

ment of elementary substances. Such schemes exhibit rather a play of the mere logical faculty, exercising itself on assumed principles, than any attempt at the real interpretation of nature. Other such pure chemical systems may have been published, but it is not necessary to accumulate instances. I proceed to consider their result.

*Sect. 3.—Failure of the Attempts at Systematic Reform.*

It may appear presumptuous to speak of the failure of those whom, like Berzelius and Mohs, we acknowledge as our masters, at a period when, probably, they and some of their admirers still hold them to have succeeded in their attempt to construct a consistent system. But I conceive that my office as an historian requires me to exhibit the fortunes of this science in the most distinct form of which they admit, and that I cannot evade the duty of attempting to seize the true aspect of recent occurrences in the world of science. Hence I venture to speak of the failure of both the attempts at framing a pure scientific system of mineralogy,—that founded on the chemical, and that founded on the natural-history principle; because it is clear that they have not obtained that which alone we could, according to the views here presented, consider as success,—a coincidence of each with the other. A Chemical System of arrangement, which should bring together, in all cases, the substances which come nearest each other in external properties;—a Natural-history System, which should be found to arrange bodies in complete accordance with their chemical constitution:—if such systems existed, they might, with justice, claim to have succeeded. Their agreement would be their verification. The interior and exterior system are the type and the antitype, and their entire correspondence would establish the mode of interpretation beyond doubt. But nothing less than this will satisfy the requisitions of science. And when, therefore, the chemical and the natural-history system, though evidently, as I conceive, tending towards each other, are still far from coming together, it is impossible to allow that either method has been successful in regard to its proper object.

But we may, I think, point out the fallacy of the principles, as well as the imperfection of the results, of both of those methods. With regard to that of Berzelius, indeed, the history of the subject obviously betrays its unsoundness. The electro-positive principle was, in a very short time after its adoption, proved and acknowledged to be utterly untenable: what security have we that the electro-negative element is