

as the sun always shines vertically at some point within the tropics, that region of the earth is the hottest, and is called the Torrid Zone. There the days and nights are nearly equal throughout the year, and the temperature is, therefore, comparatively uniform. The farther we get from the equator, the less is the amount of heat received, because the sun's rays strike the earth more obliquely; and the difference between summer and winter increases in the same proportion. In the temperate regions, the four seasons—spring, summer, autumn, and winter—are distinctly marked. In the Frigid Zone the short summer is very hot, because the sun is then nearly always above the horizon, and a great amount of heat is thus accumulated; but the winters are long, and bitterly cold, the sun being scarcely seen for months in the year: the days are very short, the nights very long. The temperature of a place depends, therefore, principally on its latitude.

(2.) *Elevation above the Sea-level.*—The temperature of the air constantly diminishes as we ascend above the sea-level, in the proportion of 1° F. for about 300 feet rise. The air is therefore always cool at great elevations, even in tropical latitudes. The city of Quito, for instance, though situated on the equator, has a temperate climate, it being situated between 9,000 and 10,000 feet above the sea.

(3.) *Proximity of the Sea.*—The water of the ocean becomes heated by the sun's rays much less rapidly than the land, and also parts with this heat much more slowly by radiation. The temperature of water is therefore much more equable than that of land, and, as the surrounding air partakes of the same character, islands and countries near the sea have the heat of summer and the cold of winter greatly modified, and enjoy a much more equable climate than inland countries. This effect is greatly increased when marine currents bring a large quantity of warm water, as is the case with the Gulf Stream on the western shores of Europe. On this account, the temperature of the North of Ireland is about equal to that of New York, which is 13° nearer the equator. At Moscow, which is surrounded by a large expanse of land, the average difference between summer and winter temperature is as much as 50° , while at Edinburgh it is only about 20° .

(4.) *The Mountain Slope, or Aspect of the Country.*—The side of a mountain, or hill, which faces the sun at noon receives a much greater quantity of heat than the opposite side, and its mean temperature is therefore proportionally greater. There are some remarkable exceptions to this rule, due to other causes, especially in the Himalaya and Pyrenees mountains.

(5.) *Character of the Prevailing Winds.*—If they come from a warmer region, they raise the temperature; if from a colder, they lower it. The prevailing winds of Europe are from the west and south-west: as these blow over a vast expanse of water warmed by marine currents, the countries where they blow have their temperature raised. Of a very opposite character are the east winds which often prevail in spring-time in the western countries of Europe. These, blowing from the cold plains of Siberia and Russia, are cold and dry at this season; but in summer, as these plains are hotter than England, they are warm winds. The character of the winds affects humidity as well as temperature. The south-west winds of England are moist, and bring rain; so do the east winds of South America, and the south-west monsoons of India. In England, in spring-time, fogs are prevalent, especially on the south coast, from the meeting of the warm moist south-west winds with the cold east winds. The former, being suddenly cooled, are unable to retain their moisture in an invisible state, and so it becomes visible as fog, mist, or rain.

(6.) *Direction of Mountain Chains.*—If these are so placed as to form a barrier against cold winds, the country on one side will be warmer than that on the other: if they intercept moist winds, one side will be more humid than the other. Thus the countries south of the great mountain axis of the Old World—as Hindostan, Sahara, Italy; &c.—are free from cold winds. Again,

on the east side of the Andes, rain is very abundant; on the west side it seldom falls.

(7.) *Human Agency.*—The degree of cultivation a country has reached has a sensible effect on the climate. The removal of forests tends to raise the temperature, and to render the air less humid. On the other hand, a large extent of forest sometimes acts as an effectual barrier to cold or pestilential winds. The clearing of the Apennines is believed to have affected the climate of the right bank of the Po, so that the Sirocco now prevails in that district, though it was formerly unknown. It is estimated that the mean annual temperature of England is 2° F. higher now than a century ago, and this result has been brought about by the removal of forests and the cultivation of the land.—*Papers for the Schoolmaster.*

On Punishing.

Ought corporal punishment to be inflicted upon children?

Many think that this is a matter already settled, since Solomon declared, "Foolishness is bound in the heart of a child, but the rod of correction shall drive it far from him." Whether we are to infer from such language more than this, that children need rigorous government, I leave to others to decide. It is very certain that good men have been brought up equally well with and without the rod. The selection of the means of discipline must be left with the parents. If they can maintain good government without inflicting bodily chastisement, all the better.

Some children are easily governed. Some are very susceptible to persuasion and to reason. It may be laid down as good doctrine, that the rod is not to be the first and cheap resource, but is to be deferred until all other means have been tried and have failed. Some parents would almost seem to watch for an opportunity to flagellate. They seem to think that the rod is in some mysterious way an instrument of virtue—a medium of mystic grace (the very antithesis of "the laying on of hands"), by whose touch certain beneficent qualities are imparted. All government, to such, seems to reside in the switch. Only whip enough, and you have cleared your skirts of all blame, whatever becomes of the child.

But, the more sensible view is, that the rod should be a thing in reserve; something on which to fall back in extreme cases, when everything else has failed—but to be wholly avoided, if possible—and never used with violence of temper on the parent's part.

1. It should be dedicated to the baser faults. A child should never be struck for inadvertencies, for faults of forgetfulness, for irritabilities. But for lying, for filthiness, for cruelty to companions or to the brute creation, for downright meanness, it may be used. It is a coarse remedy, and should be employed upon the coarse sins of our animal nature.

2. When employed at all, it should be administered in strong doses. The whole system of slaps, pinches, snappings, and irritating blows, is to be condemned. These petty disciplines tend to stir up anger, and rather encourage evil in the child than subdue it. To be of any use, corporal punishment should be emphatic and full of transient pain. Pain is the curative element in punishment. It emphasizes transgression; it tends to associate temptation to evil with the receiving of pain, and so furnishes the child a motive for resistance; in cases of temper, obstinacy, or cruelty, it acts as a literal counter-irritation, and brings down the passional excitement, by raising up a sharp counteracting sensation of suffering. But for any such end, there should be sharp and decisive dealing. Never use the rod for trifles—never trifle with it. Severely, or not at all.

3. In administering physical punishment to a child, the head should be left sacred from all violence.

A person who will strike a child in any manner upon the head