

the direct influence of the fire, will also indicate a considerable increase of temperature; in this case, a portion of the air, passing through and near the fire, has become heated, and has *carried* up the chimney the temperature acquired from the fire. There is at present, no single term in our language, employed to denote this third mode of the propagation of heat; but we venture to propose for that purpose, the term *convection*,\* which not only expresses the leading fact, but also accords very well with the two other terms. Each of these modes of the propagation of heat possesses certain peculiarities, on which we proceed to make a few remarks.

*Radiation of Heat.*—Heat radiates *in vacuo* in all directions equally, and with immeasurable velocity. Heat radiates also through all gaseous bodies, and more or less, through transparent media. Radiation goes on at all temperatures; but the quantity of heat radiated in a given time, bears some proportion to the excess of the temperature of the radiating body, above that of the surrounding medium. Radiant heat is

\* *Convectio*, a carrying or conveying. We state these three modes of the propagation of heat in accordance with popular language; and as expressive of the modes in which heat is *apparently* communicated. The convection of heat, philosophically considered, is in reality a modification of the conduction of heat; while the conduction of heat may be viewed as an extreme case only, of the radiation of heat.