cephalic center, and the degree of subordination to it in the structure. The following are some of the ways or methods in which it is manifested.

(1.) With *superior* cephalization, that is, as species rise in grade or rank, more and more of the anterior part of the body, or of its members, renders service to the head; with *inferior*, less and less.

(2.) With *superior* cephalization, the structure of the head, or of the anterior portion of the body, becomes more and more compacted, perfected, and condensed or abbreviated; with *inferior*, the same portion becomes more and more lax in its parts or loosely put together, and imperfect in the parts or members themselves; and, at the same time, the whole is more and more elongated, and spaced out or enlarged.

(3.) With *superior* cephalization, the posterior portion of the body becomes more and more compacted, or firmly put together and abbreviated; that is, as concentration goes on *anteriorly*, there is abbreviation *posteriorly*. Even the tail shows grade; for great length, or size, or functional importance is actually a mark of inferior grade, other things being equal.

(4.) With *inferior* cephalization, there is not only a less and less concentrated or compacted and perfected state of the whole structure, before and behind, but, in its lower stages, the degradation of the structure extends to an absence of essential parts, as *teeth*, *members*, *senses*; and often, also, to a gross enlargement of the body beyond the size which the system of life within can properly wield, and in this case the body is stupid and sluggish."

The question as to the condition of the life-forces thus passes from the sphere of speculation to one of direct observation. A *Lion*, for example, exhibits to the eye the high degree of cephalization of its structure by its strength anteriorly, or that of its head and fore-limbs, and the correlate form and structure of these and other parts of the body; and a *Whale* manifests its low degree by its degraded head and senses, its feeble limbs partly obsolete, and the immense size and strength of the tail; and this is so obvious, that the muscular or motorial force of the two might be sufficiently well represented by the annexed figures: figure 1 corresponding to that of the Lion, and 2, to that of the Right Whale, A being the anterior or cephalic extremity and P the posterior or caudal extremity. The figures give a faint idea of what is meant by *cephalization* and *decephalization*. If the sensorial forces of the Lion were taken into consideration, the contrast between the two would be still greater. *c* is the position of the prime systemic center; its remoteness from the front margin in the Right Whale, (figure 2) is one of the marks of the extreme decephalization of the structure. (See on Cephalization, No. III.) The arrangement of the muscular force in different Herbivores might be represented by figures intermediate between 1 and 2.

1.

2.