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Earth Sciences and the Quality of Life

One of the great developments of this generation has been sharply increased realization of our mutual interdependence as citizens of this planet. The concept has been dramatized by the phrase "space-ship earth" and given worldwide political recognition in the holding of the Stockholm Conference. Two major themes emerged at the conference. One was the obvious desire of the wealthy countries to minimize global effects of environmental degradation. The second was a great wish for help in development manifested by the less-developed countries. Both these desires are likely to endure, and they will influence the worldwide evolution of science and technology.

Zest for the coming challenges was especially evident at the recent International Geological Congress in Montreal. There the first scientific plenary session of the congress was devoted to "Earth sciences and the quality of life." Included were talks by Maurice Strong of Canada on "Science and society in the environmental age," J. Goguel of France on "La geologie et les connaissances humaines," and Sir Kingsley Dunham of the United Kingdom on "The influence of crustal resources." On succeeding days additional symposium sessions were devoted to the same topic. In a broad sense, though, the entire congress and its nearly 2000 presentations dealt with this topic. There was naturally a broad spectrum in the degree to which various papers related to the human condition. Many papers were immediately relevant. Others dealt with studies aimed at enriching our understanding of the earth. For example, the concept of plate tectonics continues to be extremely stimulating of new ideas and interpretations; presentations relating to it were very well attended.

When one considers the effort and money that goes into a great international congress it at first seems questionable whether the outcome justifies the expenditures. If one approaches the matter solely from the standpoint of transfer of technical information in formal talks, the congresses are perhaps inefficient. But that is not the crucial point. The major value of such gatherings lies in the facilitation of human contact. These contacts permit quick mutual evaluation to a depth that no amount of correspondence could ever achieve. Given a meeting of minds, new friendships are formed that carry with them trust and a willingness to enter into all manner of collaborative arrangements at the meeting and subsequently. Thus the international meetings lead to purely scientific cooperation; they also lead to international collaboration in areas where science and society interact.

Quality of human contact is at least to some degree dependent on the physical circumstances. In this respect the Canadians put on an especially admirable show. Montreal now has superlative facilities and is an excellent setting for scientific meetings. The Canadian scientists who arranged the Montreal meetings had unusually great responsibilities which they discharged very well. Before and after the congress they provided about a hundred geological field trips throughout almost all of Canada. They edited and published about 5000 printed pages of scientific material. They arranged for the majority of the scientific talks and handled all the other logistics of a congress. Most important of all for the facilitating of useful human contacts, the Canadians were excellent hosts, and their guests were comfortable. The Montreal meeting ranked with the best ever and represented a new high in Canadian contributions to international science and human progress.—PHILIP H. ABELSON