

Grants-in-Aid Leading Up to Voice Research

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Looking back, it is clear that an important part of my research career to date has been bolstered by Grants-in-Aid. Most of all, this is because they could be used freely in carrying out my work. As the amount of each grant was not so big, I remember having to give a lot of thought as to how to get the optimum result out of them.

Since having a lot of students to instruct, I've needed to pioneer research themes while securing research funding. The faculty of almost all science and engineering research labs must dedicate time and energy to their operations. Of course, universities receive funding via their research labs through various sources other than Grants-in-Aid such as joint research income from industry. Every year during the new year's break, I would look back and appraise my activities over the past year and think about plans for the coming year. Though in many respects this didn't yield tangible results from an academic perspective, it gave me a chance to ponder what I'd like to do if my pending Grant-in-Aid applications were approved. For me, this was a very enjoyable time when rather than coming up with something concrete, I could indulge myself in imaginings.

At the university, the first semester starts in April after the hectic periods at the end of the previous academic year and entrance examinations. Whereas a wide gap existed between carrying out those processes and my new year's dreams, Grants-in-Aid were, nevertheless, an important factor enabling the implementation of research, young researcher training, and research lab management.

It goes without saying that Grants-in-Aid also play a big role in allowing research groups to be organized and research to be advanced. It was research supported by Grants-in-Aid that sparked a major turning point in my own research pursuits. This was a project conducted in Waseda University's Faculty of Science and Engineering, which rare for that time (1960s) overarched multiple fields including machinery, electricity, communications and applied physics. In it, my job was to create a voice dialog system for the WASEDA ROBOT (WABOT). After that, my research went on to advance voice recognition, voice synthesis, and speech dialog. Our work on WABOT 1 made epochal advances in creating a robot endowed with biped walking, vision and hearing attributes. What owed to the success of that project was, I believe I can say, the youth of the members and, from the present perspective, the extraordinary degree of free ideas and time we were able to apply to the work.

Another important factor was the exchange enjoyed within the project among researchers in the subject fields, which was facilitated by our Grants-in-Aid. I have also participated in various other projects supported under such Grant-in-Aid categories as Specially Promoted Research and Scientific Research on Priority Areas. When I was a young researcher I had the opportunity to participate in research conferences of academic societies, albeit from the sidelines. Veering somewhat away from their main purpose, I used the meetings as a chance to make contact with university faculty engaged on the frontlines of education and research, allowing me to learn a great deal over and above the academic content of the meetings themselves. In going about invigorating our own research, I can recall the zeal with which we went about taking up the challenge of competition with overseas research groups while carrying out exchanges by participating in international conferences. Our project on speech and language greatly elevated the standing of Japanese research in that field, thanks to the active and sustained collaboration among the members permitted by Grant-in-Aid support. I fondly recall JSPS's current president Dr. Yuichiro Anzai doing research within our group.

In these various ways, I have benefited greatly from the Grants-in-Aid Program. If I may, however, there are a few requests I have of the program as it moves into the future. In line with the purpose of Grants-in-Aid to support freely conceived research, awardees are selected via an impartial peer-review process. This basic principle of the program remains the same as in the past. One salient characteristic of the program's operation is that it places all fields, be they in the sciences or liberal arts, under the same system. These days, however, it has become increasingly necessary to tackle new issues that overarch multiple disciplines. The vast majority of fields available for research grants remain those that can be grouped within existing domains. Between domains—for example, science and engineering, humanities and social sciences, medicine—there is in actuality differences in research, funding, systems, and other characteristics. The suitability of lumping them all together into one uniform system begs questioning. Though they may all be called science, fields of science/engineering, humanities/social sciences, and new types of research differ in nature. If funding is to be supplied to advance these diverse fields, it would be most effective if the methods for doing so were likewise diversified. Under the current situation in which the selection ratio is not sufficiently high, grant are simply disbursed by field in proportion to the number of application submitted for each. Now, however, it would be helpful to come up with a way to allocate a little more funding for advancing new scientific fields and research in the humanities and social sciences.

On the other hand, measures have been taken in the Grants-in-Aid Program to increase the flexibility of grant usage including carrying them over into the next fiscal year, for which researchers are very thankful. In carrying out grant-supported projects, midterm evaluations of their progress are also important. However, the results of these evaluations shouldn't end with a passive response from the researchers; rather based on them, the researchers should be allowed to apply for modifications in their research plans and/or for additional funding to optimally advance their work. Such would enable the pursuit of more dynamic research.

On another plane, science is strongly expected to contribute widely to solving various issues confronting contemporary society while generating universal, globally meaningful scientific domains. The latter, however, are difficult to achieve as their value decisions and evaluations require a high level of specialization within fixed fields. We need to obtain the understanding and positive appraisal of the general public as to how Grants-in-Aid support research and as to the directions that science is being advanced. Toward that end, there are cases when research should not be limited to scholars but include the actual cooperation of members of the public.

The participation of young researchers in projects shouldn't have as its end just their training and the feeding of results achieved directly into society, but should also include a dimension of passing on to the next generation knowledge and expertise by other researchers. Asking core researchers to give lectures and hold seminars at universities besides their own would be helpful in raising the level of science in Japan.

In sum, Grants-in-Aid should not be confined to researchers and their colleagues, but must be open to society if science is to be advanced as an integrant public knowledge.