

Japanese grant system is a lottery

SIR — The News article “Bias alleged in Japanese university awards” (*Nature* 383, 369; 1996) provides an interesting insight into some of the problems associated with Japan’s university grant system. But the problems are by no means confined to the particular type of grant described in the article. Rather they are part of much bigger problems that are deep rooted in the Japanese grant system as a whole.

I recently moved from the University of Alberta, Edmonton, Canada, to Nagoya City University. During my eight years as a professor of medicine in Canada, I participated in the Canadian grant system, through the Medical Research Council of Canada (MRC) and the Heart and Stroke Foundation of Canada. I also served on one of the study sections for grant screening of the US National Institutes of Health (NIH) for four years. Thus I am in a position to comment on both the Japanese and North American systems.

There are two very important differences between the two systems. The first concerns the very concept of a research grant. To a North American scientist, the research grant is an essential part of the resources needed to carry out his/her entire research activity, including the salaries of full-time laboratory staff.

Researchers are trained how to write applications, how the reviewing system works and how they should respond to reviewers. Most research grants are renewable over a period of a few years and they become a reliable source of support for research projects.

Although, as a result of severe budget cutbacks in both Canada and the United States in recent years, there are insufficient funds to be awarded, the competitive research grant is still the key source of support for research.

In the Japanese system, a grant is viewed very differently. It is basically considered as a supplementary ‘subsidy’ in addition to guaranteed funds from the government that cover salaries and provide very limited research and operating funds. For the ‘average’ Japanese scientist, competitive grants are not a reliable source of support for their research because most of them are not renewable and last only one or two years.

Furthermore, for the vast majority of grants, the size of a single grant is generally so small that scientists must gather between five and ten different grants of a few million yen each (a few tens of thousands of dollars or less) to have comparable funds to a single Canadian or US

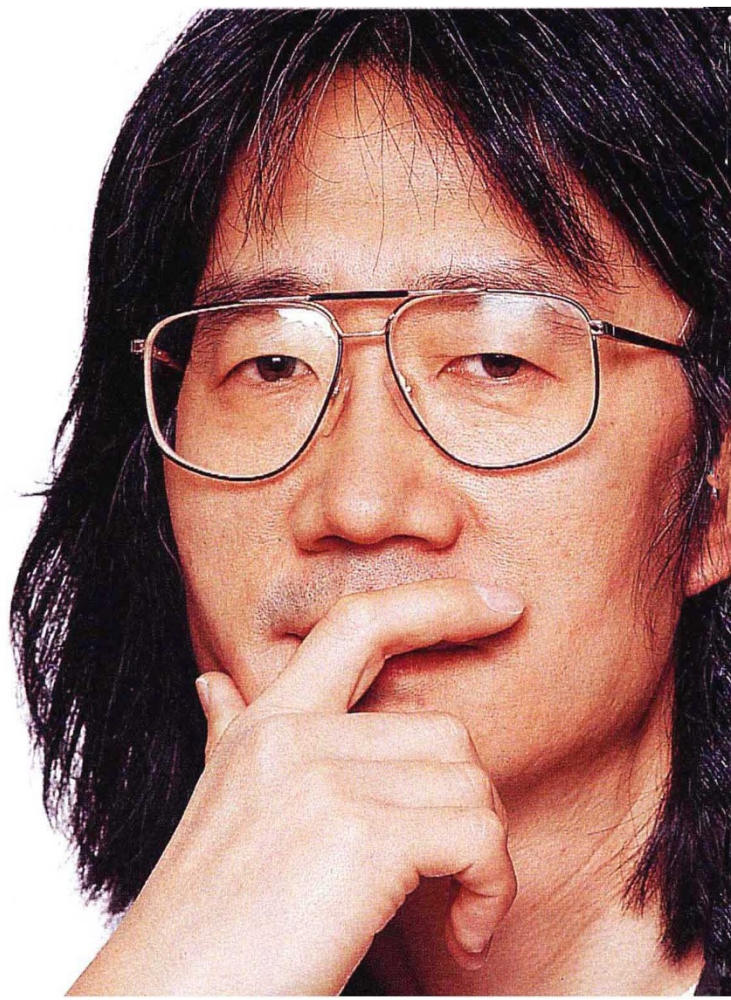
operating grant. This must be done every year. It must also be borne in mind that costs of research in Japan are almost double those of North America.

For most types of grants (the grants described in the news article are an exception), it is impossible to hire full-time staff with the money, both because of government regulations covering the grants and because of their unreliable nature as a source of funds.

A second important difference lies in the system for reviewing and selecting grant recipients. There is no real equivalent in Japan of the study sections of grant-awarding agencies in the West, except in the case of a few very prestigious grants, such as the “special distinguished” grants (*tokubetsu suishin kenkyuhi*) of the Ministry of Education, Science, Sports and Culture (Monbusho).

For most of the ministry’s common grants-in-aid of research (equivalent to NIH general research grants), there are only a few reviewers in each broad research field and they are asked to read and mark at least a few hundred applications without having any meeting among themselves. Many of the applications are outside the speciality of the reviewer. Partly as a result of that, the grant application form is generally short and brief. Only a very few special large types of grant are reviewed by committee meetings.

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This is obviously very different from Canada's MRC whose 40 study sections of 10 to 15 members each meet twice a year for 2–3 days to review some 50 applications each, or NIH's 100 study sections of 10–20 members each that meet three times a year to deal with 50 to 70 applications each time. I wonder what percentage of the grant budget is spent on these review processes in Canada and the United States?

The Japanese granting agencies undoubtedly spend far fewer resources on the evaluation process. No comments or suggestions are sent back to the applicants, so there is no way for them to know why their application has been successful or unsuccessful.

For most of the applicants, the review process is almost like a lottery, winning and losing without any reason other than luck. This is also quite different from the North American system where the applicants receive extensive comments from the study section.

Monopoly (or oligopoly) of the distribution of grants among the institutions discussed in the News article is not a unique problem of this new category of grant. Among the 68 large group grants for research in natural science selected as "priority research areas" (*juten kenkyuhi*) by Monbusho for 1996 and 1997, 37 and 32 per cent respectively of their 'leaders' are

affiliated with the University of Tokyo, 12 and 15 per cent respectively are from Kyoto University, while Osaka University, Nagoya University and Tohoku University account for 10 per cent each. Thus only 25 per cent is distributed among the other 93 national universities (not to mention municipal, prefectural and private universities).

Fundamental reform is required in these two areas of difference. Otherwise, Japan's rapidly increasing budgets for science will merely result in more money being poured into the already rich universities. And the increased funds will be useless for improving the foundations of Japanese science. It is not enough just to complain about the unfairness of one particular type of big grant.

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Cultural credits

SIR — In her review of my book, *The Prehistory of Sex: Four Million Years of Human Sexual Culture* (*Nature* **383**, 683; 1996), Yvonne Marshall accuses me of poor referencing and of falsely claiming certain ideas as my own, such as my insis-

tence on the critical importance of the invention of the baby-carrying sling in human biocultural evolution. In fact, in 32 pages of endnotes and more than 440 references, I fully credit the work of those whom she claims I ignore (pages 273, 275, 276)^{1–4}.

Marshall's frustration at not being able to pigeonhole me or my arguments may stem from the fact that they are not purely cultural as she implies, but biological too. Anyone with passing knowledge of primatology would know that the idea that penis size increased while clitoris size decreased in early hominid evolution is uncontentious^{5,6}, although the reasons for it are not⁷.

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1. Bolen, K. in *Exploring Gender Through Archaeology: Selected Papers from the Boone Conference* (ed. Classen, C.) 49–62 (Monographs in World Archaeology 11; Prehistory Press, Madison, 1992).
2. Tanner, N. & Zihlman, A. *Signs: Journal of Women in Culture and Society* **1** (3), 585–608 (1976).
3. Zihlman, A. in *Sex and Gender Hierarchies* (ed. Miller, B. D.) 32–79 (Cambridge Univ. Press, 1993).
4. Zihlman, A. *Nature* **364**, 585 (1994).
5. Smith, R. L. (ed.) in *Sperm Competition and the Evolution of Animal Mating Systems*, 618–659 (Academic, London, 1984).
6. Dixon, A. F. J. *Zool. Soc. Lond.* **213**, 423–443 (1987).
7. Margulis, L. & Sagan, D. *Mystery Dance: On the Evolution of Human Sexuality* (Simon & Schuster, London, 1991).

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