

importance. Only fifty years ago Malthusianism reigned. But applied science showed that the means of subsistence could be increased far more rapidly than the population. Now, in spite of the lowered death rate, the native population is actually decreasing in France and in New England, and is probably tending in this direction everywhere. The causes are not physiological, but psychological and social. M. Dumont blames the selfishness of democracies; he thinks that they are really aristocracies in which everyone wants to be an aristocrat and live in luxury. But it would probably be just as correct to blame our altruism. Our improved means of production, our improved hygiene, our charities and our sentimentalism have interfered with the struggle for existence, and fertility—physiological or psychological—has no longer a high selective value. It is doubtful whether M. Dumont will accomplish anything by preaching the patriotism and morality of large families. M. Bertillon's recent suggestion that an inheritance tax be imposed inversely proportional to the number of children is more reasonable, but it would only give a slight and temporary alleviation. The State would be more likely to succeed by the encouragement of early marriages, especially in the case of children from large families. But the whole problem is extremely difficult.

J. McKEEN CATTELL.

GENERAL.

W. SCHMIDT'S *Heron von Alexandria* (B. G. Teubner; 15 pp., 3 plates; .80 M.) is a review of the first volume of a new edition of Heron's works. The article contains 39 figures (partly conjectural) illustrating the many curious and ingenious automata designed by Heron for public amusement in gardens and theaters. The article gives a good idea of the subject and is interesting to the philologist as well as to the mechanic and physicist.

NUMBER VI. of the *Studies from the Yale Psychological Laboratory* has just been issued. It contains: 'A color-illusion' (with colored plate), by Professor G. T. Ladd; 'Researches in cross-education,' by Professor W. W. Davis, and 'Researches in practice and habit,' by Dr. W. Smythe Johnson. A number of copies has been

set aside for gratuitous distribution to persons who may be interested; a copy can be obtained by application to Dr. E. W. Scripture, New Haven, Conn.

BOOKS RECEIVED.

Proceedings of the U. S. National Museum. Published under the Direction of the Smithsonian Institution. Washington, Government Printing Office. 1899. Vol. xxi. Pp. xiii + 933.

Analyses électrolytiques. AD. MINET. Paris, Gauthier-Villars. 1899. Pp. 176.

Magnetical and Meteorological Observations made at the Government Observatory, Bombay, 1897, under the Direction of N. A. F. Moos. Bombay, Government Central Press. 1898. Pp. xviii + 12 tables. Price, 2s. 6d.

SCIENTIFIC JOURNALS AND ARTICLES.

Appletons' Popular Science Monthly for September opens with an article on the plague by Professor C. V. Vaughan, of the University of Michigan. In discussing recent legislation against the drink evil, Dr. Appleton Morgan argues that high licenses, damage laws and laws against adulteration are a sufficient remedy. Among the other articles is one on the milk supply of cities by Professor H. W. Conn; on the influence of the weather on crime by Dr. Edwin G. Dexter; on the survival of African music in America by Mrs. Jeanette R. Murphy, and a sketch of the zoologist Oscar Schmidt with a portrait as frontispiece.

DR. L. V. PIRSSON, professor of physical geography in Yale University, succeeds the late Professor O. C. Marsh on the editorial board of the *American Journal of Science*.

THE *Atlantic Monthly*, 'devoted to literature, science, art and politics,' but not in equal measure, has again changed editors. Mr. Walter H. Page has accepted a position in a New York publishing house and is succeeded by Professor Bliss Perry, of Princeton University.

DISCUSSION AND CORRESPONDENCE.

SCHEDULE FOR PSYCHOLOGY OF THE INTERNATIONAL CATALOGUE.

TO THE EDITOR OF SCIENCE: Professor Cattell is right in saying (SCIENCE, Aug. 11) that no scheme of classification for psychology

has been circulated with the other schemes by the Royal Society ; but one has been prepared. The present writer was asked by Professor Michael Foster to cooperate with Mr. Stout, the editor of *Mind*, who has been selected as the British representative of psychology. Mr. Stout prepared a detailed classification, which was extensively revised by my colleague, Professor Warren (the compiler of *The Psychological Index*) and myself. Our suggestions were all accepted by Mr. Stout and the schedule has been printed, a single copy reaching me some weeks ago. I know no reason for the failure of the committee to circulate it.

J. MARK BALDWIN.

PRINCETON, August 16th.

THE schedule for psychology was not presented to the Committee of Columbia University requested to report upon the plans. Neither, as I am informed, has it subsequently been sent to the responsible editor of *SCIENCE*, to the editor at present responsible for the *Psychological Review* and *Index* or to the professor of psychology of Columbia University. The proceedings of the Conferences on an International Catalogue of Scientific Literature appear to have been held in secret and concealed long thereafter. *SCIENCE* is, so far as I am aware, the only journal in the world that has given an adequate account of the conferences or extended reviews and criticisms of the plans. There is doubtless some reason for the methods of the Royal Society, but if the catalogue is to be begun with international assistance at the beginning of next year it is time that the explanation should be forthcoming.

J. McKEEN CATTELL.

POT-HOLE VS. REMOLINO.

TO THE EDITOR OF *SCIENCE*: If more room can be spared for the discussion of so inconsequential a matter, may I say that a sufficient argument against the adoption of the word 'Remolino' lies in the fact that it is not needed. The term 'Pot-hole' is with us, and, whatever its origin, its meaning is plain. There is no more cause for substituting a Spanish word here than for the substitution of the Spanish language for the English as a whole. One can

but be reminded of the ridiculous attempts at substituting French names for good old American and English dishes on the bills of fare in many of our restaurants and hotels.

GEORGE P. MERRILL,

DEPARTMENT OF GEOLOGY, U. S. NAT. MUSEUM.

NOTES ON PHYSICS.

THE TRANSMISSION OF LIGHT THROUGH ABSORBING MEDIA.

PROFESSOR OLIVER LODGE, in his presidential address before the London Physical Society,* gives a historical sketch of the theory of the passage of light through absorbing media (opacity), the subject being brought down to date ; in fact, Professor Lodge discusses some of Heaviside's results which are as yet unpublished. Those who are interested in the subject will find the address most interesting and instructive ; it cannot, of course, be abstracted.

W. Voigt, in *Wied. Ann.* 1899, No. 7, gives a general solution of the equation of wave propagation in an absorbing medium. This solution is identical in form to the solution of the 'telegraph equation,' so-called, which expresses the attenuation and variation of form of a telegraph signal. Voigt refers to Poincaré and Picard as having discussed this subject of telegraph signalling and of light transmission through absorbing media.

Readers of English cannot hold Voigt, Poincaré and Picard seriously responsible for their ignorance of the fact that this whole subject of light transmission through absorbing media and of telegraph signals has been very completely worked out by Heaviside, for probably a very few English readers are familiar with his remarkable work. Professor Lodge's presidential address, mentioned above, is almost wholly devoted to the discussion of Heaviside's work, apparently because of its preponderating importance and exceeding simplicity.

Lodge gives, in his address, the steps in the solution of the equation of wave propagation in an absorbing medium (Heaviside, 1887), which, compared with Voigt's solution, is simplicity itself.

* Proceedings of Phys. Soc., XVI., pp. 351-386.