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Japan and its women

Cultural obstacles and potential damage to one's career present major challenges to women wanting to pursue science in Japan. Some changes have occurred, but too few, and too slowly.

Why do Japanese women scientists have such a hard time of it? In their country, it seems, one is expected to wait for change to happen, not to force it, and women are supposed to *gaman*, or endure. Improvements in such matters as equal opportunity are thought of as gifts to be bestowed by a leader.

Some say that the Japanese prefer harmony to conflict and mediation to open courtrooms, and so do not actively pursue change. It is debatable, and hotly debated in Japan, whether this reflects a widely held cultural value or whether such norms are the result of circumstances that make contention difficult, such as a prohibitively expensive and inaccessible legal system. Is this culture of 'harmony' merely a tool used by government leaders, management, or whoever else might find it handy in dealing with those who make a fuss?

Certainly, it is not easy to successfully raise a complaint in Japan. If a woman feeling unjustly slighted in a job or grant competition complains, she is considered to be putting her own career interests ahead of the group's harmony. She might even be told that she should make room for males, and should concentrate on her home life. Alternatively, a woman might lose grants or fail to obtain a position because a decision-maker assumes her research will suffer because she will spend too much time with children she may not even have. Even those who support women might not be understanding. "Concentrate more on research, less on career objectives — do good research, and that will carry you through." The assumptions underlying this train of thought are that women have equal opportunities to do research and that their achievements will be evaluated objectively. Clearly, this has not been the case, as the testaments of many women show (see page 404).

Older Japanese men tend to acknowledge under-representation by women (a quick look at the statistics would convince anyone), but generally they think of it as a problem of choice — most women, as they see it, choose to have children and thus their careers do not progress. They fail to see that a woman's career could be affected by their own attitudes — attitudes that might colour evaluations on employment or grants awards and that produce offhand remarks about "a woman's place" made to aspiring women postdocs or graduate students. Younger men in Japan tend to be more conscious of the problem, and more sympathetic. This is especially true of those who may have watched their wife struggle in this system. They are more comfortable with women as colleagues, and some take on child-care responsibilities to make their wife's career possible.

There are some promising developments in Japan's scientific societies. A few women have reached high rank, and several societies have women's sub-groups. Women in Physiology in Japan, for example, releases a newsletter that conducts and reports on surveys as well as discussing issues relevant to women's careers (http://web.kanazawa-u.ac.jp/~med2/05/WPJ-MENU.html; only in Japanese). Drawing attention to the problem will continue to create pressure for change. An increasing number of societies are setting up child-care facilities at conferences to allow researcher-mothers to attend.

Some universities and institutions, such as the Institute of Physical and Chemical Research (RIKEN), seem to have created a comfortable place for women to work, but female representation more generally is abysmal. If the government wants to stand by its word and increase the number of women in research, it must go beyond current proposed concessions, such as allowing a woman to apply for a grant using her maiden name. Government agencies, starting with the Ministry of Education, Culture, Sports, Science and Technology, need to ensure open and fair employment decisions and grant awards.

Gradual changes in favour of women will no doubt continue. But how many promising careers will be dashed, and what toll will this take on Japanese science in the meantime? ■

Collider's moment of truth

A German proposal for a large linear accelerator is welcome. A global approach would be even more so.

With this week's proposal from DESY for a 500-giga-electron volt linear accelerator (see page 397), the time has arrived for high-energy physicists to start thinking seriously about how, when and where such an accelerator should be built.

Three principle efforts to design it are under way: DESY's superconducting TESLA, and the more conventional Next Linear Collider, being developed in the United States, and Japan Linear Collider. The question of choosing the right design should be made independently of the deeply political decision of where to locate it. Sadly, in the world of big science, such distinctions are rarely clear-cut.

For US physicists, still smarting from the cancellation of the Superconducting Super Collider (SSC) in Texas in 1993, decision time is perhaps arriving a couple of years too soon. The expenditure of several billion dollars on the SSC before its cancellation has left an unfortunate gap between the likely cost of the Next Linear Collider — estimated at $7.9 billion in 1999 — and the amount the US government will realistically support. Meanwhile, Japanese physicists, who deservedly have held high hopes of hosting a large linear collider, face a changing political climate in which funding may be increasingly difficult to obtain.

In Europe, where official cost estimates for a linear collider may conceal an actual price (of the sort required under US law, which includes the costs of labour and operations) similar to that ascribed to the Next Linear Collider, it is unlikely that sufficient support can be gathered from the German government or through a European collaboration, not least given the continuing demands of CERN.

The way forward is to develop an effort that is genuinely global from the outset. There are at least two prerequisites for successful collaboration, neither of which yet exists: robust political support at the highest levels, and an acceptance by Europeans that, with CERN's Large Hadron Collider, they have had their turn. The latter could help high-energy physicists worldwide acquire the former. ■