

and its channel to the Rakas-tal, though the latter is not dammed by any talus fans from tributaries.

Comparing different lakes in Tibet with one another, I have arrived at the conviction that the problem of the formation of the lakes is much more complicated than it would seem to be if we accepted as a general rule only one of the three theories mentioned above. It cannot be said that Drew alone is right and Oldham and Huntington wrong, nor that Oldham or Huntington were right to the exclusion of the two others. As far as Panggong-tso is concerned, I think that all three theories may be applied at different periods of the history of the lake and its valley. Very likely the Panggong valley may have been filled with glacier ice during the glacial period. But during ages before the glacial period, even from the period when the Himalayan and Transhimalayan fold systems began to be formed, and until the present day, differential movements of the surface have been going on. The ice has disappeared and the climate has become drier. But even during the post-glacial time, the precipitation has been incomparably more abundant than nowadays, and great rivers have been flowing through the long latitudinal valleys of the Tibetan high-lands, valleys which still exist, although the rivers have dwindled and disappeared because of the periodically proceeding desiccation. Finally the continual differential movements of the surface have gradually divided every latitudinal valley into a series of separated self-contained basins, usually with a salt lake in the centre.

At a period when the latitudinal valleys were divided in this way, the talus fans of Drew may easily have played a certain part in the formation of some of the peripheric lakes of Tibet. And thus all the three theories may be said to be correct. The differential movements belong to the whole history of the building up of the southern mountains, the glacier erosion to the ice age and the talus fans to the post-glacial epoch with a growing dryness of the atmosphere.

BURRARD and HAYDEN may be said to have added a fourth theory to the three of Drew, Oldham and Huntington. They say¹: »The further suggestion, now made by us, that the damming of the main valley may have taken place owing to its conversion into a tributary valley, may be regarded as a modification of Mr. Drew's hypothesis, and if we add to this the damming of tributary valleys by moraines of glaciers occupying the main valley we shall probably have included all the causes at work to form the more important lakes of Tibet. But we are not disposed to think that any single theory can be of universal application: thus Kala Tso may be regarded as a type of the first hypothesis (with its corollaries), Yamdrok Tso of the second and, according to Mr. Huntington, Panggong is a type of the third.»

¹ Sketch . . . p. 203.