

the clear and confident nature of Leverrier's instructions. 'Look where I tell you,' he seemed authoritatively to say, 'and you will see an object such as I describe.' And in fact, not only Galle on the 23d of September, but also Challis on the 29th, immediately after reading the French geometer's lucid and impressive treatise, picked out from among the stellar points strewing the zodiac, a small planetary disc, which eventually proved to be that of the precise body he had been in search of during two months.

"The controversy that ensued had its ignominious side; but it was entered into by neither of the parties principally concerned. Adams bore the disappointment, which the dilatory proceedings at Greenwich and Cambridge had inflicted upon him, with quiet heroism. His silence on the subject of what another man would have called his wrongs remained unbroken to the end of his life; and he took every opportunity of testifying his admiration for the genius of Leverrier.

"Personal questions, however, vanish in the magnitude of the event they relate to. By it the last lingering doubts as to the absolute exactness of the Newtonian Law were dissipated. Recondite analytical methods received a confirmation brilliant and intelligible even to the minds of the vulgar, and emerged from the patient solitude of the study to enjoy an hour of clamorous triumph. For ever invisible to the unaided eye of man, a sister-globe to our earth was shown to circulate, in perpetual frozen exile, at thirty times its distance from the sun. Nay, the possibility was made apparent that the limits of our system were not even thus reached, but that yet profounder abysses of space might shelter obedient, though little favored, members of the solar family, by future astronomers to be recognised through the sympathetic thrillings of Neptune, even as Neptune himself was recognised through the tell-tale deviations of Uranus.

"It is curious to find that the fruit of Adams's and Leverrier's laborious investigations had been accidentally all but snatched half a century before it was ripe to be gathered. On the 8th, and again on the 10th of May, 1795, Lalande noted the position of Neptune as that of a fixed star, but perceiving that the two observations did not agree, he suppressed the first as erroneous, and pursued the inquiry no further. An immortality which he would have been the last to despise hung in the balance; the feather-weight of his carelessness, however, kicked the beam, and the discovery was reserved to be more hardly won by later comers." μ .

BOOK REVIEWS.

THE CHILDREN OF THE NATIONS; A Study of Colonisation and Its Problems. By *Poultney Bigelow*, M. A., F. R. G. S. New York: McClure, Philips & Co. 1901. Pages, xiii, 365.

Poultney Bigelow, well-known as the author of a book on *The German Emperor and His Neighbors*, a man of broad education acquired both at home (viz., at Harvard) and abroad in France and Germany, has published an instructive book under the title: *The Children of the Nations*. The book discusses in thirty-five chapters the several methods of colonisation among the different civilised peoples. First the Spanish colonies and their final doom in South America, Cuba, the Philippines, etc. (Chapters I-VII). Here follows (Chapter VIII) a discussion of the Negro as an element in colonial expansion both in America and South Africa. Then the author descants on official German civilisation in Kiao Chow and East Africa (Chapter IX), which ought to be very instructive to the German Emperor,

though there is little probability that he will heed the author's advice. Next in importance are Portugal, the rise and decay of her colonies, including an appreciation of Francis Xavier's work and the establishment as well as failure of Jesuit missions (Chapters X-XIII); a discussion of the Dutch, and especially of the Boer, fills three most interesting Chapters (XIV-XVI). As much as Mr. Bigelow appreciates Dutch culture, he is hard on the Boer whom he compares to the Texas cowboy. Of no less interest are the several chapters on Scandinavian, Danish, Chinese, French, and Russian colonisation (Chapters XVII-XXIV). But the most important information may be drawn from the chapters on the English colonies in America, and the rise of American independence (Chapters XXV-XXVI); Chapter XXVII gives the reason why England lost her American colonies; Chapters XXVIII-XXX discuss the English possessions in the West Indies and British Guiana; Chapter XXXI, those in Australasia; Chapter XXXII discusses the dangers and sanitation of the tropics; Chapter XXXIII, the white invasion of China; Chapter XXXIV, the philosophy of colonisation, which may be regarded as the summary of Mr. Bigelow's experiences; and finally, in Chapter XXXV our author applies his maxims to the prospects of American colonisation.

The book is interesting wherever one may happen to open it, and it goes far to prove the wisdom of giving liberty to colonies and of encouraging home government everywhere. To select one drastic instance only, we quote from page 293: "Although the Great Wall of China was built by forced labor, it is more than probable that to-day an American contractor would undertake to build it over again with free labor for less money than it originally cost. The reason for this is, that only high-priced mechanics can be trusted with high-priced machinery,—and a good machine can underbid the best of slaves."

P. C.

PROJET D'ORGANISATION DU MOUVEMENT SCIENTIFIQUE UNIVERSEL EN ANGLAIS, ESPAGNOL, FRANÇAIS, ALLEMAND, ITALIEN; Dedié à Mr. Andrew Carnegie. Par *Dr. E. M. Cavazzutti*. Buenos Ayres: Cooperativa Tipográfica, Reconquista 414. 1902.

This pamphlet contains some excellent ideas on the unification and economisation of the World's Research, in both its active positive aspect (as investigation) and its passive negative aspect (as the dead storing up of knowledge). "In each capital of the European states and in the principal cities of both Americas, Australia, and the civilised nations of Asia, there shall be established a scientific institution called an Emporium, which shall be divided into three Divisions: one Bibliographical, one Experimental, and one for Scientific Congresses." We cannot go into details; suffice it to say that it is the object of these Emporiums to promote coöperation, unity, and parsimony, both intellectual and material, in the scientific world, and to focus the dispersed thought and spiritual energies of the world. Dr. Cavazzutti's ideas have found partial but very meagre realisation in some existing institutions, and though they are not entirely novel, they are systematic and consistent. They should receive, the author thinks, the attention of Mr. Carnegie.

It is refreshing to observe that the work comes from South America and was inspired partly by the utterances of Mr. Bonney (not Bouney, as the author has it). The text is in five languages: English, Spanish, French, German, and Italian. Barring a few slips, such as "World's Scientific *Move*" for "World's Scientific *Movement*," the English is clear reading.

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AN INTRODUCTION TO CELESTIAL MECHANICS. By *F. R. Moulton, Ph. D.*, Instructor in Astronomy in the University of Chicago. New York: The Macmillan Co. 1902. Pp. 384.

Mr. Moulton has endeavored to give in this volume "a somewhat satisfactory account of many parts of Celestial Mechanics rather than an exhaustive treatment of any special part. The aim has been to present the work so as to attain logical sequence, to make it progressively more difficult, and to give the various subjects the relative prominence which their scientific and educational importance deserves. In short, the aim has been to prepare such a book that one who has had the necessary mathematical training may obtain from it in a relatively short time and by the easiest steps a sufficiently broad and just view of the whole subject to enable him to stop with much of real value in his possession, or to pursue to the best advantage any particular portion he may choose."

Considerable knowledge of the calculus is requisite to the enjoyment of Mr. Moulton's treatise, which is in every respect an excellent survey of this most interesting field of mechanics. The discussions are elegant and concise, having been selected from the masters of this department of inquiry, and give, indeed, "an idea of the methods of investigation and the results attained in Celestial Mechanics." The interest and value of the treatise have been heightened by the addition of pertinent historical and bibliographical remarks: while too much praise cannot be bestowed on the publishers for the excellence of the typography. μ.

The Hibbert Journal is the title of a new "quarterly magazine of religion, theology, and philosophy." It is supported and sanctioned by the Hibbert Trustees, institutors of the well-known foundation made from funds left by Robert Hibbert, a West India Merchant who died in 1849. The object of the *Journal* like that of the foundation is the honest, critical, and unpartisan discussion of all unsettled problems of religion and theology. The *Journal* is edited by L. P. Jacks and G. Dawes Hicks, and has as its "editorial advisors" some of the most prominent religious thinkers of Great Britain. The contributors to the first number are Prof. Percy Gardner ("The Basis of Christian Doctrine"), Prof. Josiah Royce ("The Concept of the Infinite"), Sir Oliver Lodge ("The Controversy Between Science and Faith"), Rev. Stopford Brooke ("Matthew Arnold"), Principal James Drummond ("'Righteousness of God' in St Paul's Theology"), and F. C. Conybeare ("Early Doctrinal Modifications of the Gospels"). The *Journal* has a becomingly solid and dignified appearance. (London and Oxford: Williams & Norgate. Price, 2s. 6d. net.)

Mr. William Morton Payne has collected into two tasteful little volumes, recently published by A. C. McClurg, of Chicago, the editorial articles on literary and educational topics which he has supplied in past years to the pages of *The Dial*. Mr. Morton's essays have always been one of the most attractive features of *The Dial*; he has ever striven to make them more than ephemeral comments on the objects of which they treat; and the care with which they have been written, the soberness and self-restraint with which they have been conceived, the wide culture which their contents bespeak, amply justify their author in the hope that there is due them some meed of permanency. The readers of these little volumes will have their memories pleasantly refreshed on nearly all the important movements in literature and the related arts that recent years have chronicled. (*Little Leaders. Editorial Echoes.* Two volumes. 1902.)

The Temple Classics, under the critical and discerning editorship of Mr. Israel Gollancz, are fast augmenting in number and elegance. They include now the greater part of what is best in English and the world's literature; they meet the most fastidious tastes; and a careful selection from their wealth would form a rare adornment to the tables of any household. The *Temple Dramatists* (English) and the *Temple Cyclopedic Primers* (general science and literature) form appropriate complements to the series. Especial attention is to be directed to the *Temple Classics for Young People* which now include *The Arabian Nights*, Fouqué's *Sintram*, Kingsley's *Heroes*, Lamb's *Tales from Shakespeare*, Scott's *Ivanhoe*, etc. Mr. E. Lucas, whose work in rendering good literature accessible we noticed in a former number of *The Open Court*, has given us in the same group an admirable rendering of some of *Andersen's Fairy Tales*. The illustrations of these little works are quaint and appropriate: the books are of pocket size and cost, bound, from forty to sixty-five cents. The publishers will doubtless be glad to send a full list of titles on application. (New York: The Macmillan Co., 66 Fifth Ave. London: J. M. Dent & Co.)

Paul Elder and Morgan Shepard have published a series of baby pictures under the name of *Baby Roland*, by George Hansen,—one called "Lima Beans," another "Vespers," and the third "The Ascent of Man." The contents are three sets of photographs: the first of a baby dining on lima beans; the second greeting the setting sun and bidding good night; and the third the gradual climbing of the stairs and the final triumph, followed by a "declaration of independence." The photographs are a trifle dilettantic, but the price (50 cents for each little fascicle) is reasonable, considering the handmade make-up; each series is ornamented with pressed algae.

The August and September issues of *The Biblot*, "A Reprint of Poetry and Prose for Book Lovers, chosen in part from scarce editions and sources not generally known," are: (1) "In Praise of Old Houses," by Vernon Lee (Miss Violet Paget), and (2) "An Address on William Morris," by J. W. Mackail, delivered at Kelmescott House, Hammersmith, before the Hammersmith Socialist Society, Nov. 11, 1900. Mr. Mackail's address gives an admirable review of Morris's life and career. The October *Biblot* is "Rossetti and the Religion of Beauty" by F. W. B. Myers. (Portland, Me.: Thomas B. Mosher. Price each, 5 cents.)

Watts & Co. of London have just issued a cheap edition (six pence) of Matthew Arnold's famous book *Literature and Dogma: An Essay Towards a Better Apprehension of the Bible*,—a work as justly noted for its literary qualities as for its criticism of an unreasoning and false theology. It was originally published in the early seventies, and its object was, as its author stated, "to reassure those who feel attachment to Christianity, to the Bible, but who recognise the growing discredit befalling miracles and the supernatural."

Echoes from the Solitudes is the title of the latest volume of aphorisms and poems from the pen of Mary Morgan (Gowan Lea), a former contributor to *The Open Court*, the earlier readers of which will remember her graceful sonnets. The little book contains many pretty sentiments. (London: George Allen.)

The First Principles of Herbert Spencer has been translated into French from the sixth English edition by M. Guymiot. The proofs of this French edition have been read and thoroughly revised by the author, and the publishers have supplied a very handsome photogravure reproduction of the best bust of Herbert Spencer that we have seen. While this work will not be largely used by English readers, save possibly by English students of French who are desirous of acquiring by comparison a knowledge of French philosophical terminology, for which purpose it would be admirable, the translation will serve the purpose of introducing to circles knowing French but not conversant with English, the chief work of one of the most popular English philosophers of the last decades. (Paris: Librairie C. Reinwald; Schleicher Frères, Éditeurs. 1902. Pages, xvii, 508. Price, 10 Francs.)

NOTES.

The proposed Hindu-Buddhistic Religious Conference at Kioto, Japan, mentioned in the last *Open Court* as taking place in October of this year, has been postponed until April and May of 1903. An industrial exhibition will be held about the same time at Okasa, Japan. It is expected that a large number of Indian visitors will attend the Conference and Exhibition, the latter of which is to be supplemented by a special Indian Arts Exposition. Japan owes a large debt to India, and the forthcoming gatherings are in the nature of a friendly return for the intellectual advantages which Japan has derived from Indian civilisation in the past.