

(3) Probably the great majority of geologists now adopt in some form the third opinion, that the oldest or so-called "Archæan" gneisses are essentially eruptive rocks, and that they should be compared with the larger and more deeply-seated bosses of intrusive material now visible on the earth's surface. Whether they were portions of an original molten magma protruded from beneath the crust, or were produced by a re-fusion of already solidified parts of that crust or of ancient sedimentary accumulations laid down upon it, must be matter of speculation. In the gathering of actual fact we cannot go beyond their character as eruptive rocks, which is the earliest condition to which they can be traced, and we must consequently place them in the same great series as all the later eruptive materials with which geology has to deal. It is quite true that they have been profoundly modified since their original extrusion, but traces of their original character as masses of mobile, slowly crystallizing and segregating material have not been entirely effaced.

Looking at the gneisses as a whole, with their various accompaniments, we find them to form a complex assemblage of crystalline rocks which, though generally presenting a foliated structure, pass occasionally into the amorphous condition of ordinary eruptive rocks. In composition they range from granite at the one end to peridotites and serpentines at the other. Hand-specimens of these rocks in their amorphous or unfoliated condition do not differ in any essential feature from the material of ordinary intrusive bosses in later portions of the terrestrial crust, and the same similarity of structure is borne out when thin slices are placed under the microscope.

Perhaps the most convincing proof of the really eruptive nature of the gneisses is to be found in those tracts where