

of Stainmoor, the natural course of the vales of Tees and Greta may account for the directions at first taken by the boulders to Darlington; and the plains of Cleveland, and the vales of Mowbray and York, easily conduct us to the Humber. But still the same kind of difficulty as that presented by Stainmoor meets us at the foot of the Hambleton hills and the wolds of Yorkshire, over which high and continuous ranges, the boulders have been lifted from the vale of York, which spreads wide and far, several hundred feet below, and drifted onward till they reach the sea, 100 and more miles from their parent rocks.

On the line of these hills there is no great dislocation of strata: their elevation was probably effected by a general upward movement of the whole area of the eastern side of England, affecting equally the chalk wolds, oolitic hills, and red sandstone vale. As, therefore, it by no means follows in this case that such distinctions of level were aboriginal (as in the instance of Stainmoor and the vale of Eden), it may be *imagined*, that from the Penine ridge to the German Ocean, one long slope permitted descending streams to transport the detritus; and that to the same or subsequent watery force we must ascribe the production of the inequalities which render the transport of the boulders, in the directions they once took, impossible now, without extraordinary dynamical means.

But, granting this, we shall still advance but little in the explanation of the phenomena. For if it be admitted that currents flowing from the Penine ridge toward the east could remove all the mass of materials, thus *imagined* to rest on the carboniferous rocks, why have they left on the summits of the hills, and on the lower ground of this very region, plenty of the blocks of granite, which, by the hypothesis, should have been swept away over the unwasted surface? Dismissing, then, for the present, the notion that drainage waters, under any possible condition of levels of the dry land, could disperse these erratic boulders, let us inquire