

born with exactly the same spot marked or scarred. Many instances have been recorded of cats, dogs, and horses, which have had their tails, legs, &c., amputated or injured, producing offspring with the same parts ill-formed; but as it is not very rare for similar malformations to appear spontaneously, all such cases may be due to coincidence. It is, however, an argument on the other side that "under the old excise laws the shepherd-dog was only exempt from tax when without a tail, and for this reason it was always removed;"⁶⁰ and there still exist breeds of the shepherd-dog which are always born destitute of a tail. Finally, it must be admitted, more especially since the publication of Brown-Séguard's observations, that the effects of injuries, especially when followed by disease, or perhaps exclusively when thus followed, are occasionally inherited.⁶¹

Causes of Non-inheritance.

A large number of cases of non-inheritance are intelligible on the principle, that a strong tendency to inheritance does exist, but that it is overborne by hostile or unfavourable conditions of life. No one would expect that our improved pigs, if forced during several generations to travel about and root in the ground for their own subsistence, would transmit, as truly as they now do their short muzzles and legs, and their tendency to fatten. Dray-horses assuredly would not long transmit their great size and massive limbs, if compelled to live on a cold, damp mountainous region; we have indeed evidence of such deterioration in the horses which have run wild on the Falkland Islands. European dogs in India often fail to transmit their true character. Our sheep in tropical countries lose their wool in a few generations. There seems also to be a close relation between certain peculiar pastures and the inheritance of an enlarged tail in fat-tailed sheep,

⁶⁰ 'The Dog,' by Stonehenge, 1867, p. 118.

⁶¹ The Mot-mot habitually bites the barbs off the middle part of the two central tail-feathers, and as the barbs are congenitally somewhat

reduced on the same part of these feathers, it seems extremely probable, as Mr. Salvin remarks ('Proc. Zoolog. Soc.' 1873, p. 429), that this is due to the inherited effects of long-continued mutilation.