even a name for the thing implied—did not exist before the middle of the century. How both were gradually introduced will be shown in another of the following chapters.

The atomic view or theory which gave such good help in classifying and in studying the characteristic feature of all chemical processes—the fact that they take place according to definite proportions of weight—had also the effect of promoting a somewhat one-sided habit of thought in the domain of chemical science itself.

The search for the elements, the fixing of their combining weights and properties, absorbed a great deal of time, labour, and ability.

51. Practical influences.

The practical demands of the arts stimulated the preparation of metals, of acids, and of alkalies, all of which possessed useful properties in their isolated, as distinguished from their natural, condition. This gave a stimulus in practice to the invention of processes of disintegration, and in reasoning to processes of analysis. The synthesis or putting together was expected to take place easily, if once the elements or constituent parts were got. In mineral chemistry and metallurgy this is indeed very frequently the case. It was soon found that it is not so in organic chemistry, and that when in organic chemistry a synthesis is effected, the product is frequently unlike that original natural substance from the analysis or disintegration of which the constituents or elements were procured.

It soon became evident that synthesis does not mean merely addition. A certain order had to be observed in the way of putting together, and this led to the introduction of structural, further of geometrical, formulæ. Even then, however, it was found that if a synthesis succeeded,