It is evident that a territory so immense—covering more than 25 degrees of latitude and 120 degrees of longitude— must include a great variety of orographical and climato­logical characters, and that the popular conception which persists in representing Siberia as a snow-clad desert is erroneous. In fact—not to speak of the rich prairies of the middle Amur and the Usuri region, where the wild vine grows freely—we find in Siberia proper the very fertile black earth prairie steppes, or rather pampas, of the Tobol and Ishim,—not mere patches of fertile land, but plains covering some 25,000,000 acres and ready to receive millions of inhabitants; the highlands of the Altai, with their rich valleys, alpine lakes, glaciers, and snow-clad peaks, —a country three times as large as Switzerland and pre­senting almost the same variety of aspects; the high plains of Eastern Siberia, where water-melons are grown in the fields during the short but hot summer ; the rich steppes of Minusinsk, profusely adorned with flowers ; the lower plateaus of Transbaikalia, embellished with the beautiful Daurian flora and supplying food to hundreds of thousands of cattle; the high inhospitable marshy plateaus of the Selenga and Vitim; vast hilly tracts densely covered with forests, and visited only by hunters and gold-diggers; and beyond these the frozen *tundras* of the north,—all these constitute an immense world, with the most striking con­trasts of scenery and vegetation, of manners and customs. In one direction only is the popular conception true: throughout its extension Siberia is the coldest country of the world in consequence of its protracted and exceedingly severe winter. This variety of characters will be best under­stood from the following brief sketch of the orography.

The leading features of the orography of Siberia are so much at variance in our best maps that a few words are necessary to ex­plain the views taken in what follows. The inhabited districts are well laid down ; but the immense areas between and beyond these have only been visited by geographers and are mapped only along a few routes hundreds of miles apart. The intermediate spaces are filled according to information derived from native hunters. With regard to a great many rivers we know only the position of their mouths and their approximate lengths estimated by natives in terms of a day’s march. Even the hydrographical network is very imperfectly known, especially in the uninhabited hilly tracts.@@2 The orographical representation of Siberia is no­thing more than a combination of a few surveys and journeys, in which conscious or unconscious hypothesis is resorted to in order to connect the isolated facts. As soon as the river systems of Siberia began to be approximately known, chains of mountains were drawn in all hilly tracts,—higher ones on the chief watersheds and lower ones along the secondary ones. This representation conveyed quite a false idea as to the surface configuration of Siberia. The immense plateaus which play so predominant a part in the

structure of Asia (as they also do in the western parts of North America) were quite overlooked. Chains of mountains were drawn as if they rose in the midst of plains, where in reality we have either the slopes of one side of the plateaus or border-chains. Lofty mountains appeared where none exist, as, for instance, in those parts of Yakutsk where tributaries of the Lena and the Amur start from common marshes; and some of the highest chains were re­presented as minor upheavals because they are pierced by rivers descending from the high plateaus to the lowlands. It was only by making use of rich unpublished collections of barometrical observations for the calculation of hundreds of heights that many sections of Siberia could be drawn,@@3 and by going into a minute study of topographical materials scattered through the bulky literature of Siberia and certain MS. field-books—the whole con­trolled by personal journeys—that it became possible to arrive at the following general conclusions as to the structure of the country, which may be of service until more complete surveys shall have given more reliable data.@@4 This study has shown how predomi­nant has been the part played in the formation of Siberia by huge swellings of the earth’s crust (plateaus), and how subordinate that played by isolated chains of mountains, which latter are regulated in their direction in north-eastern Asia by the border ridges of the plateaus; and it has enabled us to make out a close connexion be­tween the structure of Central Asia and Tibet and that of north­eastern Asia, and to establish a link between the two.

A vast plateau, beginning in the south at the foot of the gigantic semicircular border range of the Himalayas, and having the lofty plateau of Pamir in the west and the little-known high tracts of the upper Hoang-ho and Yang-tse-kiang in the east, extends towards the north-eastern extremity of Asia. Broadly speaking, it has the shape of a South America pointed towards Behring Strait. It attains a width of no less than 1800 miles and an altitude of from 11,000 to 14,000 feet in the south; but both width and altitude diminish towards the north-east. In north­west Mongolia the average height is but 4000 to 5000 feet, and this diminishes to 3500 feet in the Vitim plateau ; while its width is not more than 700 miles in the latitude of Lake Baikal. On the 50th parallel of latitude there occurs in the plateau a broad lateral indentation, occupied by Lake Baikal and the plains of Kansk, and this renders the resemblance of the plateau to South America still more striking. This immense plateau is the remainder of a vast and very old continent, which, so far as we know, has not been submerged since at least the Devonian period.@@5 It extends from the Himalayas to the land of the Tchuktchis, but does not of course present a plane surface of the same altitude in all its parts. It is diversified in the following ways. (1) Like other plateaus, it has on its surface a number of gentle eminences (*angehäufte Gebirge* of Ritter), which, although reaching great absolute heights, are relatively low. These chains for the most part follow a north­easterly direction in Siberia; but in the southern parts of the plateau, as we approach the Himalayas, they seem to assume a direction at right angles (towards the north-west). (2) On the outskirts of the plateau there are several excavations which can best be likened to gigantic trenches, like railway cuttings when with an insensible gradient a higher level has to be reached. These trenches for successive geological periods have been the drainage valleys of immense lakes (probably also of glaciers) which formerly spread over the plateau, or fiords of the seas which sur­rounded it. Now the chief commercial routes have been made to follow these trenches to reach the higher level of the plateau. Their steep excavated sides, which have the appearance of chains of mountains to the traveller who follows the bottom of the trench, have often been described as such; in reality they are merely uni­lateral slopes, which may best be compared with the steep slope of the Jura turned towards the Lake of Geneva. We have examples of such trenches in the valley of the Uda to the east of Lake Baikal (route to the Amur); in the valley of the Orkhon, leading to Urga and Mongolia (route to Peking), with a branch up the Djida ; in the broad depression of the Ulungur leading from Lake Zaisan to Barkul ; and in a few others which have been utilized as

@@@1 Governor-generalships.

@@@2 The wide area between the middle Lena and the Amur, as well as the hilly tracts west of Lake Baikal, the Yeniseisk mining region, and many others, are in this condition. An instance of a map distinguish­ing between surveys and information derived from natives is given on a cartoon of map 4 of *Mem. Russ. Geogr. Soc.,* General Geography, vol. iii.

@@@3 A catalogue of heights in East Siberia is given in the appendix to the present writer’s “Report on the Olekma and Vitim Expedition” (*Mem. Rιιss. Geοgr. Soc.,* General Geography, vol. iii., 1873); also in *Petermann's Mitth.,* 1872. The height of Irkutsk, taken as a basis for the catalogue, has been determined since that date by a levelling through Siberia at 1486 feet.

@@@4 “General Sketch of the Orography of Siberia,” with map and sections, and “Sketch of the Orography of Minusinsk, &c.,” by the same writer (same series, vol. v., 1875). The views taken in these writings have been embodied by A. Petermann in his map of Asia, sheet 58 of Stieler’s *Hand-Atlas.*

@@@5 The great plateau of North America, also turning its narrower point towards Behring Strait, naturally suggests the idea that there was a period in the history of our planet when the continents turned their narrow extremities towards the northern pole, as now they turn them towards the southern.

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|  | Area  Square Miles. | Population. | Pop. per Square Mile. |
| Tobolsk | 531,982  329,039 | 1,283,168  1,134,748 | 2∙4  3∙4 |
| Tomsk |
| Western Siberia@@1 | 861,021 | 2,417,916 | 2∙8 |
| Yeniseisk |
| 992,870  309,190  1,517,127  240,781 | 421,010  398,873  243,443  497,760 | ∙42  1∙2  ∙16  2∙1 |
| Irkutsk |
| Yakutsk |
| Transbaikalia |
| Eastern Siberia1 |  |
| 3,059,968 | 1,561,086 | ∙51 |
| Amur |
| 173,559  730,022 | 40,533  74,000 | ∙23  ∙10 |
| Maritime Province |
| Amur1 |
| 903,581 | 114,533 | ∙12 |
| Total |
| 4,824,570 | 4,093,535 | ∙85 |
|  |