

man art is adequate to effect their reunion in the same state as that in which they had existed in those substances; for it was by the refined operations of vitality, the only power which could produce this adjustment, that they have been brought into that condition.

We may take as an example one of the simplest of organic products, namely, *Sugar*; a substance which has been analyzed with the greatest accuracy by modern chemists: yet to reproduce this sugar, by the artificial combination of its simple elements, is a problem which has hitherto baffled all the efforts of philosophy. Chemistry, notwithstanding the proud rank it justly holds among the physical sciences, and the noble discoveries with which it has enriched the arts; notwithstanding it has unveiled to us many of the secret operations of nature, and placed in our hands some of her most powerful instruments for acting upon matter; and notwithstanding it is armed with full powers to destroy, cannot, in any one organic product, rejoin that which has been once dissevered. Through the medium of chemistry we are enabled, perhaps, to form some estimate of the value of what we find executed by other agencies; but the imitation of the model, even in the smallest part, is far beyond our power. No means which the laboratory can supply, no process, which the most inventive chemist can devise, have ever yet approached those delicate and refined operations which nature silently conducts in the organized texture of living plants and animals.

The elements of organic substances are not very numerous: the principal of them being oxygen, carbon, hydrogen, nitrogen, sulphur, and phosphorus, together with a few of the alkaline, earthy, and metallic bases. These substances are variously united, so as to form certain specific compounds, which, although they are susceptible, in different instances, of endless modifications, yet possess such a general character of uniformity, as to allow of their being arranged in certain classes; the most characteristic substance in each class constituting what is called a *proximate orga-*