Archæan gneiss brought up by great displacements. The complete divergence in structure and lie, however, between these schists and the true old gneiss, as well as the apparent conformable succession from the limestones up into the schists were generally regarded as irreconcilable with the explanation proposed by Nicol, and Murchison's views continued to maintain their hold.

Various writers had meanwhile proposed other solutions of the difficulties; but it was not until the year 1884 that the ground having been studied in great detail, conclusions were arrived at independently by the Geological Survey and Professor Lapworth, which have at last given the key to the problem.[1] Nicol was undoubtedly right in maintaining that the old gneiss is brought up again to the east of the limestones, but he failed to account for the origin of the so-called younger gneisses. It now appears that, by an extraordinary series of upthrusts, the old gneiss has not only been forced from beneath the thousands of feet of strata under which it lay buried, but has been pushed bodily over these strata, sometimes for a distance of at least ten miles. Where the masses of gneiss, thus torn off and driven westwards, have been of sufficient thickness they have retained much of their old structure. They appear in vertical beds with their pegmatites and hornblendic bands, and repose upon gently-inclined limestones, shales, and quartzites. But along the upper and under surfaces of such displaced masses, the rock has been subjected to such intense pressure as it moved along that its component minerals have been crushed and drawn out in the direction of movement, so as to give the rock a fissile, streaky, or schistose structure. Where the masses of gneiss have been comparatively thin

[1] Report by B. N. Peach and J. Horne, *Nature*, 1884, p. 29. Lapworth, *Proc. Geologists' Association*, viii. (1884), p. 438.