

this circumstance that the great value of the *Année* lies. The science of biology in all its extent for the year 1897 is here epitomised and one need have this volume only, to be assured that nothing of importance has escaped one's notice. Too much praise, therefore, cannot be bestowed upon the editors and their collaborators for the performance of their wearisome task; and it is to be hoped that the work will find its way into all working libraries.

The principal modification of the contents for 1897 is the introduction of a new heading "Polymorphism," which is a name for such phenomena as the existence of workers, drones, and queens in colonies of bees. The general captions are: "The Cell," "The Sexual Products and Fecundation," "Parthenogenesis," "Asexual Reproduction," "Ontogenesis," "Teratogenesis," "Correlation," "Death, Immortality," "Morphology," "Heredity," "Variation," "Origin of Species," "Nervous Systems and Mental Functions." μ.

NATURALISM AND AGNOSTICISM. The Gifford Lectures Delivered Before the University of Aberdeen in the Years 1896-1898. By *James Ward*, Sc. D., Hon. LL.D. Edinburgh, Professor of mental Philosophy and Logic in the University of Cambridge. New York: The Macmillan Company. London: Macmillan & Co., Ltd. 1899. 2 vols. Pp. 302, 294.

These lectures will be profitable reading to many students of the philosophy of science, for they come from a psychological writer of distinction, and both afford a tolerable retrospect of scientific history and cast a cheerful horoscope of the future. Mr. Ward seeks to overthrow the purely mechanical conception of the universe, and believes that "an examination of the 'real principles' of Naturalism secures us a specially advantageous position for discussing the epistemological questions on which the justification of idealism depends." As to agnosticism, he remarks: "The unity of experience cannot be replaced by an unknowable that is no better than a gulf between two disparate series of phenomena and epi-phenomena. Once materialism is abandoned and dualism found untenable, a spiritualistic monism remains the one stable position. It is only in terms of mind that we can understand the unity, activity, and regularity that nature presents. In so understanding we see that Nature is Spirit." Further, since naturalism and agnosticism "eventually lead us to spiritualistic monism in spite of themselves, their demurrer to theistic inquiries is not sustained." On the ground that necessary truths are "truths of reason," they are held to originate in the *subject* of experience and not in the object; hence the justification of Mr. Ward's doctrine. But it does not follow that because they originate in the subject, they are not objective in character and validity, nor even non-experiential in origin. This is always the error of the spiritualists, (who, while professing monism, are dualists without knowing it), that they still regard the subjective and the objective as belonging to disparate realms, the one as real the other as unreal, and their modes of operation as essentially distinct. The strictly "scientific," i. e., the mathematico-mechanical, view of the universe

Mr. Ward says can never give us "rational insight, spiritual light, understanding." We do not see why. If Mr. Ward cannot put reason and poetry into it, perhaps others can; much depends upon ourselves and on the *character* of our conviction, in this regard; to us, "the thoughts that often lie too deep for tears" may be conceived to spring far more naturally and spontaneously from nature considered as a law-determined cosmos than from nature conceived as an elusive, obscure, and impenetrable source of sentimentalities. We are in accord with many of the trenchant criticisms that Mr. Ward has made, but we cannot agree with his view of the limitations of scientific research. It would seem that in most instances, he is overthrowing Mr. Spencer's philosophy of science (which forms his main object of attack), not the philosophy of science itself, which is quite a different thing. *μρκ.*

THE LOGICAL BASES OF EDUCATION. By *J. Welton, M.A.*, Professor of Education in the Yorkshire College, Victoria University. London: Macmillan and Co., Limited. New York: The Macmillan Company. 1899. Pp. 288. Price, \$1.00.

Mr. Welton is one of those who believe that the solution of all the questions relative to education will be found in the study of modern logic; for logic analyses the processes by which knowledge is reached, and education is the inculcation of knowledge. In like manner, it has been contended that, since man is an animal, all philosophy is merely a branch of biology, as in a farther view it might be of astronomy. The connexion is evident and will not be disputed. But the present book is nevertheless a treatise on elementary logic and not a treatise on education. In the former respect it is good, and will, because of its desire to influence the theory of education, perhaps be better suited to teachers than many another text-book of logic. It has appeared in Macmillan's *Manuals for Teachers* series, and is excellently got up. *μ.*

AN ETHICAL SUNDAY SCHOOL. A Scheme for the Moral Instruction of the Young. By *Walter L. Sheldon*, Lecturer of the Ethical Society of St. Louis; Author of "An Ethical Movement." London: Swan Sonnenschein and Co., Ltd. New York: The Macmillan Co. 1900. Pp. 206. Price, 3s.

Parents and educators desirous of substituting some more rational and systematic method of religious instruction for the conventional Sunday-school may find a basis for their work in this volume. Mr. Sheldon claims for it the value of *sketch*, and nothing more. It has cost much hard practical work to produce it, and it is the outcome of many disheartening failures. Here are some of its ideas: "It was our intention to reverse the process customary in the average Sunday school, letting the teaching concerning what is commonly known as 'religious conceptions' come in at the end of the course, *beginning* the course of instruction with the elements of morality. It has not been our purpose in any way definitely to antagonise religious beliefs. But instead of beginning our teaching with talks about 'God,'

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SHA256 signature: [linux]\$ echo -n

"symbol=LTCBTC&side=BUY&type=LIMIT&timeInForce=GTC&quantity=1&price=0.1&recvWindow=5000&tamp=1499827319559" |
openssl dgst -sha256 -hmac "NhqPtmdSJYdKjVHjA7PZj4Mge3R5YNiP1e3UZjInCIVN65XAbvqqM6A7H5fATj0j" (stdin)=. The 1.40%
inflation rate means \$1 in 1800 is equivalent to \$21.56 today. This inflation calculator uses the official US consumer price index
published by the Department of Labor. Value of \$1 from 1800 to 2021. \$1 in 1800 is equivalent in purchasing power to about \$21.56
today, an increase of \$20.56 over 221 years. The dollar had an average inflation rate of 1.40% per year between 1800 and today,
producing a cumulative price increase of 2,056.32%. Gas price: The rate set by the user for converting gas into units of ether. These
units are usually denominated in gwei, which is a unit of Ethereum equivalent to 0.000000001 ether. Cost of an operation on
Ethereum = Gas cost x Gas price. How Ethereum works. Like Bitcoin, Ethereum has its own blockchain where a global network of over
2.4 million computers known as nodes maintains a record of transactions.