

counteracting and neutralizing the activity of the other. The notion of such opposition and neutrality is applicable to a very wide range of chemical processes. The person who appears first to have steadily seized and generally applied this notion is Francis de la Boé Sylvius; who was born in 1614, and practised medicine at Amsterdam, with a success and reputation which gave great currency to his opinions on that art.<sup>1</sup> His chemical theories were propounded as subordinate to his medical doctrines; and from being thus presented under a most important practical aspect, excited far more attention than mere theoretical opinions on the composition of bodies could have done. Sylvius is spoken of by historians of science, as the founder of the *iatro-chemical* sect among physicians; that is, the sect which considers the disorders in the human frame as the effects of chemical relations of the fluids, and applies to them modes of cure founded upon this doctrine. We have here to speak, not of his physiological, but of his chemical views.

The distinction of *acid* and *alkaline* bodies (*acidum, lixivum*) was familiar before the time of Sylvius; but he framed a system, by considering them both as eminently acrid and yet opposite, and by applying this notion to the human frame. Thus<sup>2</sup> the lymph contains an acid, the bile an alkaline salt. These two opposite acrid substances, when they are brought together, *neutralize* each other (*infringunt*), and are changed into an intermediate and milder substance.

The progress of this doctrine, as a physiological one, is an important part of the history of medical science in the seventeenth century; but with that we are not here concerned. But as a chemical doctrine, this notion of the opposition of acid and alkali, and of its very general applicability, struck deep root, and has not been eradicated up to our own time. Boyle, indeed, whose disposition led him to suspect all generalities, expressed doubts with regard to this view;<sup>3</sup> and argued that the supposition of acid and alkaline parts in all bodies was precarious, their offices arbitrary, and the notion of them unsettled. Indeed it was not difficult to show, that there was no one certain criterion to which all supposed acids conformed. Yet the general conception of such a combination as that of acid and alkali was supposed to

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<sup>1</sup> Sprengel. *Geschichte der Arzneykunde*, vol. iv. Thomson's *History of Chemistry* in the corresponding part is translated from Sprengel.

<sup>2</sup> *De Methodo Medendi*, Amst. 1679. Lib. ii. cap. 28, sects. 8. and 53.

<sup>3</sup> Shaw's *Boyle*, iii. p. 432.