

The universality of this terrestrial waste had been more or less distinctly perceived by other writers, as has been pointed out in previous pages. But Hutton saw a meaning in it which no one before him had so vividly realised. To his eye, while the whole land undergoes loss, it is along certain lines traced by running water that this loss reaches its greatest amount. In the channels of the streams that carry off the drainage of the land he recognised the results of a constant erosion of the rocks by the water flowing over them. As the generalisation was beautifully expressed by Playfair: "Every river appears to consist of a main trunk, fed from a variety of branches, each running in a valley proportioned to its size, and all of them together forming a system of valleys, communicating with one another, and having such a nice adjustment of their declivities, that none of them join the principal valley, either on too high or too low a level, a circumstance which would be infinitely improbable if each of these valleys were not the work of the stream that flows in it.

"If, indeed, a river consisted of a single stream without branches, running in a straight valley, it might be supposed that some great concussion, or some powerful torrent, had opened at once the channel by which its waters are conducted to the ocean; but, when the usual form of a river is considered, the trunk divided into many branches, which rise at a great distance from one another, and these again subdivided into an infinity of smaller ramifications, it becomes strongly impressed upon the mind that all these channels have been cut by the waters