

easy to see that the changes which every species of animal and plant experiences cannot always be improvements. In fact, many phenomena of differentiation, which are of direct advantage to the organism itself, are yet, in a wider sense, detrimental, inasmuch as they lessen its general capabilities. Frequently a relapse to simpler conditions of life takes place, and by adaptation to them a divergence in a retrograde direction. If, for instance, organisms which have hitherto lived independently accustom themselves to a parasitical life, they thereby degenerate or retrograde. Such animals, which hitherto had possessed a well-developed nervous system and quick organs of sense, as well as the power of moving freely, lose these when they accustom themselves to a parasitical mode of life; they consequently retrograde more or less. There the differentiation viewed by itself is a degeneration, although it is advantageous to the parasitical organism. In the struggle for life such an animal, which has accustomed itself to live at the expense of others, by retaining its eyes and apparatus of motion, which are of no more use to it, would only expend so much material uselessly; and when it loses these organs, then a great quantity of nourishment, which was employed for the maintenance of these parts, benefits other parts. In the struggle for life between the different parasites, therefore, those which make least pretensions will have advantage over the others, and this favours their degeneration.

Just as this is found to be the case with the whole organism, so it is also with the parts of the body of an individual organism. A differentiation of parts, which leads to a partial degeneration, and finally even to the loss of individual organs, is, when looked at by itself, a degenera-