

THE TYRANNY OF TEMPERATURE

DESPITE his elaborate internal temperature-control mechanism, optimum temperature and humidity ranges exist for man, varying somewhat with activity and the type of clothing worn. For light work indoors, it appears that temperatures of from 65 to 70° Fahrenheit and relative humidities of about 60 per cent at the lower temperature and 40 per cent at the higher give the greatest feeling of comfort and the best conditions for efficiency. When sleeping, somewhat lower temperatures are preferable provided some form of covering is used to maintain a temperature of about 80° F. next to the skin. The temperature-regulating mechanisms of the body are sufficiently flexible, however, so that in completely dry air indoors, human beings can tolerate temperatures up to 112° when nude and up to 138° when clothed. Clothing protects the body not only against cold, but also against heat, as desert dwellers have long known. As the humidity at high temperatures rises and perspiration evaporates more slowly, clothing becomes decreasingly valuable. In saturated air at 88° F., the clothed body is unable to prevent its internal temperature from rising above normal, and a genuine fever results. For a nude body, the corresponding limit is about 92° F.

At low temperatures the limit of toleration is vaguer, since it is greatly affected by clothing and physical activity; but when the air inside the clothing becomes too cool, just as when it becomes too warm, the body is so fully employed in the task of keeping its internal temperature constant that there is little surplus of energy for any other activity.

Much effort has gone into the gathering of objective data by which the general level of civilization in various areas may be judged, and while it is easy to overestimate the effect of a given variable, it does seem that a good climate is an important aid, although not a guarantee, for a low average death rate, low infant mortality and high per-capita income. For example, tests of general culture have shown Washington, Oregon, California, New York, Connecticut and Massachusetts high on the list. Indeed, it has been suggested that development of heating means facilitated the spread of civilization to northern Europe in the Middle Ages. Similarly, modern air conditioning helps to mitigate the situation of the tropics.

RESEARCH is the department of a
the substance on which it grows.

Phos If you design or invent a uniform that adjusts to the optimum in terms of hot, cold, dry or moist you have never slumbered - King's tree