

What I would here note is, that we are perfectly willing to advance thus far and recognize these two primary and the third secondary cell layer. But there, in our appreciation of embryology as bearing upon pathology, we have been strangely apt to stop.

But now, just as the hypoblast gives origin to the mesoblast, so it is perfectly legitimate for us to recognize a similar process on the part of the epiblast; for the epiblastic cells in the immediate neighborhood of the primitive groove proliferate rapidly, and, in so doing, project in part below the original line of the epiblast, and, being forced inwards, a regular mass of cells is developed, in the central portion of which, around the spinal canal, there still remains evidence of its origin, in the form of a definite epithelial lining. This second portion becomes cut off completely from the superficial epiblast to form the mother tissue of the nervous system. Similarly, the hypoblast gives off a second localized mass of cells to form the notochord. Professor Minot has pointed out to me that, while possessing special features, the cells forming this notochord retain throughout epithelial characters, and must assuredly not be regarded as being of connective tissue type. The nature of the cells forming the chordoma of Ribbert makes him more than doubtful as to the origin of this tumor from notochordal remains. I have thus, in deference to this authority, modified my original writing in this respect.

The point I wish here to indicate is that mesoblast, "neuroblast," and notochord are derived from the two primitive cell layers, and, the first two, at least, *lose the lining—membrane characteristic of these two earliest layers, and take on a less differentiated condition prior to further evolution.* At a somewhat later period the mesoblast repeats the process of differentiation, and, from being a simple undifferentiated cell mass which we may compare with the morula, certain of its cells growing outwards between the epiblast and hypoblast, become arranged into a definite layer, to form or enclose the primitive body cavity. From this point onwards we can distinguish two structures of mesoblastic origin—the mesothelium, or lining membrane portion of the mesoblast; and the mesenchyme, or, as I may term it, the mesoblastic pulp.

It will be seen that I here make no note of the separation of mesoblastic elements into archiblast and parablast, as laid down by His. His's conception of the parablast, as arising from the elements of the white yolk and from the "granulosa cells," is now known to be wrong, and indeed he has himself withdrawn his earlier hypothesis as to its origin. Add to this, that so hopeless a confusion has arisen among writers as to what is archiblastic and what parablastic, that we have no