the more central material. In this state, very little pressure is required to crush into angular fragments the now brittle shell of the mesoblast, and, by a trifling disturbance of the yolk fluid, the broken parts may be made to roll over till they display their inner surfaces covered with ridges, (Pl. 9, fig. 12, *d*, *d*[1],) or present a profile of their thickness, showing in an indisputable manner that this thickness is uniform throughout the whole extent of the spheroid mass, to which it bears a very small proportionate diameter. Now, the very fact that the water passes through the exterior of the mesoblast, leaving it intact, and powerfully reacts upon that which it last comes in contact with, is of itself evidence enough to show that the acknowledgment of a cell wall here depends merely upon our interpretation; and whether a denser layer, inclosing a more fluid substance, can be called a wall, or is to be considered only as the extreme of a mass gradually increasing in density centrifugally, from centre to superficies. The latter view, fortunately, cannot be sustained without the help of questionable reasoning, when we refer to the manner in which the entoblasts, as they gorge the parental matrix, press outwards, in angular prominences, (Pl. 9, fig. 6a, *c*, *d*, *i*, *j*,) the thin resistant layer which bounds their field of development, and persist in restraining them from projecting uncovered into the hyaline fluid of the primary cell.[1]

Again: the existence of entoblasts, without a cell wall to contain them, would be an unprecedented phenomenon; yet here such an envelope is denied, inasmuch as there does not appear any visible differentiated layer of protein compound corresponding to the usually received definition. But, as it has been shown regarding the wall of the primary cell, (which wall, as likewise here, is not visible at first on account of its lack of refractive powers,) there is a thin stratum, sufficiently tenacious to restrain the more fluid contents, and this stratum sustains a very different reaction from the latter when immersed in water. To such an envelope, whether visible or not, most certainly the title of cell wall belongs; and under this mode of consideration we may extend the definition of a cell wall beyond the hitherto stereotyped bounds, and embrace a broader and more general view of its essential nature, characterizing it as a hollow, more or less spherical, layer, of indefinite density, tenacity, and refraction, which surrounds the field of some definite, though isolated and homogeneous, function.

When speaking of the plasticity and resilience of the ectoblast, we have already

[1] As the entoblasts of the yolk cells have generally been described as crystalloid bodies, swimming either free in the yolk or surrounded by a transparent cell wall, (J. MÜLLER, Ueber den glatten Hai des Aristoteles, Ak. d. Wiss., Berlin, 1842, p. 37, and Rathke, Entwick. d. Schildkröten, p. 5,) and as the mesoblast which incloses them has been overlooked by all previous observers, we have not been tired in accumulating proof upon proof, in order to show that they are, in every instance, actually inclosed in a sac, and that this sac, and not the crystalloid body, is the mesoblast of the yolk cells.