

easily reconcilable to the hypothesis with respect to the cause of Instinct which I am now considering; and probably a great many more might be brought forward: but my object here is merely to consider the general principle; it would, indeed, be needless and endless to discuss particular cases, and fully to account for all aberrations, which, in the present state of our knowledge, it would not be possible to do.

But there is one circumstance of a less confined nature, and upon which a good deal of the question hinges, to which it will be proper to advert. I mean the change that has been observed in the nervous system of some insects in their passage from one state to another. It is contended that this change has nothing to do with any alterations that then take place in their instincts, but only with those in their organs of sense or motion.* In confirmation of this opinion it is further affirmed, that in three whole Orders,† the structure of the nervous chord is not altered, and yet they acquire new instincts.

But though no change has been *noticed* to take place in the number of ganglions of these Orders, there must necessarily be a development in those that render nerves to the wings and reproductive organs; so that, though some ganglions may not become confluent, as in the *Lepidoptera*, yet the range of their nerves is increased. In this respect, they are in much the same situation with the higher animals, though their nervous system, as to its organization, undergoes no material change, yet from the period of their birth, it is gradually more and more developed till they arrive at the age of puberty, when new appetites are experienced and new powers acquired, not by *metaphysical*, but by *physical*, action upon their several systems. In the three Orders referred to by Mr. Spence, there is not that

* Introd. to Ent. iv. 27, 28.

† Viz. Orthoptera, Hemiptera, and Neuroptera