

[Just as English philosophy since the Middle Ages has been utilitarian and German philosophy since the Reformation idealistic, so Italy would find salvation by returning to the calm naturalism of the Renaissance.] **L. M. Billia.** 'Rompicapi del *Parmenide* e la tragedia del Pensiero.' [A discussion on the meaning of predication as illustrated by Plato's *Parmenides*, concluding with the very questionable assertion that 'we have to choose between Absolute Egoism and Mysticism; and perhaps Mysticism is the sole, the true, and the only (sic) philosophy'.] **Ferdinando Belloni-Filippi.** 'E il Buddhismo ma Religione o una Filosofia?' [As a working definition of religion this writer proposes: the recognition of intelligent supersensible forces as objects of hope or fear, adored and invoked to prevent evils or to obtain favours; and, so understood, he insists that Buddhism is a religion.] **A. Faggi.** 'Un moralista dimenticato.' [The forgotten moralist in question published an ethical treatise in three thick volumes in 1878, and the sole reason for reviving his memory seems to be that, writing in Italy so long ago he fearlessly based morality on pure reason.] Recensioni, etc. Anno iv., Fasc. 2. March-April, 1912. **Giuseppe Zuccanta.** 'I Cirenaici.' [Relates the well-known story of how the hedonism of Aristippus turned into the pessimism of Hegesias.] **Franz Weiss.** 'Il pensiero di Giambattista Vico' [While praising Croce's recent book on Vico, the writer complains that it does not bring out the debt of modern Biblical criticism to the *Scienza Nuova*.] **Michele Losacco.** 'La filosofia dell'organismo.' [Claims, as against Driesch, the whole world of consciousness as, still more than biology, fit for the application of the teleological method.] **Vittorio Machioro.** 'La ricerca del simbolo nelle arti figurative.' [The writer recommends his own symbolism in preference to all others.] **Luigi Visconti.** 'Evoluzione e Dissoluzione della Coscienza religiosa.' [Religion, being a synthesis of all men's spiritual powers in presence of the problems of destiny, cannot conceivably disappear from the world.] **Alessandro Bonucci.** 'Libertà di volere e Libertà politica.' [Against State socialism.] Recensioni, Notizie, etc.

## IX.—NOTES.

## NOMINALISM IN MATHEMATICS.

A REVIEW by Prof. A. E. Taylor in No. 82 of *MIND* (p. 280) suggests some reflexions on nominalism in Mathematics. Prof. Taylor says: "The modern developments in mathematics are, rightly understood, the very reverse of a victory for any form of Nominalism. In Mathematics, Nominalism should mean the doctrine that the symbols with which we operate are the objects which we are studying, e.g., that the associative and commutative laws of Addition and Multiplication are actually statements about the written or printed symbols + and  $\times$ . This is a view which has had its supporters, but it is not to them that we owe the great developments like Cantor's Theory of the Transfinite, or the reconstruction of the calculus on a sound logical basis."

Cantor<sup>1</sup> has expressly protested against the theory, advocated by Helmholtz and Kronecker in 1887, that the integer ordinal numbers are the signs we use in writing them down; but, strangely enough, he seems to have supported the view that real numbers are "signs to which certain properties are attributed".<sup>2</sup> It is quite possible to maintain that

<sup>1</sup> *Zur Lehre vom Transfiniten*, Halle, 1890, pp. 16-20.

<sup>2</sup> *Math. Ann.*, vol. xxi., 1883, pp. 589-590.

Cantor is not to be taken quite literally in this statement, and that what he really means is that new entities having the properties stated are to be postulated.

The question that Prof. Taylor suggests seems to me to be a very important one from a psychological point of view. It seems to be undoubtedly true that some mathematicians to whose efforts the structure of modern mathematics is mainly due had a very strong dislike to nominalism in mathematics. This was the case with Paul du Bois-Reymond. But, on the other hand, many men, such as Heine, Helmholtz, Kronecker, Thomae, Stolz, and Pringsheim, have expressly advocated nominalism in mathematics and yet have sometimes made very valuable contributions even to rather fundamental questions. It seems to be true that the really fundamental questions of mathematics have been successfully treated only by those few mathematicians who have little or no tendency towards nominalism; but, on the other hand, philosophers, with whom the tendency towards nominalism is not usually so general, have not been markedly successful in dealing with the principles of mathematics. A discussion would be helpful.

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#### CORRIGENDA.

"Euler's Circles and Adjacent Space," *MIND*, No. 83, p. 410 *seq.*

On page 411, in line 4, for  $\bar{S} \bar{i} \bar{P}$  read  $\bar{S} i \bar{P}$ ; in line 6, for Some  $\bar{S}$  is  $\bar{P}$  read Some  $\bar{S}$  is  $P$ , and for Some  $S$  is not  $P$  read Some  $\bar{S}$  is not  $\bar{P}$ ; and in line 7, for  $\bar{S} \bar{i} \bar{P}$  read  $\bar{S} i \bar{P}$ . In the sixth line from the bottom of page 414, for  $\bar{S} a P$  read  $\bar{S} a \bar{P}$ .

#### OBITUARY.

We regret to have to record the death, at Lyons, on 16th July, in the seventy-fourth year of his age, of Prof. Alfred Fouillée, Officier de la Légion d'Honneur, Membre de l'Institut, Ancien Maître de Conférences à l'École Normale Supérieure. The works of this prolific and learned writer were well known to many English readers. His literary activity and the vigour of his thinking were maintained to the end of his long and distinguished career. Among his works may be mentioned *La Philosophie de Platon*; *La Philosophie de Socrate*; *La Liberté et le Déterminisme*; *Systèmes de Morale Contemporains*; *Le Moralisme de Kant et l'Amoralisme Contemporain*; *Morale des Idées-Forces*; *Psychologie des Idées-Forces*, *Esquisses Psychologique des Peuples Europ*; *Psychol du Peuple Français*, *L'Évolutionisme des Idées-Forces*.