

Development.¹ And he was further probably quite as deficient as Schelling and his followers in recognising the *rôle* which the exact or mathematical methods were destined one day to play also in the historical sciences of nature.

If, in the light of our present knowledge, we read afresh the writings of such thinkers as Kielmeyer, Schelling, Steffens, Oken, and others, to which we may add the names of Lamarck and Geoffroy, of Treviranus and Von Baer, we meet with almost all the leading ideas which governed natural science at the end of the century except one, and that is, if I may say so, a mathematical or arithmetical conception.² This idea, nevertheless, was put forward about the same time in this country by Malthus in his 'Essay on Population.' It refers to the disproportionate increase of all organisms if compared with their means of subsistence: it is the phenomenon of overcrowding which, combined with that of "variation," necessitates an automatic "selection" leading to the "struggle for existence" and the "survival of the fittest." But it was not till forty years after this period that the reflections contained in Malthus's 'Essay' met in the mind of Darwin with the necessary conditions by

11.
An omitted
idea: Mal-
thus.

12.
Afterwards
taken up
by Darwin.

¹ This, however, with the qualifications contained in Lotze's and Wundt's criticisms of this school: see *supra*, pp. 549, 550.

² Since I wrote this passage, in the first years of the present century, a second important conception has been added, of which we find no trace among the naturalists and philosophers I am here dealing with, but which has likewise tended in the direction of introducing math-

ematical or arithmetical methods into the study of the living creation. This is the conception anticipated already by Francis Galton and rendered more precise by the acceptance of Mendel's theories, which had been neglected and forgotten. Though published far back in the nineteenth century (1865), they do not belong to the history of Thought during that period.