

and sulphur, and mercury, these names were given, rather to save the hypothesis, than because the substances were really those usually so called: and thus the supposed analyses proved nothing, as Boyle justly urged against them.¹

The only real advance in chemical theory, therefore, which we can ascribe to the school of *the three principles*, as compared with those who held the ancient dogma of the four elements, is, the acknowledgment of the changes produced by the chemist's operations, as being changes which were to be accounted for by the union and separation of substantial elements, or, as they were sometimes called, of *hypostatical principles*. The workmen of this school acquired, no doubt, a considerable acquaintance with the results of the kinds of processes which they pursued; they applied their knowledge to the preparation of new medicines; and some of them, as Paracelsus and Van Helmont, attained, in this way, to great fame and distinction: but their merits, as regards theoretical chemistry, consist only in a truer conception of the problem, and of the mode of attempting its solution, than their predecessors had entertained.

This step is well marked by a word which, about the time of which we speak, was introduced to denote the chemist's employment. It was called the *Spagiric art*, (often misspelt *Spagyric*,) from two Greek words, (*σπᾶω*, *δυσίρω*,) which mean to *separate* parts, and to *unite* them. These two processes, or in more modern language, *analysis* and *synthesis*, constitute the whole business of the chemist. We are not making a fanciful arrangement, therefore, when we mark the recognition of this object as a step in the progress of chemistry. I now proceed to consider the manner in which the conditions of this analysis and synthesis were further developed.

CHAPTER II.

DOCTRINE OF ACID AND ALKALI.—SYLVIUS.

AMONG the results of mixture observed by chemists, were many instances in which two ingredients, each in itself pungent or destructive, being put together, became mild and inoperative; each

¹ Shaw's Boyle. *Skeptical Chymist*, pp. 312, 313. &c.