

about forty-five degrees, and at a right angle; and after the same manner all the cells of the lateral system, receding from their peripheric terminations toward their bases, cross those of the radial system. It must be borne in mind, however, that these various angles of traverse are not as if formed by lines coursing on a plane, but as if on the surface of a sphere; that is, they are spherical angles.

This, in general terms, may be said to be the relation of those cells of the radial and lateral systems which lie between the equatorial plane and such a plane as would divide the body by traversing it on a level with the basal ends (*Fig. 23 j²*) of the tentacular apparatus; but beyond this zone and towards the mouth, the relations of these cells change very rapidly: within the zone the cells of the lateral system diverge from the tentacular socket about at right angles to its axis, but beyond this they diverge at a gradually lessening angle, till at the tip of the socket (*j²*) they trend, as it were in direct continuation of its axis, to the nearest point in the periphery, somewhat in the same manner as the hairs project from the tail of a squirrel along the sides and at the end. As the cells of the radial system do not penetrate the spaces which intervene between the tentacular sockets and the interambulacral bands, which the plane of the former bisects, the cells of the lateral system are here left free to act by themselves.

The motory system of the tentacles is so intimately interwoven with their whole structure, that it is most convenient to describe it when presenting the anatomy of these organs in detail; but we will make one or two remarks in this connection in regard to the relations which their different walls bear to those of the body. Although the outer wall (*Fig. 15 β β' β''*, and p. 235 *Fig. 87 β'' β'''*) of the tentacular base is composed of much smaller and differently shaped cells from those of the sockets (*j j¹ j²*), yet we must believe that the walls of the two are essentially one continuous layer; and, referring to what we have previously ventured to suggest, that these sockets are depressions in the interambulacral layer, and also that the whole tentacular apparatus is a prolongation of two opposite points of the peripheric system, endowed with the faculty of more extensive motion than the basis from which it arises. Any one familiar with the very simple tentacular apparatus of *Bolina*, *Chiaja*, *LeSueuria*, and *Euramphæa*, will readily comprehend that whilst in them the tentacular sockets are shallow depressions from which the peripheric prolongations arise, in *Pleurobrachia* these sockets differ only in degree by being more deeply plunged into the mass of the body. The inner wall (*Fig. 15 g²* and *Fig. 87 γ γ'*) of the tentacle (*k*) and its base (*g γ*), although very thick at the latter point, is, to all appearance, identical in cellular structure and continuous with the thin wall (*Fig. 87 γ'' γ''' c*) of the chymiferous tubes, which we have next to describe. Throughout the whole extent of the digestive cavity and chymiferous system, the wall is composed of extremely elongated cells, which, trending