Human Frontiers at the Economic Summit

The Western leaders took note of a Japanese proposal for an international program of biological research, but they stopped short of giving it the go-ahead

DEEP inside the text of the final communiqué produced at last week's summit meeting in Venice was a statement that the leaders of the world's seven largest Western nations "took note" of preliminary proposals for an ambitious, multinational program of basic biological research put forward by Japanese Prime Minister Yasuhiro Nakasone.

Initially suggested almost 2 years ago by Japan's Ministry of International Trade and Industry (MITI), the research proposal has since been widely discussed both inside and outside Japan under the title of the Human Frontiers Science Program. Its overall goal is to stimulate global cooperation in basic research into what MITI describes as "superior biological functions." The idea is that understanding the behavior of organisms at the molecular level will eventually provide the key to solving a wide range of social problems, from human aging to the deforestation of the Third World.

Even if the detailed contents of the Japanese proposal remain somewhat ill-defined, the broad goals have, in general, been strongly supported by Western scientists who have been involved in discussions about the project. The Human Frontiers proposal "certainly focuses on the major issues in biological science at the present time; everyone accepts these as the major issues these days," says Benno Hess, director of the Max Planck Institute for Nutrition Physiology in Dortmund, West Germany.

Reflecting this enthusiasm, a group of 12 Western and 4 Japanese scientists issued a joint appeal after a meeting in London in early April. They urged the political leaders meeting in Venice to give their "active support" during the summit to what they described as "a unique scientific program in which scientists from many nations would collaborate in building up a body of knowledge to be shared by people throughout the world."

Politicians have been more skeptical. Some argue that the program remains too vaguely worded and lacks detailed targets. Others fear that it could become one more mechanism by which Japanese engineers are able to tap scientific skills of Western nations. Indeed, shortly before the Venice summit, it was rumored that there would be no mention at all of the Human Frontiers Program in the final communiqué.

Three factors, however, appear to have swayed the balance. The first is that several Western governments have been convinced that the idea is a good one, even if there is considerable massaging to be done before Human Frontiers emerges in a politically acceptable form.

Second, some of these governments also feel that, given its current commitments, MITI is likely to pursue the general research lines with or without international collaboration, and that it would be preferable for other countries to remain involved.

The project has received strong support from scientists, but politicians have been more skeptical.

Finally, there has been the keen personal commitment of Nakasone. A former minister of science who steps down from office later this year, Nakasone is said to have taken a close personal interest in the possibility, as one scientist puts it, of promoting biology as "the humanizing aspect of modern science, balancing its less desirable fallout such as environmental pollution and nuclear weapons."

Several key issues, however, still remain to be resolved and are currently the subject not only of debate between Japan and the Western nations, but also inside Japan itself. On the question of finance, for example, Japan appears to have stepped back from its initial proposal that any funds it provides should be matched equally by money from other governments—several of whom pointed out that they were in no position to make such a commitment.

It is still uncertain, however, how much money Japan is likely to make available. At one point, there was talk of a research budget of several billion dollars. The Japanese Treasury, however, has remained skeptical about the project. MITI has asked for at least $130 million a year, but apart from an initial $800,000 for preliminary feasibility studies, the amount being allocated to the program itself will not be announced before the end of the year.

Also being hotly debated is the main focus of the research. The U.S. National Academy of Sciences, for example, presented a statement to the London meeting welcoming the Japanese initiative but suggesting that it should be focused primarily on solving the problems faced by the Third World, such as overpopulation and tropical diseases, as well as the training of scientists from developing countries. Others disagree. "If we concentrate on the Third World, we are already limiting the scope; we want to have people from laboratories coming out with ideas, and then looking at ways in which they can be applied, but we cannot predict in advance what will be useful," says Hess.

Then there is the question of how the distribution of the funds will be organized. The scientists would like to see some form of politically independent foundation; the Rockefeller Foundation is often mentioned as a possible model. This would provide fellowships, research grants, and support for workshops and special projects—MITI has already proposed that these might cover subjects ranging from basic research for automatic translation to "techniques for the noninvasive measurement of biological functions"—primarily on the basis of international peer review.

"The science should not be too tightly defined," says Tom Blundell, professor of molecular biology at Birkbeck College, London, and another participant in discussions with Japanese scientists. "I do not want to see a large, international bureaucracy, but a foundation with general objectives which is open to all scientists to apply for support in areas that coincide with its interests."

No one pretends that creating such an institution will be easy, particularly in view of sensitivities over patent rights and know-how agreements in negotiations of international research projects. Japanese officials admit that finding the right institutional formula is one of the biggest hurdles they still face.

Last week's summit communiqué provided little guidance. The Western leaders said merely that the feasibility study being conducted by Japan should continue, and that they would be "pleased to be kept informed" of its progress, leaving the program still taxiing down the runway, but with no immediate commitment to takeoff. ■

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