

at least, would be required to verify the law satisfactorily in the higher parts of the scale.

(342.) The mere agitation of such a question, however, points out a class of phenomena in physical science of a remote and singular kind, and of a very high and refined order, which could never become known but in an advanced state of science, not only practical, but theoretical,—we mean, such as consist in observed relations among the *data* of physics, which show them to be quantities not *arbitrarily* assumed, but depending on laws and causes which they may be the means of at length disclosing. A remarkable instance of such a relation is the curious law which Bode observed to obtain in the progression of the magnitudes of the several planetary orbits. This law was interrupted between Mars and Jupiter, so as to induce him to consider a planet as wanting in that interval;—a deficiency long afterwards strangely supplied by the discovery of *four* new planets in that very interval, all of whose orbits conform in dimension to the law in question, within such moderate limits of error as may be due to causes independent of those on which the law itself ultimately rests.

(343.) Neither is it irrelevant to our subject to remark, that the progress which has been made in this department of chemistry, and the considerable exactness actually attainable in chemical analysis, have been owing, in great measure, to a circumstance which might at first have been hardly considered likely to exercise much influence on the progress of a science,—the discovery of platina. Without the resources placed at the ready disposal of chemists by this invaluable metal, it is difficult to conceive that the multitude of delicate analytical experiments which have been required to construct the fabric of existing knowledge could have ever been performed. This, among many such lessons, will teach us, that the most important uses of natural objects are not those which offer themselves to us most obviously. The chief use of the moon for man's immediate purposes remained unknown to him for five thousand years from his creation. And, since it cannot but be that innumer-