

The modern theories of the cell, of metabolism, and selection, have also greatly influenced and modified our conceptions concerning the last and most important property of all living matter—viz., that it is self-reproductive. Older text-books on physiology treated of the great problem of generation—*i.e.*, the origin of a new individual—as a phenomenon of organised life which stood quite isolated; and although the sexual difference in plants and animals had early led to certain analogies, to similar terminology, and to vague inferences, the mysterious phenomena of generation, and especially of sexual generation, were not brought into line with the general properties of all living matter till about fifty years ago. Even Johannes Müller in his great text-book on Physiology, which takes a much wider view of the subject than any work before it, treats of the reproduction of tissues and of generation in quite separate, seemingly disconnected, parts of his work. Into this uncertainty only little light was thrown by the original propounders of the Cellular theory, who, misled by the supposed analogy of cells and crystals, imagined that cells originated out of the surrounding cell sap, as crystals solidify out of the solution or mother liquor. Correcter views were gradually elaborated by botanists. Mohl emphasised the important part which protoplasm plays in the formation of cells. Nägeli established the process of intussusception as against external accretion; anatomists like Max Schulze and Brücke joined hands,

43.
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possible express the doctrine which Dr Gaskell and Prof. Hering have embodied in words which have now become familiar to every student. The words in question—‘anabolism,’

which, being interpreted, means winding-up, and ‘catabolism,’ running down—are the creation of Dr Gaskell.”