

ters and investigated their inheritance by themselves. Thus, for instance, he fixed his attention on tallness and dwarfness. He crossed tall and dwarf varieties of peas. He found that the next, or hybrid, generation, consisted of plants all of which were tall. He said, therefore, that tallness was *dominant*, while shortness which had apparently disappeared, he called *recessive*. He then collected the seeds from these hybrid tall plants which had been allowed to fertilize themselves, and found that out of every hundred about 75 developed into tall plants and 25 into short plants. He thus obtained an important numerical relation, namely, that dominant and recessive characters appear in the third generation in the proportion of 3 to 1. From this and many other similar experiments which were carried on through several successive plant generations, he drew some important theoretical conclusions. One of them is known as the principle of dominance, and another as the segregation of unit characters in the gametes or sex-cells. It is impossible to explain these principles in detail in the limits of this address, but their profound importance for understanding inheritance is now universally recognized. These principles are being applied on an extensive scale at the present moment in the breeding of new and useful varieties of animals and plants. Mendel's principles of inheritance have also been applied successfully in explaining the inheritance of certain characters in man, such for instance as eye colour, an abnormality known as brachydactyly, and a defect known as night-blindness. Light from the same source has been thrown upon the transmission of a number of human diseases.

Eugenics.

During the last few years, a new science known as Eugenics has been founded. The word "Eugenics" was invented by the late Sir Frances Galton, and he defined it as "the study of agencies under social control that may improve or impair the racial qualities of future generations either physically or mentally." Eugenics, as thus defined, includes the study of all agencies which have racial importance, i.e., both those concerned with nature and those concerned with nurture. The natural agencies are those which have to do with the qualities and gifts implanted in man-