THE CONCEPT OF NATURAL LAW IN GEOLOGY

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Geology operates largely without the concept of "natural law." The speaker became keenly aware of this circumstance when, a number of years ago, he began his efforts to derive from rapidly accumulating knowledge concerning the geology of different parts of the earth generalizations to form a reliable foundation for reasoning concerning the dynamics of the earth's crust. When he spoke of them as "laws of crustal deformation," he had to meet the objections of others and his own doubts. He had to view the procedure of geologic investigations in the light of the fundamental methods of all science.

Some of the resulting reflections are presented here before men from many fields of science in the hope that they will lead to a clearer understanding of the nature of the geologist's work, and to that finer sympathy from which springs effective cooperation between men in different sciences upon which further progress depends in a large measure.

Geology is peculiarly dual in its aims: on the one hand, it is concerned with what happened once at a certain place, in individual mines, mountains, regions. Interest that centers on individuals is history, not science. As a science, geology is concerned with the typical that finds expression in generalizations, whether they be called laws or something else. In his actual work, the geologist describes the individual and attempts to grasp its meaning in terms of the typical. If you catch him unawares, he will tell you that he tries to "explain" the "facts" of geology in terms of

1 Presidential address read before the Ohio Academy of Science, at Toledo. A number of minor changes have been made in the final manuscript.