

The non-occurrence of such a general convulsion is proved by the perfect horizontality now retained by some of the most ancient fossiliferous strata throughout wide areas.

*Inferences derived from unconformable strata.*—That the subterranean forces have visited different parts of the globe at successive periods, is inferred chiefly from the unconformability of strata belonging to groups of different ages. Thus, for example, on the borders of Wales and Shropshire we find the slaty beds of the ancient Silurian system curved and vertical, while the beds of the overlying carboniferous shale and sandstone are horizontal. All are agreed, that in such a case the older set of strata had suffered great dislocation before the deposition of the newer or carboniferous beds, and that these last have never since been convulsed by any movements of excessive violence. But the strata of the inferior group suffered only a local derangement, and rocks of the same age are by no means found every where in a curved or vertical position. In various parts of Europe, and particularly near Lake Wener in the south of Sweden, and in many parts of Russia, beds of the same Silurian system maintain the most perfect horizontality; and a similar observation may be made respecting limestones and shales of the like antiquity in the great lake district of Canada and the United States. They are still as flat and horizontal as when first formed; yet since their origin not only have most of the actual mountain-chains been uplifted, but the very rocks of which those mountains are composed have been formed.

It would be easy to multiply instances of similar unconformability in formations of other ages; but a few more will suffice. The Coal-measures before alluded to as horizontal on the borders of Wales are vertical in the Mendip Hills in Somersetshire, where the overlying beds of the New Red Sandstone are horizontal. Again, in the Wolds of Yorkshire the last-mentioned sandstone supports on its curved and inclined beds the horizontal Chalk. The Chalk again is vertical on the flanks of the Pyrenees, and the tertiary strata repose unconformably upon it.

*Consistency of local disturbances with general uniformity.*—As almost every country supplies illustrations of the same phenomena, they who advocate the doctrine of alternate periods of disorder and repose may appeal to the facts above described, as proving that every district has been by turns convulsed by earthquakes and then respited for ages from convulsions. But so it might with equal truth be affirmed that every part of Europe has been visited alternately by winter and summer, although it has always been winter and always summer in some part of the planet, and neither of these seasons has ever reigned simultaneously over the entire globe. They have been always shifting about from place to place; but the vicissitudes which recur thus annually in a single spot are never allowed to interfere with the invariable uniformity of seasons throughout the whole planet.

So, in regard to subterranean movements, the theory of the perpetual uniformity of the force which they exert on the earth's