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Our Responsibility to Young Scientists

"We usually do get very good young people here; and they keep us alive with their ideas." This statement by Fred Sanger of the British M.R.C.'s Laboratory of Molecular Biology in Cambridge states succinctly what young scientists mean to good research: a lifeline of ideas and a reservoir of talent.

The training and promotion of young scientists is one of the principal aims—and a statutory requirement—of the Deutsche Forschungsgemeinschaft (DFG). As an institution, the DFG can provide only a skeletal framework for the education of the next generation of scientists. Its activities, however, play an important part in initiating and maintaining the personal contacts, relationships, and experiences that must add the flesh to the bones.

Our estimate is that approximately 55 percent of the DFG's total budget in 1983 (898 million deutsche marks) went directly to the benefit of young scientists. Of the more than 10,000 research assistants working in DFG-funded projects, 90 percent or more were students, graduates, or post-doctorate research scientists. They were employed full time or part time in projects directed by experienced scientists who assumed responsibility for the project, its funds and, consequently, its participants.

This is an important point. Doing good research requires more than knowledge. Initiative, willingness to work hard and long, and the ability to cooperate and communicate one's ideas are just as crucial. In this respect, research is similar to a trade—it should be learned from a master. Many of the scientists from all disciplines who contributed to the DFG's report "Forschung in der Bundesrepublik Deutschland" acknowledge how important for them were the examples of their teachers, together with their hints, ideas, criticism, and encouragement.

Senior scientists have a special responsibility. Personal contacts with students—in spite of the almost insurmountable problems caused by the overcrowding of our universities—are the necessary beginning. Later, a researcher's graduate student and post-doctorate research scientist must be carefully and responsibly guided, their inclinations and opportunities being given priority over one's own particular research interests. The best academic teachers are those whose students surpass them, and Sir Howard Florey, whose name will always be linked with the benefits of penicillin, held the training and promotion of younger scientists to be the most important task of their older colleagues.

Among the programs that the DFG offers to young scientists, I think the Heisenberg Program is the most notable. These are fellowships that are granted to researchers after their habilitation for a maximum of 5 years; they enable the young scientists to continue their research at a place of their own choice (at home or abroad), unhampered by other duties in what is hopefully one of the most productive phases of their career. Intended to alleviate the difficult situation caused by the abrupt termination of the rapid increase in the number of university jobs, the Heisenberg Program has so far proven very successful and has been widely acknowledged. Thanks to the high standards of the selection committee, Heisenberg fellows enjoy a high reputation and have very good chances of finding satisfactory positions.

The DFG's efforts on behalf of young scientists, varied as they are, make sense only if scientists who take the risk of entering a research career have reasonable prospects of attaining a permanent position. Public and private institutions have a part to play here. With a little effort and imagination, the creative potential of a whole generation of scientists can surely be put to good use in research, industry, or trade. Encouraging the development of the abilities and the initiative of these young scientists is one of the soundest investments in the future that we can make.—EUGEN SIEBOLD, *President, Deutsche Forschungsgemeinschaft, Kennedyallee 40, D-5300 Bonn 2, Federal Republic of Germany*