sideration, which is interesting inasmuch as it shows that that which I called above the inverse method of statistics does not involve ideas identical with those which the direct method — as applied in ordinary economic and social statistics—involves. In the direct processes of statistics, which we may class under the all-case or enumerative method, we rise, from a large number of individual facts and data which are all different, to the conception of certain uniform averages, to recurring, or continuously and slowly changing, totals, such as we handle daily in sciences like meteorology, in moral, economic, and industrial statistics. The averages are nowhere represented by the individuals, and the regularity of the totals does not appear in dealing with single instances, or with such restricted numbers as come under the personal control of any of us; hence the general uselessness of statistics in handling individual cases or predicting special occurrences. But the statistical view of natural phenomena, as applied to the atomic constitution of bodies, leads us ultimately to the conception that the smallest constituents of matter, the atoms, exhibit a regularity and recurrent uniformity of structure which reminded Sir John Herschel of manufactured articles. The attempt to reduce the somewhat numerous types of these ultimate elements to purely geometrical configurations of the homogeneous elements of one substance has indeed failed, though it is being continually revived. But allowing that there exist some sixty or seventy distinct forms of matter or atomic structures, these structures seem to be alike and stable wherever we meet with