

Whitman says, "Aristotle, Harvey, Wolff, and Blumenbach all traversed the same problem, and landed in the same pitfall. They all faced the question of preformation, and discovering no natural way by which the germ could come ready-made, they insisted that the germ must start anew every time and from the pit of material homogeneity, acquiring everything under the guidance of hyperphysical agencies, assisted by the accident of external conditions." Wolff's particular hyperphysical agency was a *vis corporis essentialis*—an essential organic force; but any phrase is as good as another in such matters. The fact must be re-emphasized, that until the genetic continuity which links generation to generation was realized, until the origin of the germ-cells with their heritage of organization was elucidated, there could be no real progress in theories of development.

Karl Ernst von Baer (1792–1876) brings us close to modern movements and modern methods. He handled the problems of development with a firmness of grasp which far surpassed that of his predecessors, and has not been excelled by his most illustrious successors. Von Kölliker has said of his works, that they may be unreservedly described as the most important contributions to embryological literature.

As a student of medicine at Dorpat he seems to have been influenced by Burdach, who was even then (1810–1814) lecturing on "the History of Life"; at Würzburg he sat at the feet of a remarkable teacher, Döllinger, who set his eager pupil to the practical study of comparative anatomy; but a perusal of Von Baer's charming autobiography convinces one that, even in early days, the student was much stronger than any of his masters. In spite of formidable difficulties he persistently worked his way towards the path of investigation which had from early days organically attracted him, and as the outcome of a long and arduous life he had the reward of leaving a stately scientific edifice, where there had been at the most only imperfect foundations.

As to Von Baer's work, though we cannot in our space do it justice, it may be noted, in the first place,