

na which arise on the application of fire, or of any other heating cause. We should be greatly deceived if we referred only to sensation as an indication of the presence of this cause. Many of those things which excite in our organs, and especially in those of taste, a sensation of heat, owe this property to chemical stimulants, and not at all to their being actually *hot*. This error of judgment has produced a corresponding confusion of language, and hence had actually at one period* crept into physical philosophy a great many illogical and absurd conclusions. Again, there are a number of chemical agents, which, from their corroding, blackening, and dissolving, or drying up the parts of some descriptions of bodies, and producing on them effects not generally unlike (though intrinsically very different from) those produced by heat, are said in loose and vulgar language, to burn them; and this error has even become rooted into a prejudice by the fact that some of these agents are capable of becoming actually and truly *hot* during their action on moist substances, by reason of their combination with the water the latter contain. Thus, quicklime and oil of vitriol both exercise a powerful corrosive action on animal and vegetable substances, and both become violently hot by their combination with water. They are, therefore, set down in vulgar parlance as substances of a hot nature; whereas, in their relations to the physical cause of heat, they agree with the generality of bodies similarly constituted.

(346.) The nature of heat has hitherto been chiefly studied under the general heads of—

- 1st, Its sources, or the phenomena which it usually accompanies.
- 2d, Its communication from its sources to substances capable of receiving it, and from these to others, with a view to discover the laws which regulate its distribution through space or through the bodies which occupy it.

* *Novum Organum*, part ii. table 2. (24), (30), &c. on the form or nature of heat.