

Book VI. Part I. § ii.). All these rocks have a general dip and strike parallel with those of the Cambrian strata on which they now rest, and in this respect, as well as in their prevailing lithological characters, they present the most striking contrast to the rocks that unconformably underlie the quartzites a little to the west. Whatever may have been their age and original condition, they have certainly acquired their present structure since Cambrian times.

From the remarkably constant relation between the dip of the Cambrian strata and the inclination of the reversed faults which traverse them, no matter into what various positions the two structures may have been thrown, it is tolerably clear that these dislocations took place before the strata had been seriously disturbed. The persistent parallelism of the faults, folds, and prevailing strike, indicates that the faulting and tilting were parts of one continuous process. The same dominant northeasterly trend governs the structure of the whole Highlands, and reappears over the Silurian tracts of the south of Scotland and north of England. If, as is probable, it is the result of one great series of terrestrial movements, these must have occurred between the middle or close of the Cambrian period and that portion of the Old Red Sandstone period represented by the breccias and conglomerates of the Highlands. When the rocks were undergoing this metamorphism, there lay to the northwest a solid ridge of old gneiss and Torridon sandstone which offered strong resistance to plication. The thrust from the eastward against this ridge must have been of the most gigantic kind, for huge slices, hundreds of feet in thickness, were shorn off from the quartzites, limestones, red sandstones, and gneiss, and were pushed for miles to the westward. During this process, all the rocks driven forward by it had their original structure more or less completely effaced. New planes, generally parallel with the surfaces of movement, were developed in them, and along these new planes a rearrangement and recrystallization of mineral constituents took place, resulting in the production of crystalline schists.⁸¹

Much remains to be done before the structure of the Central and Southern Highlands is explained. That some portions of the rocks may belong to the Lewisian gneiss is not improbable. But, on the other hand, in almost all parts of

⁸¹ Nature, xxxi. p. 30; Quart. Journ. Geol. Soc. xlv. 1888, p. 378. For further details see the account of pre-Cambrian rocks in Book VI. Part I. § ii.