

A Fusion of Disciplines

The first Science and Technology in Society Forum, or STS Forum, was held in Kyoto, November 14–16, 2004, and attracted 480 scientists, politicians, and business leaders from some 50 different countries. Under the general title of "Light and Shadows of Science and Technology," small groups debated such issues as energy and the environment, ICT, and human security. *The Japan Journal* spoke to Yoshikawa Hiroyuki (see box) about the event.

TJJ: How did the STS Forum come about?

YOSHIKAWA HIROYUKI: Omi Koji [see box] first came up with the idea, and the groundwork began in earnest in 2002. The twentieth century saw many advances in science and technology that have greatly benefited humankind, but those very same advances have spawned a range of problematic issues such as nuclear weapons, environmental degradation, cloning, and



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Yoshikawa Hiroyuki

so on. In the twenty-first century it is up to the world's governments, industry leaders, and academia to work together to tackle these issues that affect us all. The idea here was to provide the necessary forum to allow interested parties to meet as individuals for free-ranging discussion on scientific issues, a sort of Davos for science and technology.

In the past, scientists have arranged international conferences and invited politicians as guest speakers, and business and political leaders have held meetings to which scientists have been invited. The STS Forum is the first international gathering that has been organized from the start by scientists, politicians, and business leaders on an equal footing.

What do you see as the significance of the recent STS Forum?

Participants were able to express their own personal views, and we avoided specialized technical discussions. As a result, we achieved free discussion that superseded backgrounds and disciplines. At the session

I chaired on "Energy Issue and Global Environment," there was very vigorous debate between scientists in favor of nuclear power and those who believe in renewal energy, and politicians joined in. Under usual circumstances, there is little chance for such discussion among scientists from differing fields, let alone with politicians, so I believe this was an important opportunity.

Several of those who attended the energy session plan to hold further meetings during the course of this year and to publish the results of their discussions. The STS Forum has thus been widely applauded as a first step in setting up a mechanism that will have real impact on society.

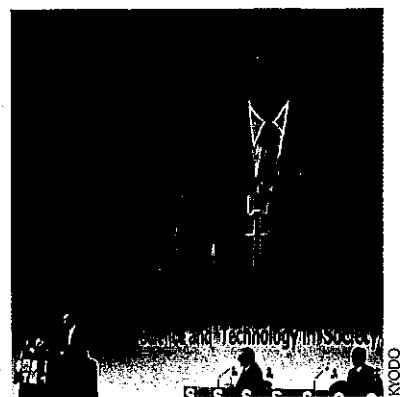
Has scientists' awareness of their social role been changing, do you think?

Moves by political establishments to keep academia under their control exist today much as they did in medieval Europe. Science was subjected to political manipulation during the Cold War era. So until recently many scientists believed it important to maintain an independent stance, separate from political and social influence.

But in the 1980s scientists themselves began to say they should play a more useful social role. As one example, in the mid eighties scientists from the International Council for Science (ICSU) began actively to impress on society their concerns about global warming, and this led ultimately to the Conference of Parties (COP), which is the present-day platform for international debate on the subject.

What role should the scientific community play in modern society?

How can science become involved in social affairs while preserving its independent stance? I think this can be achieved if the scientific community gives "neutral advice." Up until now, when a controversial issue emerges, such as a land reclamation project for instance, those in favor and those opposed each bring along their own experts to provide the scientific basis that supports their position. In other words, scientific advice has often been used to intensify the confrontation between the two sides. To avoid this happening in future,



Prime Minister Koizumi Junichiro addresses the first STS Forum.

bodies such as the ICSU or the Science Council of Japan should seek out a scientific consensus, a position that an overwhelming majority of scientists can support, and this should be offered as "neutral advice."

How can Japan's scientists contribute to making science more socially useful?

To make science more socially useful, fusion among scientific disciplines will become extremely important. But as scientists pursue their research within the strict confines of their disciplines, we can expect considerable resistance to the making of a single common "language" that supersedes individual disciplines, or the combining of two disciplines into one. Nevertheless, I think scientists in Japan may find it easier to interact across disciplinary boundaries than those in Europe and North America.

In the National Institute of Advanced Industrial Science and Technology to which I belong, much effort is currently being directed towards "type-II basic research," which combines a number of established theories for practical outcomes. I am hopeful that this sort of "fusion of disciplines" will become one of Japan's home-grown strengths. ■


Forum Five

The five people central to the organization of the Forum were Omi Koji (member of Japan's House of Representatives and former Minister of State for Science and Technology Policy), Bruce Alberts (president of the National Academy of Science, USA), David Sainsbury (Minister for Science and Innovation, UK), Yoshikawa Hiroyuki (president of the National Institute of Advanced Industrial Science and Technology, and former president of the International Council for Science), and Henry McKinnell (chairman of the board and CEO of Pfizer Inc.).

Note: A second STS Forum, also to be held in Kyoto, is planned for September 11–13 this year.

Japon: Koizumi inaugure le Forum des Sciences et Technologies à Kyoto

AFP 11.09.05 | 09h07

 Le Premier ministre Junichiro Koizumi a inauguré dimanche le Forum des sciences et technologies de Kyoto (ouest du Japon), un important colloque annuel qui réunit des noms célèbres de la recherche, du monde politique et de l'entreprise autour des grands débats scientifiques.

M. Koizumi n'a pas hésité à participer à la cérémonie d'ouverture de ce forum international malgré un calendrier chargé en ce dimanche d'élections législatives qui décideront de la suite de sa carrière politique.

Le Prince héritier du Japon, Naruhito, était également présent.

Sous l'intitulé "Sciences et technologies dans la société: ombres et lumières", ce forum international où sont attendus plus de 500 participants venus de 60 pays abordera plusieurs thèmes majeurs: énergie et environnement; sciences de la vie; impact des nouvelles technologies de l'information et de la communication (NTIC) sur la société humaine; sciences et technologies pour la sécurité humaine, etc.

Ce colloque a pour ambition d'élaborer des pistes pour "promouvoir le développement des sciences et technologies susceptibles de faire prospérer l'humanité et d'enrichir la qualité de vie tout en en contrôlant les aspects négatifs".

Le président de la Fondation mondiale pour la recherche et la prévention du sida, Luc Montagnier, l'ex-directeur général de l'Institut Pasteur, Philippe Kourilsky, le président de l'Académie nationale des Sciences des Etats-Unis, Ralph Cicerone ou le PDG de Samsung Electronics, Yoon-woo Lee, figurent parmi les personnalités qui prendront part aux débats.

Japon: le Forum STS veut être le "Davos" des sciences et technologies

13-09 13:00:47 Les organisateurs du Forum international des sciences et technologies dans la société (STS) de Kyoto (ouest du Japon) veulent faire de leur manifestation annuelle un "Davos des sciences et technologies".

Les organisateurs ont décidé de créer d'ici le 1er janvier 2006 une association dont le président sera le député japonais Koji Omi, ex-secrétaire d'Etat à la Politique scientifique.

Cette association bénéficiera d'une subvention de l'Etat japonais ainsi que de dons. Les entreprises pourront également adhérer moyennant une cotisation annuelle de 2 millions de yens (environ 15.000 euros).

Parmi le bureau de cette association, figurent Ralph Cicerone, président de l'Académie des Sciences américaine, Henry McKinnell, PDG du groupe pharmaceutique américain Pfizer, Philippe Desmarescaux, président de la Fondation scientifique de Lyon Biovision ou encore Jerome Friedman, professeur au Massachusetts Institute of Technology.

Sa mission sera d'installer la réputation du Forum, dans l'espoir d'en faire l'équivalent scientifique du Forum économique mondial annuel de Davos (Suisse).

"Davos a mis au moins quinze ans avant d'atteindre son niveau de reconnaissance international", a plaidé mardi M. Desmarescaux.

Selon ses promoteurs, le Forum STS est le seul colloque international réunissant politiques, chercheurs et décideurs qui a pour objectif d'élaborer des pistes pour mieux gérer le rapport des sciences et techniques avec la société.

La deuxième édition du Forum STS s'est déroulée du 11 au 13 septembre à Kyoto.

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Business News

Experts make a case for science

Standard Reporter

If well applied, science and technology can tame terrorism and spur economic growth.

Scientists, policy makers and business leaders have agreed to focus efforts on terrorism, energy and HIV/Aids.

These was discussed during last week's Second Annual Meeting of the Science and Technology in Society Forum held in Kyoto, Japan.

The participants praised the role played by science and technology but noted that it had created new challenges.

They agreed to focus efforts on the use of science and technology to defeat terrorism, find new and renewable sources of energy and develop medical vaccines and therapies against infectious diseases such as HIV/Aids.

The function was graced by Japanese Prime Minister, Junichiro Koizumi and the Crown Prince Naruhito who made speeches.

At least 500 leading scientists, 18 Cabinet ministers overseeing science and technology policies, 10 Nobel laureates, policymakers, business executives and opinion leaders from over 60 countries attended the event.

These included African ministers of Science and Technology from South Africa, Malawi, Rwanda and Sudan.

The forum is a global initiative which aims at providing a new

mechanism for open discussions on how to shape the future of humankind from the perspective of science and technology.

This would include the promotion of the development of science and technology that will bring prosperity to humankind and enrich the quality of life while controlling the possible negative aspects of science and technology.

While opening the forum, Koizumi said the progress of science and technology had made lives more comfortable "but it has also raised new issues, namely, global warming, human cloning and other bioethical issues, infectious diseases including avian influenza and IT-related challenges such as cyber attacks".

He pointed out that these issues cannot be solved by a single country and called for global initiatives to tackle them. In his keynote address Naruhito said progress in science and technology "has raised some basic questions, such as whether the fruits of innovation have been shared fairly amongst all groups of people".

He wondered whether this progress could be harmonised with nature or "whether science and technology should be allowed to develop simply because it seems to have infinite potential".

STF founder and steering committee, Mr Koji Omi argued that science and technology can best be viewed as "lights and shadows" and "while the negative aspects must be properly controlled, the positive features of science and technology should be promoted".

Omi said that the STS Forum was "a unique platform for humankind to discuss and find solutions and pathways for science and technology".

He said the forum was not "a gathering where specialists convey their knowledge to an audience, but an opportunity for real dialogue among people of different backgrounds and fields".

Climate change issues: Japanese leader's call

P. Sunderarajan

NEW DELHI: Koji Omi, a senior leader of the ruling Liberal Democratic Party of Japan, has emphasised the need for India to become more involved in addressing global climate change issues. Mr. Omi, considered close to the Japanese Prime Minister, told *The Hindu* that it was important for every country to be involved in the implementation of the Kyoto Protocol on climate change. India, the U.S. and China, in particular, need to be more involved in the interest of saving humanity from the ill-effects of climate change.

He, however, declined to comment on a question about suggestions from the U.S. and other developed countries that India take up commitments for reduction in the emission of greenhouse gases.

Mr. Omi, twice member of the Japanese Cabinet, said there was a need to recognise that harmonising economic development with global warming was among the most pressing problems the world faced. India must play an active role in ensuring that the progress of science and technology did not threaten the future of humankind. Its scientists, industry, political leaders and policy makers must contribute more in tackling global issues such as ethics in biotechnology and problem of privacy relating to information and commu-

- Says the world must harmonise economic development with global warming

- Calls for greater economic ties between India and Japan

nication technology. The Japanese leader, who set up the Science and Technology in Society Forum, an international forum for promoting sustainable development, two years ago, hoped that leaders from India would participate in large numbers in the Forum meetings.

Mr. Omi called on Minister of State in Prime Minister's Office Prithviraj Chavan, Secretary, Department of Science and Technology, V.S. Ramamurthy and senior representatives of CII and FICCI.

Some representatives from India, including Infosys chief Narayanamurthy, Rajya Sabha MP Ashwini Kumar and former Secretary of Department of Biotechnology Manju Sharma participated in the two previous meetings. There was a need for more Indian participants.

Mr. Omi, who recently assumed charge as Chairman of the Japan-India Friendship League in Japan Parliament, also called for greater economic ties between Japan and India.