

as well as of the same kind, with the volcanoes and earthquakes which now shake the surface. His doctrine of uniformity was founded rather on the supposed analogy of other lines of speculation, than on the examination of the amount of changes now going on. "The Author of nature," it was said, "has not permitted in His works any symptom of infancy or of old age, or any sign by which we may estimate either their future or their past duration:" and the example of the planetary system was referred to in illustration of this.⁴ And a general persuasion that the champions of this theory were not disposed to accept the usual opinions on the subject of creation, was allowed, perhaps very unjustly, to weigh strongly against them in the public opinion.

While the rest of Europe had a decided bias towards the doctrine of geological catastrophes, the phenomena of Italy, which, as we have seen, had already tended to soften the rigor of that doctrine, in the progress of speculation from Steno to Generelli, were destined to mitigate it still more, by converting to the belief of uniformity transalpine geologists who had been bred up in the catastrophist creed. This effect was, indeed, gradual. For a time the distinction of the *recent* and the *tertiary* period was held to be marked and strong. Brocchi asserted that a large portion of the Sub-Apennine fossil shells belonged to a living species of the Mediterranean Sea: but the geologists of the rest of Europe turned an incredulous ear to this Italian tenet; and the persuasion of the distinction of the tertiary and the recent period was deeply impressed on most geologists by the memorable labors of Cuvier and Brongniart on the Paris basin. Still, as other tertiary deposits were examined, it was found that they could by no means be considered as contemporaneous, but that they formed a chain of posts, advancing nearer and nearer to the recent period. Above the strata of the basins of London and Paris,⁵ lie the newer strata of Touraine, of Bourdeaux, of the valley of the Bormida and the Superga near Turin, and of the basin of Vienna, explored by M. Constant Prevost. Newer and higher still than these, are found the Sub-Apennine formations of Northern Italy, and probably of the same period, the English "crag" of Norfolk and Suffolk. And most of these marine formations are associated with volcanic products and fresh-water deposits, so as to imply apparently a long train of alternations of corresponding processes. It may easily be supposed that, when the subject had assumed this form, the boundary of the present and past condition of the earth

⁴ Lyell, i. 4, p. 94.

⁵ Lyell, 1st ed. vol. iii. p. 61.