

appear too great for those small streams that meander at their feet, what cannot be attributed to their immediate power is attributed to the continued action of time.

Without examining how long a series of ages it would be necessary to admit, before the rivers which we have mentioned above, and the water-courses encased in the deep valleys of the Alps, Pyrenees, Jura, Grampians, &c. could have scooped their valleys, on which their present action is so slow that no one has yet been able to estimate it; without examining if this long series of ages agrees with the phenomena, which preclude our attributing so remote an antiquity to the actual state of the earth's surface, a question of too much importance to be treated indirectly; it will be sufficient to mention here four sorts of observations, in order to be persuaded, or at least to suspect, that the present rivers, even supposing them ten times the size that they are, could not have scooped out the deep channels at the bottom of which they run.

1. We must recur to the period when the ranges of hills which border the present valleys were not as yet scooped out, but were united in such a manner as not to leave any hollow between them, or merely a slight original depression.

This shallowness of the valley would be accompanied with an inconsiderable slope of its bottom. If, then, we suppose the same mass of water, it must run with less quickness, and consequently with much less power; and yet a very great force must be attributed to it, before it could have had the power of removing a portion of rock nearly represented by a recumbent triangular prism, having often 500 metres of breadth by a sometimes equal