

that of the internal part of a tree; whereas in winter it is quite the contrary. They have not remembered that the roots have constantly the degree of heat which surrounds them, and that this heat of the internal part of the earth is, during all winter, considerably greater than that of the air, and the surface of the earth. They did not consider that the motion alone of the pith, already warm, is a necessary cause of heat, and that this motion, increasing by the action of the sun, or by an external heat, that of vegetables must be so much the greater as the motion of their pith is more accelerated, &c.

Here the air contributes to the animal and vital heat, as we have seen that it does to the action of fire in combustible and calcinable matters. Animals, which have lungs, and which consequently respire the air, have more heat than those deprived of them; and the more the internal surface of the lungs is extended, and ramified in a greater number of cells, the more it presents greater superficies to the air which the animal draws by inspiration; the more also its blood becomes hotter, the more it communicates heat to all parts of the body it nourishes, and this proportion takes place in all known animals.

Birds,