

is part and parcel of the animal system? Then come a series of changes and metamorphoses, at some of which one type stops, while another passes on. One type undergoes certain changes before it is born, another not till a longer or shorter time after birth; one type retains a certain peculiarity of organization for almost its whole lifetime, and this organization forms one of its principal characteristics, while in another, the same peculiarity, lasting but a short time, is too often looked upon as a mere scaffolding and prop-work, which serves to hold the structure in shape while it is perfecting. Because one has a long and the other a short existence, the same characteristics in two different animals are very differently estimated. Minutely described in the first case, they are perhaps totally ignored in the other as unessential, as having no particular reference to the type in which they occur.

Can this be? Is it not true, that each and every type undergoes a series of changes, not only during its "embryonic period," but throughout life; some following after longer, and others after shorter, spaces of time, so that their peculiarity and periodicity characterize this, or that, or the several different types, as distinct from one another? Different animals shed their teeth at diverse ages, and then acquire other habits. Some shed their epidermis (dandruff, scales, leathers, or slough) at stated periods, and others constantly. Some bear young soon after they are born, and others at two, three, ten, fifteen, twenty or more years of age, and this function ceases in them at diverse ages. And yet this latter change is a normal development just as truly as any which occurs at a much younger age. The long space of time that may follow the period of sterility is quite as prominent a characteristic of the life of an animal as any preceding state. At that period, so great a revolution takes place in the system as sometimes to endanger life when adaptation to its requirements is accidentally prevented. Yet, after such metamorphoses, are not the peculiarities of the functions of some of the organs greatly changed? And so we might go on, enumerating many other progressions and alterations, to show, that life after birth is not fixed to one uniform phase; but that there is a constant and more or less frequent formation and suppression of functions, and a series of alterations going on in the organization, not only from the beginning to the end of the embryonic period, but ever afterwards, through the whole duration of life, till death.

Finally, we must contend that it is a false idea of the physiology of animal life to suppose that in the egg the animated being is only forming; that its organs are only combining with each other in order to establish regular communications between them for certain ends, and to prepare the way for a variety of functions, the beginning of which is not realized until a definite and unvarying relation of parts with definite proportions has been completed. As if the