

western district, we have a rise northward of 641 feet, to the summit of Mickle Fell; and from Wilton Beacon, the culminating point of the Wolds, there is a rise of 680 feet northward to Burton Head.

The explanation of these prevalent eastward and southward slopes of the surface is simple; they correspond to the internal structure of the country. In Yorkshire the constituent mineral masses are for the most part stratified*; the strata are not horizontal, but inclined to the eastward, or south-eastward, from an 'axis of elevation' (Pl. II. fig. 2, x) as it is called, or what is in effect equivalent to it, a great line of dislocation (Pl. II. fig. 1, x') nearly coincident with the western boundary. The most prevalent slope of the surface then is to the east or south-east, because the rocks upon which it is formed are inclined in that direction (Pl. II. fig. 1). As the several strata rise toward the west, the surfaces formed on these strata also rise in that direction; and the surface attains the greatest elevation near the axis of uplifting of the strata. This explanation is fully confirmed by examining the districts separately.

In each of the hilly districts, it is toward the northern and western parts that the greatest average elevation is attained; in each the country grows lower toward the east and the south; and upon a view of the whole country, the most prevalent direction of the streams is from the north and west toward the south and east.

The separate slopes of all the hilly districts to the east follow the inclination of the strata in that direction, and are much more rapid than the average slope of the whole surface: in three of these districts, the north-eastern, south-eastern and south-western, a southward dip of the strata appears along the northern edge, and combines with the eastward dip to give them somewhat of the concave or basin-shaped character. The surface corresponds to this peculiarity of structure: Holderness

* Only the 'Whinstone Dike' and 'Whin Sill,' and other small dikes and mineral veins, are exceptions.