THE STATUS-DISCUSSION MEETING AS AN ANTIDOTE TO SUPERCONFERENCES

Researchers actively engaged in a fairly narrow field of physics may exchange ideas in a more effective manner by meeting in small informal groups rather than in large formal conferences.

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IN 1931 ENRICO FERMI organized a small meeting to deal with the new, small field of nuclear physics. The handful of active and generally young physicists who were invited each reviewed a different aspect of nuclear physics. They spent the rest of this status-discussion meeting in informal discussions, accentuated by excursions.

Since then patterns of nuclear and subnuclear physics have drastically changed and so have the patterns of meetings. High-energy physics, an offspring of nuclear physics, has grown into a discipline that occupies several thousand people around the world. Correspondingly, high-energy physics meetings have grown into mammoth congresses with hundreds of participants; formal, often parallel sessions; and, at best, *rapporteur* talks that to a working scientist often sound too smooth, too well organized, too noncontroversial.

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I do not intend severe criticism of such large conferences. Having attended many such conferences, I find them often very instructive, and I have often used the opportunity to establish personal contacts with colleagues and to engage in a two-way discussion with specific individuals.

Large vs small

Yet, as with other scientific communication channels, one particular format appears insufficient to satisfy simultaneously all communication demands of meetings. Large meetings do help to establish a multitude of links among scientists in a given field, and they help the specialist to get an overall, although perhaps too superficial, view of the status of a large field. However, large meetings cannot possibly serve to replace scientific discussion, give-and-take between proponents of different viewpoints, or verbal criticism of one "expert" by another. Someone said of printed scientific communication that "we do not read any more, we just write." A similar danger exists with oral communication: "We just talk and do not respond any more."

Physicists, therefore, have a considerable need for meetings like the one organized by Fermi in 1931, meetings at which a small group of people interested in a relatively narrow yet active field can discuss informally past accomplishments, present problems and future aims.

Review articles

In addition to the already mentioned motivation, a status-discussion meeting could help allieviate the scarcity of up-to-date, readable review articles. In fast-moving fields, especially those fields in the middle of the crystallization process, good review papers are in great demand but potential review authors are hard to find. Often the physicists best qualified to write reviews are reluctant to give up original research for the months needed to write a review. Furthermore the most valuable reviews are those in which not only are facts collected and a large bibliography given, but some perspective is attempted and a direction for experimental and theoretical research is outlined. This type of review is generally not the work of a bright, enthusiastic and young researcher, but rather of a person with more experience and a larger horizon. Because of the inverse-pyramidical structure of the physicist population, however, such people are rare.

The status-discussion meeting offers a way around this problem by allowing the bright, young and enthusiastic researcher to acquire the perspective at second hand, taking advantage of the collective wisdom and argumentative balance of a discussion meeting as a whole. If, therefore, a prospective young reviewer could attend a status-discussion meeting, have later access to the tape-recorded comments, and then submit a draft of the review for criticism by the participants, he might produce a first class review article. This approach would eliminate the time commitment of those who have the least time and devotion to contribute. Indeed, Fermi's 1931 meeting resulted in six review papers. Samuel Goudsmit called my attention to the proceedings of that meeting, published as "Convegno di Fisica Nucleare, Ottobre 1932—IX," Reale Accademia d'Italia 1932.

Regge-pole meeting

These communication concerns were the main motivations for a discussion meeting on the status of experimental

verification of the Regge-pole hypothesis. The meeting, at the University of Oregon on 14–16 March 1968, was considered very successful by the participants, who commented by completing questionnaires. Because similar undertakings might add a new pattern to the texture of scientific discussion, I think it is worthwhile to describe some of the features of this meeting. To start with, a list of some 25 participants was drawn up, attempting to represent all the major groups around the world engaged in research on the Regge-pole hypothesis. The subject, chosen because it is topical, controversial, and not too broad, was subdivided into discussion topics distributed over three days. A moderator assigned to each of these topics started each session with a brief summary of the status as he saw it. This introductory summary quickly turned into a round-table discussion. At the end of the session the moderator tried to summarize the discussion and outline recommendations for future research. The entire meeting was tape recorded, and a review article is being written, based on the tapes as well as on published literature.

The participants at this meeting were younger than is usual at conferences. This difference is understandable because active and current personal involvement in research on the Regge-pole hypothesis was a main criterion for participation.

Pitfalls

Two shortcomings in the selection of participants are worth mentioning because once realized these deficiencies can be easily avoided in the future. First, too few experimentalists were present. More experimentalists were originally invited, but several backed out when scheduled experimental runs were postponed and began to overlap with the conference. This high mortality rate for experimentalists should be taken into account in similar situations in the future. Second, there were too few people present who knew enough about other, competing schemes. One of the original goals was to assess the Regge-pole approach not only in terms of its absolute success or failure to explain experiments, but also in comparison with alternative approaches. Proponents of other approaches, perhaps less militant than the Reggeists, were somewhat reluctant to enter the lions' den.

The remedy to a third deficiency is much less clear. A prominent representative of the Regge group in the USSR was on the original invitation list. Although efforts to secure his attendance were made by many government and scientific organizations within the US, response from the USSR was essentially nil. The meeting lost the substantial contribution the Soviet group could have made.

INFORMAL EXCHANGE OF IDEAS is one advantage cited for the status-discussion meeting. Regge-pole researchers discussed work during picnic on Pacific Ocean coast.

Different approach

In some ways the technical aspects of the meeting organization were a departure from the usual. Travel and living expenses of US participants, who comprised about half the group, were paid by their own institutions. Living expenses of foreign participants came from the Willamette Valley Research Council, an organization devoted to the development of the scientific and industrial potential of northwestern Oregon. Travel expenses of foreign participants came from the respective institutions and grants from the US Atomic Energy Commission and the National Science Foundation.

The organization of such a small discussion meeting is very simple, occupying one person, plus his secretary, over perhaps six months on a very part-time basis. During the last month and the meeting itself one more person assisted, also on a very part-time basis. Running costs are next to nothing because small meeting rooms are easily available without charge—in this case one of the student union discussion rooms of the University of Oregon. Apart from a blackboard, two borrowed tape recorders and a borrowed projector, nothing was required for the meeting. Thus such meetings are within the reach of many institutions.

A common complaint heard today is that there are too many scientific meetings. This gripe is in some respects justified because it often happens that a physicist goes to one meeting after another, just to hear the same people giving the same lectures. In another sense, however, the potential of scientific meetings as a research tool is far from being fully exploited. The wide-spread "conferencitis" that affects many of us is not a case of overeating, but rather the satiated feeling of taking in the daily 2500 calories in the form of pure peanut butter and nothing else. The informal status-discussion meeting while not *the* answer, is *one* answer to this problem. □