be established in regard to fertilization, Virchow's conclusion led on to two others of fundamental importance. The first of these was the conception of genetic continuity — that the ovum was derived by continuous cell-lineage from the fertilized ovum of the previous generation, and bears with it from the first an inherited organization. We shall return to this conception when we discuss Heredity; it is enough to notice here that it is the starting-point for every modern theory of development or inheritance, and removes the stumbling-block which was fatal to all the early theories. The apparently ready-made organization of the fertilized egg-cell, involving all the potentiality of the future organism, becomes less unintelligible when we recognize that it is, in a sense, itself an antiquity, a link in the continuous chain of germ-cells. We owe the first clear presentment of this idea to Virchow's classic work (1858).

The second corollary is one of great interest, practically as well as theoretically. Since the researches of O. Hertwig and others in 1875, it had been clear that each parent contributes a single germ-cell to the formation of the offspring; but the masterly researches of E. van Beneden (1883) showed that every nucleus of the offspring may contain nuclear substance derived from each of the parents, a conclusion which is visibly demonstrable for a few of the first steps in cleavage. In fact, Van Beneden to some extent *proved* what Huxley had foreseen when he said in 1878: "It is conceivable, and indeed probable, that every part of the adult contains molecules derived both from the male and from the female parent; and that, regarded as a mass of molecules, the entire organism may be compared to a web of which the warp is derived from the female and the woof from the male".

To Van Beneden and Boveri we also owe the discovery of the centrosomes—small bodies which seem to play an important part in the division of animal cells. They have been much discussed of recent years, and there is still great uncertainty in regard to them and their associated attractive spheres. One of the best-substantiated