

Modern philosophers have thought it necessary to make a distinction in terms between the cause and effect of the sensation that is called heat, and have adopted the word caloric as expressive of the agent. So far as our own opinions are concerned, this refinement in phraseology is not a matter of little importance; although there will be equal difficulty in answering the apparently simple question "what is it?" whether one term be used or the other. It might be supposed that the distinction of terms is consequently unnecessary; but as their appropriate use may sometimes prevent a confusion or a circumlocution of expression, we shall use the word caloric as expressive of the agent in those instances where there might be a want of precision if the term heat were employed.

The various opinions that have been entertained concerning the nature of caloric may be considered under two general heads. Some persons imagine it to be a material agent of so great tenuity as to evade our observation, its existence being proved only by its effects; while others consider it as a property of that principle called motion. We are not among those who expect to ascertain with precision the elements of heat, light, electricity, and motion; for although we entertain an opinion that they are all united, and perhaps modifications of the same agent, yet it is, in all probability, one of those primary created agents which the most refined analysis, and the most careful inquiry, will ever fail to discover. To ascertain the variations and dependances of effects is within the reach of the human mind, but the cause is hidden from the most curious gaze, and must ever remain the secret of that self-intelligent Power by which it was brought into existence.

Among those who have maintained the immateriality of heat, and have considered it a property of matter producing a vibration among its particles, we may mention the names of Bacon, Boyle, Newton, Davy, and Leslie. The theory is well expressed by Bacon, "*calor est motus expansivus, cohibitus, et nitens per partes minores.*"

In favour of this hypothesis, it has been argued, that as caloric does not possess weight, and is not under the guidance of those laws which govern bodies in relation to the conditions of motion and rest, so it cannot be a substance.

The opinions of Davy, the master mind that remodelled