

Why am I running over this history? Sir William Hamilton never would discuss any great theme without looking back across the record of its discussion in order to obtain the trend of opinion through a long range. Without historical retrospect, we are easily deceived by temporary swirls of opinion. We have yet another clew besides the one of cause and effect: it is the unanimity of experts. A fair statement of the history of the cell-theory will show that the points that are central in the modern form of that theory were established thirty-five years ago, and that there has been unanimity of conclusion as to all the more essential facts.

(1.) "This semi-fluid substance," says Schwann, "possesses a capacity to occasion the production of cells."

(2.) "When this takes place, the nucleus usually appears to be formed first, and then the cells around it."

You will not fail to remember the distinction between living matter and formed matter, and that nutrient matter is transmuted by the bioplast into living matter, and then thrown off as formed material. But in the cell are nuclei and nucleoli; and the question of questions in the central part of the cell-theory is, whether the bioplasm existed before the nucleus, or the nucleus before the bioplasm.

Schwann gave as his opinion on that point thirty years ago, that the nucleus appears to be formed by the semi-fluid substance in the cell.

(3.) "*The cell, when once formed, continues to grow*