

called cells which, through growth and reproduction by division and fusion, maintain life as a continuous unique phenomenon.

Into this view, which under the special form of pangenesis has not found much favour, but which, nevertheless, in some form or other, forces itself more and more on our attention, Professor Weismann has imported a further distinctive feature, not prominently brought out by Darwin, though it also dates farther back¹ than the present generation.

¹ The history of the knowledge and theory of sex and heredity has been written in English by Profs. Patrick Geddes and J. Arthur Thomson, in a book entitled 'The Evolution of Sex' (1st ed. 1889); in French by M. Yves Delage, in his much-quoted work, 'La Structure du Protoplasma et les Théories sur l'Hérédité et les grands problèmes de la Biologie' (1895). The latter work contains elaborate criticisms, and finally inclines towards a theory of life termed in France "Organicisme," the main idea of which is the assumption of two distinctive factors in all the phenomena of living matter—viz., "Organisation and Environment." This view, according to the author, has not yet gained sufficient strength to form a definite current of thought like the three earlier views defined by the terms "Animisme," "Evolutionisme," "Micromérisme." The first of these centres in the idea of vital force, the second in the older school of evolution; the last begins with Buffon, and comprises the modern theory of Evolution with Spencer, Darwin, Haeckel, Weismann. Of the last M. Delage says: "Ce dernier est, pour le moment, l'ouvrage le plus parfait créé pour expliquer l'Hérédité et

l'Évolution. Nous croyons avoir montré qu'il est bâti d'hypothèses fragiles, invraisemblables, et, tout en rendant justice au talent de son architecte, nous conseillons de l'admirer de loin et de construire ailleurs" (p. 837). "Organicisme" is represented by W. Roux, Driesch, and O. Hertwig, and is historically traced back to Descartes (p. 838), and to von Baer and Claude Bernard (p. 720). To the theories of the others, "les Organicistes opposent le concours d'une détermination modérée et des forces ambiantes toujours agissantes, toujours nécessaires, non comme simple condition d'activité, mais comme élément essentiel de la détermination finale" (p. 720). As in this account the names of Roux, Driesch, and O. Hertwig are placed together, it is well to remark that since that time the two last-named authorities have in various polemical publications signified the divergence of their fundamental conclusions from the later attitude which Prof. Roux has assumed. For those of my readers who desire to get some insight into the drift of this most recent and advanced controversy, in which questions of principle, of scientific and philosophical method, alternate with discussions of minute