which have any disposition to combine, are united; if there approaches them a third, which has more affinity with one of the two, this one unites with the third and lets go the other." He then states these affinities in the form of a Table; placing a substance at the head of each column, and other substances in succession below it, according to the order of their affinities for the substance which stands at the head. He allows that the separation is not always complete (an imperfection which he ascribes to the glutinosity of fluids and other causes), but, with such exceptions, he defends very resolutely and successfully his Table, and the notions which it implies.

The value of such a tabulation was immense at the time, and is even still very great; it enabled the chemist to trace beforehand the results of any operation; since, when the ingredients were given, he could see which were the strongest of the affinities brought into play, and, consequently, what compounds would be formed. Geoffroy himself gave several good examples of this use of his table. It was speedily adopted into works on chemistry. For instance, Macquer[2] places it at the end of his book; "taking it," as he says, "to be of great use at the end of an elementary tract, as it collects into one point of view, the most essential and fundamental doctrines which are dispersed through the work."

The doctrine of *Elective Attractions*, as thus promulgated, contained so large a mass of truth, that it was never seriously shaken, though it required further development and correction. In particular the celebrated work of Torbern Bergman, professor at Upsala, *On Elective Attractions*, published in 1775, introduced into it material improvements. Bergman observed, that not only the order of attractions, but the *sum* of those attractions which had to form the new compounds, must be taken account of, in order to judge of the result. Thus,[3] if we have a combination of two elements, P, s, (potassa and vitriolic acid), and another combination, L, m, (lime and muriatic acid,) though s has a greater affinity for P than for L, yet the sum of the attractions of P to m, and of L to s, is greater than that of the original compounds, and therefore if the two combinations are brought together, the new compounds, P, m, and L, s, are formed.

The Table of Elective Attractions, modified by Bergman in pursuance of these views, and corrected according to the advanced knowledge of the time, became still more important than before. The next step

[2] Pref., p. 13.

[3] *Elect. Attract.*, p. 19.