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Group Interaction among Scientists

Given the right circumstances, human beings can interact in extremely constructive, helpful ways. Most scientists need, and to some degree receive, information, help in making judgments, and stimulus from others. The stimulus can be provided by another individual, by a small group, by a larger group, or by the general community. Twenty years ago and earlier, the national meetings of scientific societies provided much of this needed stimulus. Many can remember coming away from such meetings charged with enthusiasm and filled with new ideas. The huge meetings of today are not nearly so inspiring. Indeed, some are downright depressing. In contrast, small closed symposia often are exhilarating. At such a gathering recently I found participants almost euphoric. They were receiving intense intellectual satisfactions. They were having a special kind of fun. Such occasions come all too rarely. While scientific societies grope for means of improving their meetings, individuals are finding most of their needed stimulus through association with another scientist, or through activity as part of a small group. The interactions can enhance motivation, and they can provide other factors that are essential to creativity. Scientists find excitement in ideas, and stimulus in arguments and discussions. They discover common ties of understanding and amity. In the process they become more effective and creative.

Judgment can usually be sharpened through interactions within a group. A man may think deeply about a problem but fail to cope with it successfully because of some small blind spot—the lack of some piece of knowledge, perhaps, or simply a slight failure in analysis. Discussion of the problem can provide the single item that opens new vistas of comprehension.

Once a group is formed, a special microenvironment is created. Those within the group can influence each other as much as, or more than, they are influenced by the world at large. Members often come to feel that the value system of the nonscientific world is not very important—that a common effort in advancing an area of science is the most satisfying activity in which anyone can engage. Moreover, if a member of the group loses his elan, he can regain it, for other members provide infectious enthusiasm.

Bringing individuals together does not invariably produce such an environment. Men who have the capacity to create have their share of pride and egotism. Tensions and rivalries are never far below the surface. It is necessary that the individuals become so desirous of achieving common goals that they suppress their natural egotism. The tendency toward dissension can be countered in various ways. One effective way to ensure peace within a small group is to choose wisely in selecting its members. They should be people of different background and temperament. One, for instance, may be a skilled experimenter, another an enthusiast who spouts ideas. A third may have excellent judgment and the ability to recognize what leads are likely to prove valuable and to quietly dispose of the trivial, unsound, or sterile ones. The group usually needs a compromiser, or peacemaker, as well.

Perhaps scientific organizations will find better mechanisms for fostering the kinds of meetings where the needed interactions can occur. For the present, the need is being best met by small informal groups.—PHILIP H. ABELSON

This editorial is adapted from an article which is to appear in *Daedalus*.