

the forces and material of the being can develop at one time but one or a few ova; in others inferior, the amount required for each is so small; or, is so small a part of the whole energies of the individual, that the number produced is almost indefinitely large.

4. *Relation of the law of amplification to the law of axial distribution of force.*—The condition as to the distribution of force along the body-axis under a type, determines, as has been shown, the form or general nature of the structure, in any case, and the structure thus established is that which undergoes amplification. Thus the law of amplification is secondary to the law of axial distribution. Gross-amplification in a Whale is amplification of a *urosthenic* structure, or one in which the forces are so distributed along the axis that the anterior pole is not very highly superior to the posterior—a structure which is of great length and size behind *because* urosthenic, or feeble in cephalic polarity, while, at the same time, powerful in life-system.

5. *Diminution of cephalic concentration or polarity not necessarily a diminution of the total amount of force in an organism.*—As a Whale has more locomotive force than any other animal, it is evident that the transfer of force posteriorly, or the loss of cephalic concentration, does not necessarily involve a great diminution of strength of body: in a transfer of force, there is not necessarily a lessening of force. In fact, it might be inferred from the case of the Whale, and also from examples among the higher Mammals, that sensorial and other higher cephalic force becomes converted, in the transfer posteriorly, into muscular force; so that a Whale is a representative of the force of a typical megasthene,—a Lion, for example—in the condition almost exclusively of *muscular* force. The last part of this statement may be quite true; for the Whale may not differ from a Lion so much in amount of systemic force as in the proportions of that force divided between the several kinds of muscular, sensorial, and psychical. But this commutation of kinds of force cannot properly be admitted. It is more correct to say that the systemic developments in one case produce almost solely muscular force; in the other, less of this with a larger proportion of sensorial, or sensorial and psychical; and that these proportions are determined by the cephalic polarity of the life-energy characterizing the organism under development. The brain is the last part of an animal that is perfected. It becomes complete in its powers only after the rest of the structure has so far reached its limits of growth that the whole system may combine its nutrient energies and material on the one great feature of the being. In this way the cephalized structure attains its most highly cephalized condition.

The views here set forth rest on the ground that in a living organism there are not only molecular forces everywhere individually at work, carrying on all changes and growth, but also