

was therefore unable to take any great leaps, and especially unable to leap across a hedge into a neighbour's garden—a quality which seemed advantageous to the owner, as the territories were divided by hedges. It therefore occurred to him to transmit this quality to other sheep, and by crossing this ram with normally shaped ewes, he produced a whole race of sheep, all of which had the qualities of the father, short and crooked legs and a long body. None of them could leap across the hedges, and they therefore were much liked and propagated in Massachusetts.

A second law, which likewise belong to the series of progressive transmissions, may be called the *law of established or habitual transmission*. It manifests itself in this, that qualities acquired by an organism during its individual life are the more certainly transmitted to its descendants the longer the causes of that change have been in action, and that this change becomes the more certainly the property of all subsequent generations the longer the cause of change acts upon these latter also. The quality newly acquired by adaptation or mutation must be established or constituted to a certain degree before we can calculate with any probability that it will be transmitted at all to the descendants. In this respect transmission resembles adaptation. The longer a newly acquired quality has been transmitted by inheritance, the more certainly will it be preserved in future generations. If, therefore, for example, a gardener by methodical treatment has produced a new kind of apple, he may calculate with the greater certainty upon preserving the desired peculiarity of this sort the longer he has transmitted the same by inheritance. The same is clearly shown in the transmission of diseases. The longer consumption