

## Japan's unemployed PhDs

*Tokyo*

JAPAN'S ever-increasing numbers of unemployed postdoctoral researchers are banding together to find ways of making life a little easier. But there is little they can do to increase their chances of actually finding an academic job.

The number of "overdoctors", or "ODs" as unemployed postdoctoral researchers are known in Japan, is now at an all-time high. (Overdoctor is an apt English word which the Japanese have invented for themselves.) There are at least 5,000 waiting for jobs in university departments, many of whom have now been waiting for more than ten years.

Japanese universities, unlike many of their Western counterparts, officially allow students who have completed their doctorates to stay on in their laboratories (upon payment of a monthly fee of around £40) to continue unpaid research while looking for a job. In some cases, such as the physics department of Kyoto University where there are now over a hundred, they outnumber the full-time teaching staff. Physicists, particularly theoretical

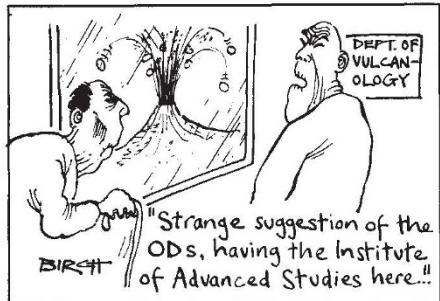
physicists, have been hardest hit, with more than a thousand ODs nationwide, followed by humanities, social science and agriculture.

To ease their plight, Dr Teruhisa Komatsu, an oceanographer from Kyoto University, has set up an OD Society and has found himself 200 members in just a few weeks. The society's chief aim is to keep ODs going, both financially and psychologically, while they are looking for *arubaito* (part-time work, this word stolen from the German *arbeit*) — usually teaching in a cramming school, translating technical reports from European languages or helping with the sophisticated analysis of university entrance requirements needed to help high-school students to pick a suitable university. The society plans to help find the best jobs for its members and also to remove the ODs' sense of isolation by arranging conferences for the presentation of their work.

Life as an OD is by no means easy. Although most ODs are in their late twenties, surveys show that only a little over half are married (compared with nine-

tenths of the general population of the same age). Average incomes are exceptionally low, only a little over £3,000 a year before tax.

A particularly cruel irony faces those who never find academic jobs. During their postgraduate study (two years for a master's course followed by three years of doctoral research), students must pay their own fees of around £400 a month as well as their own living expenses. There are no cosy European-style grants to cover the cost of education. As a result, almost all students take loans from semi-govern-



mental bodies. While the loans need not be repaid by those who find a university job, the unemployed are left with a huge bill for their education.

Neither the Ministry of Education, Culture and Science (MESC) nor university staff are taking steps to ease the OD problem, mainly because everyone lays the blame at someone else's door. One ministry official sums it up by saying that "they (the ODs) should seek work in practical, non-academic fields, instead of keeping their sights on a life in the ivory towers".

Certainly it is a common view that ODs bring about their own problems by "refusing" to work in industry, insisting instead on waiting for the impossible. There is some truth in this charge. Among physicists, for example, there are many who have had experience of computer programming and are in demand by industry. But it is nonsense to suggest that most ODs can easily find work of any other kind than the part-time work they already do.

Industry in Japan has a strong preference for graduates fresh from university, who can be trained in a company's own ethos. Even school teaching is hard to enter, with an upper age-limit for new entrants of around 28–32. Particularly hard-hit are the many ODs with training in agriculture, for there is no related practical field into which they can go. Small wonder, then, that the two most favoured routes out of the OD trap are a fellowship to a US or European university — and journalism.

The only long-term Japanese solution must be an expansion of the universities, but this is a political question. And the government intends to squeeze all the ministries again next year (with the exception of defence). Hopes of university expansion must for the time being remain in the realms of fantasy. Alun Anderson

## Academic demography awry

THE OD problem results from the massive expansion of the universities in the late 1960s, which created many new doctoral schools. With the oil shock, the expansion of the universities has been halted, but there are fewer job opportunities for researchers from the new schools.

So why cannot the Ministry of Education, Science and Culture (MESC) reduce the flow of graduate students, or at least redirect them into areas, such as computer programming, where highly-trained people are needed? Unfortunately, the Japanese system is far from flexible. Once permission has been gained for the establishment of a doctoral school, there is little further MESC can do to control it. As no grants are given directly to students (and loans are easy to obtain), it is hard to redirect students quickly into new subject areas. And professors, enjoying considerable power under the "chair" system, will fight tooth and nail to prevent government meddling in their affairs.

Thus arises a common view within MESC that professors worried about the OD problem should voluntarily reduce their student intake and coordinate activities with others in their field to take account of future forecasts. Some professors have indeed done exactly this. But because teaching loads are high, it is virtually impossible for any ambitious professor to carry out a research programme without graduate students to help.

The contraction in the universities that has provoked the OD problem has also

caused another, potentially more damaging, academic problem, one which MESC seems again to be ignoring. The slowdown in the recruitment of new researchers has seriously distorted the age structure in the university research community. Simulations conducted by Kenichi and Kaoru Aoki of the Kyoto University Research Institute for Fundamental Physics show that, by 1991, the median age of university staff will peak very sharply at 48. By 2001, the distribution will be bimodal with the larger peak at age 58.

European countries, particularly West Germany, are no strangers to this problem. The difference is that in Europe studies are being made by official bodies rather than being left to private individuals and steps are being taken — such as the United Kingdom's "new blood" scheme — to ensure that there are enough young workers at universities.

Drs Aoki hold that Japan just does not take a long-term view of scientific research planning — day-to-day economics are the prime determinant.

Postdoctoral fellowships, at present non-existent in Japan, could bridge the immediate shortage of young university workers until retirements begin to ease the situation. The Aokis claim that with such fellowships, an average expansion of 1,800 university posts a year, well below the 1960s peaks when 5,000 new jobs a year were being created, would give the universities a very healthy age structure.

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