

nutrition, and the generation of animal heat.<sup>1</sup> Already in 1783 Lavoisier and Laplace had presented a memoir to the Paris Academy of Sciences, in which they attributed the generation of animal heat mainly to a process of combustion which took place by the conversion of oxygen into fixed air during the process of respiration. Lavoisier continued his researches on these and other similar physiological processes, such as perspiration, along with Séguin. They presented a joint memoir on the subject in 1790. It is also known, through the posthumous publication of Lavoisier's scientific papers in 1862, long after Liebig had brought out his series of researches on this matter, that the former had entertained very correct views on the economy of organic life as it exists in the balance of the animal and vegetable creations. After Lavoisier, the application of the new science of chemistry to questions of the individual and collective life of organisms was extended in a series

<sup>1</sup> The two great discoveries of oxygen and of the electric current at the close of the eighteenth century were not long in being applied to the reform of medical doctrine. In both instances exaggerated theories were not wanting. Fourcroy, himself a medical student by profession and one of the most ardent followers and promoters of the new chemistry, who, moreover, edited a journal with the title 'La médecine éclairée par les sciences physiques' (1790-92), found it nevertheless necessary to give warning against the premature introduction into medical teaching of the new ideas of chemistry. Of this many instances existed, both in France and Germany, such as the 'Essai d'un système chimique de la science

de l'homme' (1798), by J. P. T. Baumes of Montpellier, against which Fourcroy aimed his criticisms in a letter to Humboldt. On these extravagances see Haeser, 'Geschichte der Medicin,' vol. ii. p. 737, &c.; also Dr A. Hirsch, 'Gesch. d. medicin. Wissenschaften in Deutschland' (München, 1893, p. 567). There is no doubt that opposition to this one-sided application of some chemical or physical theory, or of some special therapeutic method, which might be valuable to a limited and restricted degree, partly accounted for the fact that the more thinking members of the profession clung to the notion of a vital force or principle, as yet undefined but nevertheless existent.