

## Editor's Page

The effective practice of most earth scientists is limited to a single discipline (field) or, at most, to a few disciplines (fields) within the domain of geology. At once this reflects both the complexity of geologic processes and the human limitations of the individual earth scientist. The concept of expertise and practice within a discipline of geology is firmly entrenched in the fabric of our science and further, each succeeding generation of "budding" geologists is educated in geology through a system of discipline based courses.

We wish to examine these obvious truths with respect to the evolution or maturity of the science of geology. In the past, when the data base was small and geological processes were ill defined, significant contributions were made by individuals often without formal geological training, who were guided only by the principles of scientific investigation. More recently as our science evolved, progressively more disciplines were identified as legitimate fields of practice. Therefore, the division of geology into specific disciplines can be identified as a stage in the evolution of our science. This stage was, still is, and always will be adequate where relatively singular processes capable of resolution by 'independent specialists' are of concern.

If, however, we are concerned with complex large-scale and long-term earth processes, and further identify a need to establish universal geologic laws about these processes, then 'independent specialized' investigation is insufficient. These geologic laws represent real goals and are a measure of the maturity of the science of geology as distinct from a measure of the maturity of a specific field of geology. Therefore, reliance only on an independent specialized approach hampers the evolution of our science.

We propose that recognition and real support of interdisciplinary large system and/or regional studies by universities, granting agencies and the geological profession is necessary to assure efficient progress in the science of geology. The ideas developed by the independent specialists are fundamental to the 'tool kit' of interdisciplinary studies. In turn, the results of large system studies are a test of the degree and scope of the applicability and/or validity of the individual specialists' ideas. Interdisciplinary studies can and would develop those concepts that cannot be extrapolated from specialists' studies, and would identify areas where specialist research may be directed within more completely defined systems.

Inevitably the science of geology will mature through some process that will somehow bring together the contributions of individual specialists and the results of large system studies. Shouldn't we start to promote the inevitable now?