through the agency of mountain masses of a peculiar white soda-granitic rock.

The other main line, namely, that of the Portillo, is of a totally different formation: it consists chiefly of grand bare pinnacles of a red potash-granite, which low down on the western flank are covered by a sandstone, converted by the former heat into a quartz-rock. On the quartz, there rest beds of a conglomerate several thousand feet in thickness, which have been upheaved by the red granite, and dip at an angle of 45° toward the Peuquenes line. I was astonished to find that this conglomerate was partly composed of pebbles, derived from the rocks, with their fossil shells, of the Peuquenes range; and partly of red potash-granite like that of the Portillo. Hence we must conclude that both the Peuquenes and Portillo ranges were partially upheaved and exposed to wear and tear, when the conglomerate was forming; but as the beds of the conglomerate have been thrown off at an angle of 45° by the red Portillo granite (with the underlying sandstone baked by it), we may feel sure that the greater part of the injection and upheaval of the already partially formed Portillo line, took place after the accumulation of the conglomerate, and long after the elevation of the Peuquenes ridge. So that the Portillo, the loftiest line in this part of the Cordillera, is not so old as the less lofty line of the Peuquenes. Evidence derived from an inclined stream of lava at the eastern base of the Portillo might be adduced to show that it owes part of its great height to elevations of a still later date. Looking to its earliest origin, the red granite seems to have been injected on an ancient pre-existing line of white granite and mica-slate. In most parts, perhaps in all parts, of the Cordillera, it may be concluded that each line has been formed by repeated upheavals and injections; and that the several parallel lines are of different ages. Only thus can we gain time at all sufficient to explain the truly astonishing amount of denudation which these great, though comparatively with most other ranges recent, mountains have suffered.