus formed and intensified, upon his most provocative social dramas. The main outlines of his checkered and extraordinary career are too familiar to all interested persons to need reproduction here. Much more highly gifted intellectually than the vast majority of his compatriots, arrogant in his conviction of his own superior abilities, and despising the more prosperous but somewhat mouldy society from which he was debarred by poverty, hopelessly embittered though never crushed—he had wonderful courage—by the persistent trials, neglect, and disappointments of youth and early manhood, and morbidly alive to the pettiness, meanness, corruption, and general degeneracy of the system in which he was submerged, he seems to have come to regard the manners and morals of his remote environment as typical of the world at large. The very strength and independence of his character, conceivably, may have prevented him from recognizing or acknowledging the more kindly, generous, or noble qualities in imperfect human nature. It was the seamy and unlovable side of it that he chiefly dealt with and studied with a piercing but jaundiced eye. The treatment of this point by Mr. Zucker is one of prudent avoidance.

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That in the long array of the world's poets and dramatists the name of Ibsen must be assigned an honorable place no one will deny. But in the not distant future it will not be found among those of the greatest. For a generation he was the object of an extraordinary publicity which won for him a notoriety—partly due to the gallantry of his supporters, partly to the attacks of his critics—already on the decline. And notoriety is not fame, a matter of later and more persistent growth. Had he, indeed, pursued the road of romantic and legendary national drama on which he set out, when inspired by the ambition of Norwegian regeneration, he might possibly have attained to a much higher dramatic and literary stature, by using material of a less sordid and more imaginative cast. Of those earlier works nothing, or little, is heard now, although they revealed dramatic power and poetic fancy. Both these qualities were exhibited even more unmistakably in "Brand," which, despite its gloomy tone must be accounted among his most memorable achievements. "Peer Gynt," also, with its fantasy, variety, mockery,

^{*} INTRODUCTION TO THE HISTORY OF SCIENCE. Vol. I. From Homer to Omar Khayyam. By George Sarton. Baltimore: Williams & Wilkins.

satire, and legendary lore is a panorama of unquestionable genius, although too intrinsically Scandinavian in its spirit to win general popularity, even with the aid of Grieg's entrancing music. Such pieces as "Love's Comedy," "The Pretenders," "The League of Youth," "Pillars of Society" have their undeniable excellences, but are not of transcendant originality or merit. Nor does "Emperor and Galilean" put all quasi-historical drama into eclipse.

Actually it was with the appearance of "A Doll's House" that the repute of Ibsen became international. The phenomenal vogue acquired by this play was altogether disproportionate to its intrinsic literary and dramatic values. Coincident with the earlier stages of the agitation in favor of feminine emancipation, it attracted wide-spread attention by the appositeness, dexterity, and realism of its special pleading, and aspiring women everywhere gave it their enthusiastic support. It was not, in any sense, great drama, nothing in its personages, situations, or imagination rising above the level of the commonplace. But it was pregnant throughout with an appealing sex motive that everybody could understand. And in the compactness, smoothness, and interdependence of its mechanism it was a model of artistic and effective dramatic construction. And herein may be discerned the real gist and substance of the sterling benefit and instruction which Ibsen conferred upon the modern theatre, then largely filled with unmeaning trash and slipshod workmanship. He did not, as Mr. Zucker assumes, revolutionize the drama, change its traditional forms or objects, or, as a matter of fact, greatly enrich its treasury of masterpieces, but he did show how a skilful craftsmanor Master Builder-even when working with ordinary, but aptly chosen, materials, could, by steady adherence to a definite plan and purpose, and minute portrayal of diverse individual characteristics, compose an arresting and consistently effective play, without resorting to wildly ludicrous, extravagant, or irrelevant artifice.

"Ghosts," temporarily, proved almost as great a sensational success as "A Doll's House" and for similar reasons. Its appearance was contemporaneous with a marked revival of public interest in the subject of heredity and its illustration of the principle, though not new in idea or very precious as a scientific demonstration, was vivid and, on the surface, sufficiently logical, while the chief personages, of somewhat extravagant type, were depicted with realism and consistency, and the closely knit story compounded with masterful ingenuity. None of the stuff was first rate, but the expert treatment displayed all of it to the best advantage. The attacks upon the piece, provoked by its drabness and morbidity, and the queer notion that there was something immoral about it, helped to stir curiosity and create notoriety. It is by these two plays, probably, that Ibsen is most widely known, although much of his finer work is to be found in such symbolical and imaginative, but less intelligible, works as "The Wild Duck," "The Lady from the Sea," "Rosmersholm," and "The Master Builder." From the purely theatrical point of view "Hedda Gabler"-whose fantastic, highly colored, and unamiable heroine has engaged the efforts of many leading actresses—was, perhaps, one of his most successful productions. The joiner-work of it is excellent, as usual, but the minor characters have no special distinction, while the prevailing atmosphere is unexhilarating, and the study of wayward womanhood, is neither profound nor especially subtle or truthful.

The precise status of Ibsen as a poet needs no present consideration as Mr. Zucker makes no attempt to define it. As a dramatist, particularly in his earlier and more romantic moods, he is entitled, unquestionably, to a fairly prominent position among the writers for the theatre or the library. But to place him next or near to Shakespeare, or among the greatest of all time, is to betray a lamentable lack of taste and judgment. Not his was the touch of nature that makes the whole world kin, nor genius that is for all time.

Mighty Opposites

(Continued from page 793)

have been sold at the outset to the ideals of mass production. When quantity comes in at the window, quality goes out at the door.

What is elevation of spirit in literature? Is that a question to be answered in an editorial? But Milton knew when he wrote of Fame "that the clear spirit both raise . . . to scorn delights and live laborious days. . . . But not the praise, Phoebus repli'd, . . . Fame is no plant that grows on mortal soil."

A Portrait of England

ENGLAND. By WILHELM DIBELIUS. New York: Harper & Brothers. 1930. \$5.

Reviewed by HAROLD J. LASKI

HIS remarkable book, which has been most admirably translated, is, I think, the most valuable single work published on its subject in recent times. It differs from President Lowell's well-known work, partly by reason of its width of treatment and power of incisive judgment, partly because of its effort to relate institutions to the psychological deposit of national tradition. It has not, let it be said at once, the universality which made Tocqueville's "Democracy in America" one of the seminal books of the nineteenth century. I am inclined to compare it with Bryce's "American Commonwealth," and to urge that it comes out well from a comparison which is itself a verdict of high quality. Certainly no European scholar who has written of England has ever approached the standard of this book; nor do I know of any contemporary work which, at the moment, equals it in grasp of principle or knowledge of detail. Weighing my words carefully, I suggest that it is the indispensable book on its subject at the present time.

Professor Dibelius covers a very wide area. What he has attempted is, so to say, an impressionist portrait of England. Its position as a world-power, its



A cartoon of Lloyd George reproduced from Punch in "Lloyd George," by Mr. Punch (Stokes). (See next page.)

national characteristics, its industries, its constitution, its churches, and its educational system,-all these are handled with knowledge and insight, and with, in general, remarkable accuracy. Sometimes one is tempted to dissent. I think, for example, that Professor Dibelius's picture of British imperialism is written more out of the books of Mr. Bernard Shaw than out of the raw material of history. I am more impressed than he is by English provincial universities. I do not think he realizes quite how deep is the modern scepticism of the English public school. He underestimates, in my judgment, the degree of reconstruction that has taken place in English political institutions since the war; and he overestimates the influence of religious institutions today in their power to shape the national life. I think, too, that what he calls the "Anglo-Saxon idea," the love of freedom, the resentment of state interference, and so on, would need rather careful annotation if it were not to emerge as more distinct and clarified than in fact it is. Granted, again, the facts, I believe that Professor Dibelius ends upon an excessively optimistic note. But these are differences of opinion in which there are arguments on either side. None of them disturbs the profound insight of the general portrait he has

What I should like here to note is certain elements in that portrait revealed to me with new precision by the power of Professor Dibelius's analysis. I do not say that they are new; I only say that they are the more freshly seen by the way in which he presents

them. The first, and the most outstanding, is the pervading and enduring power of the English aristocracy. There has not, so far as I know, been anything like this in the history of the world. It has gone in France and Germany, in Russia and Italy and the Scandinavian countries. In England it remains, a little shaken, perhaps, but still profound. The aristocracy, by its marriage with the City, its political relations, its administrative connections, shows a capacity of influence and absorption that are quite incomparable. There are still big feudal elements in English life. The problem of rural England in no small degree depends upon their recognition. A democratic franchise system still gives unique advantages to the aristocrat who enters political life. Other things being equal, he will get into the House of Commons, and thence into the Cabinet, about ten years earlier than self-made men. Contact with him will soften the edges of those who dislike aristocratic predominance and seek its destruction. Mr. Mac-Donald does not send ardent socialists to the House of Lords, but men rather like the occupants there of the Conservative benches. I think it was Mr. Chesterton who once said that the greatest event in the English nineteenth century was the revolution that did not happen. That was true because the governing class has always known when to compromise and coalesce. In Professor Dibelius's picture I see no element which suggests a decline of that capacity. He knows just what to improve and just what to preserve. It is still at the very heart of power.

Professor Dibelius criticizes a little severely the operation of Parliamentary government in England. He thinks it tends, in some degree, to the unreality of a sham fight and that certain classes, the underpaid curate, for example, and the small rentier, are unprotected in the conflict of parties, where a strong monarchy might safeguard their interests. On the whole, I am not impressed by his argument. As I have sought elsewhere to show, English parliamentary procedure is in drastic need of reform. But I am tempted to say, first, that the two-party system is a capital discovery in the technique of parliament, and even of representative government, and, secondly, that the interests Professor Dibelius thinks neglected under the system are just those least deserving of protection. My own doubt would be on a different aspect of his theme. Parliamentary government depends for its success upon the assumption that parties are agreed about fundamentals and differ only on points of detail. For these can be discussed and there are always ways and means of arriving at agreement by compromise. Where ultimate principle is concerned, as Ireland showed, as India may show, discussion cannot solve the problem. For discussion admits that reason must prevail, and where men argue from different premises, passion and not reason, is king. Here, as I think, is the main problem of parliamentary government in the future. I do not feel clear that it is certain to meet it successfully.

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For here is a point of substance upon which Professor Dibelius does not, I think, touch adequately. You cannot make England a constitutional democracy, as was done by the Act of 1928, in politics without raising major issues of industrial government. You cannot meet those major issues, without demanding the surrender of very considerable economic power from the governing classes. They mean, as Mr. Keynes has recognized with emphasis, high taxation to distribute more equally the amenities of social life. They mean also, as education does its fell work, an increasing demand for constitutional government in industry. The effect of both these tendencies in England is, of necessity, towards a growing economic equality, and the effect of that is the disappearance of the rentier class whose outlook has been mainly shaped by contact with the aristocracy. The question I ask myself is whether the revolution in the quality of life that these things portend can be accomplished silently and in peace. I wish Professor Dibelius had dealt with this question. To answer it in the affirmative is to say that the English governing class will be the first in history peacefully to abdicate from the possession of social control. It would be exhilarating to be able to think that confidently. It would also, I suggest, be absurdly optimistic.

Two other remarks I venture to make. Professor Dibelius sees signs of new life stirring in the churches. I wish he had given us the evidence for this and sought to measure its significance. My own impression is that, whether judged by attendance at service, or candidates for the ministry, or power to