name of Mount Logan, are reputed to be nineteen thousand five hundred feet in height, or fully equal to what was for many years assumed to be the true height of St. Elias. The small angle of measurement, through which the height of this mountain was computed, does not permit us fully to accept the determination, and it is by no means unlikely that Mount Logan will, on closer scrutiny, share the fate which has befallen so many of the North American mountains, such as St. Elias, Mount Wrangell, Mount Hood, etc.—decapitation. The niceties of absolute measurement in the case of a high mountain are such that only upon a most careful and repeated use of instruments can any dependence be placed, and this applies equally to determinations that are made by the angle and the barometric methods. At the present moment, the height of what has been assumed to be one of the most accurately determined summits of the Karakoram range of India—Mount Godwin Austen, or K2—has been brought into question, and only recently a resurvey of the Australian Alps has restored Mount Kosciusko, with a height of seven thousand three hundred and thirty-six feet, to the first position among the Australian mountains; its rival, Mueller's Peak, whose crown has received a special accumulation of visiting-cards, scraps of paper, addressed envelopes, etc., in recognition of its claims to superiority, falls short by sixty-eight feet.

The discrepancies in the results of mountain measurements are such that one if tempted to ask: Are the results obtained by a single investigator worthy of full confidence? The personal element—by which we mean not only the desires and non-desires in a determination, but the method of handling the instruments, the kind of allowances that are made for instrumental and ocular aberrations, and the uniformity and similarity of the checks that are used to counteract these aberrations—enters so largely, and seemingly so constantly, into any calculation, as to make this almost individual or approximative, rather than positive. Otherwise, indeed, it becomes difficult to explain the differences of results that are obtained by equally competent observers—differences that are in many cases far too great to be explained away on the assumption of special difficulties of measurement. To mention only a few of the higher American summits, toward the measurements of which no special difficulty ought to have been encountered: Aconcagua has been oscillating between twenty-two thousand four hundred and twenty-three thousand nine hundred feet: Chimborazo between twenty thousand and twenty-one thousand four hundred feet; the Illampu between twenty-one and twenty-five thousand feet; Orizaba between seventeen thousand four hundred and eighteen thousand three hundred feet; St. Elias between fourteen thousand and nineteen thousand five hundred feet; Ixtaccihuatl between fifteen thousand seven hundred and sixteen thousand nine hundred and sixty feet. It would almost seem as if there were certain factors involved in mountain measurement which have not yet been fully taken account of, for it is difficult to explain such broad differences on the theory of individual methods alone.

It has become customary, in scientific circles, to disparage the use of the barometer as an instrument of precision in the determination of heights; and it is unquestionably true that the most refined measurements have been made by angle instruments. But, on the other hand, it is equally true that many of the most divergent results have been obtained through just such angle measurements, in which, especially in the case of lofty