mann, is the germ-plasm, *i.e.* a special portion of the nuclei of the reproductive cells, which, with great morphological stability, keeps itself intact, and is sooner or later re-established in the reproductive cells of the growing organism. Nägeli finds sufficient explanation of the constancy of inheritance in the individuality and persistence of what he calls the "idioplasm".

Kölliker, O. *Hertwig*, Strasburger, and Bambeke may be noted for the emphasis which they have laid upon the nuclei as transmitting or rather continuing the essential characteristics from generation to generation. Thanks to the researches of such investigators as Van Beneden and Boveri, it is now certain that the male and female nuclei contribute an equal share in forming the segmentation-nucleus of the ovum. Nay more, each of the first two daughter-cells has in its nucleus half of the male and half of the female nuclear elements, and it is possible that this marvellously exact dualism holds true later on.

Most daringly, perhaps, has the continuity been expressed by several, *e.g.* Berthold, Gautier, and Geddes, in chemical terms. In a paper by the last-mentioned on "Growth, Sex, Reproduction, and Heredity", the following weighty sentence occurs:—"If the reproductive elements start with a specific protoplasm continuous with that of the combined mother ovum and fertilizing sperm—that is, with a concentrated accumulation of characteristic anastates and katastates—the simple fact that the products of protoplasmic change must be fixed, definite, and continuous, as in all chemical processes, gives us at once a protoplasmic basis from which to explain the constant and necessary symmetry of segmentation and development". The views of Berthold are closely similar. Inheritance is possible only on the basis of the fundamental fact that in the chemical processes of the organism "the same substances and mixtures of substances are reproduced in quantity and quality with regular periodicity". Gautier discusses both variation and heredity from a chemical point of view. "The force which maintains the species, and gives it the character of constancy and resistance,