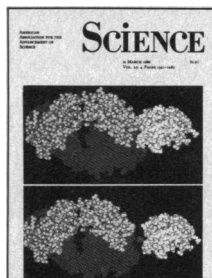


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■ SCIENCE is published weekly on Friday, except the last week in December, and with a plus issue in May by the American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005. Second-class postage (publication No. 484480) paid at Washington, DC, and at an additional entry. Now combined with *The Scientific Monthly* © Copyright © 1986 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): \$65. Domestic institutional subscription (51 issues): \$98. Foreign postage extra: Canada \$24, other (surface mail) \$27, air-surface via Amsterdam \$65. First class, airmail, school-year, and student rates on request. Single copies \$2.50 (\$3 by mail); back issues \$4 (\$4.50 by mail); Biotechnology issue, \$5.50 (\$6 by mail); classroom rates on request; Guide to Biotechnology Products and Instruments \$16 (\$17 by mail). Change of address: allow 6 weeks, giving old and new addresses and seven-digit account number. Authorization to photocopy material for internal or personal use under circumstances not falling within the fair use provisions of the Copyright Act is granted by AAAS to libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$1 per copy plus \$0.10 per page is paid directly to CCC, 21 Congress Street, Salem, Massachusetts 01970. The identification code for Science is 0036-8075/83 \$1 + .10. Postmaster: Send Form 3579 to Science, 1333 H Street, NW, Washington, DC 20005. Science is indexed in the *Reader's Guide to Periodical Literature* and in several specialized indexes.

■ The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.



COVER (Upper) Three-dimensional structure of an antigen-antibody complex. The antigen is lysozyme (green, with a protruding residue, glutamine-121 in red). (Lower) The antigen and the antibody have been pulled apart to reveal their complementary contacting surfaces. See pages 747 and 755. [A. G. Amit *et al.*, Institut Pasteur, Paris, France]

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The United States and the IIASA Connection

Two years ago Secretary of State George Shultz signaled government agencies that the Reagan administration would countenance the funding of acceptable research projects with the International Institute of Applied Systems Analysis (IIASA) in Laxenburg, Austria. It appeared then that officialdom had thought better of its 1981 cutoff of funding for that multinational research center, whose principal original supporters had been the United States and the Soviet Union.

Taking the secretary's message as read, the Appropriations committees of the House and Senate, in their November 1985 Conference Report on 1986 appropriations for the National Science Foundation, agreed on programmatic support for IIASA of up to \$500,000. In January 1986 NSF provided this amount for a package of IIASA initiatives in demography, environment, and systems theory. The Department of Energy and the Environmental Protection Agency followed suit with additional research funds totaling almost \$200,000 for acid rain and environmental monitoring. All this money is now stalled in the National Security Council. The credibility of the United States as a partner in the 16-nation IIASA consortium is at its lowest point ever, paralleling the more general worldwide dismay at the American failure to put up funds for some of the collaborative long-term research programs interrupted by this country's walkout from Unesco. It is no wonder that our friendliest allies, let alone the Eastern countries, have second thoughts as to our reliability when we profess interest in long-term cost-sharing for large scientific projects that exceed current budgetary resources.

The case of IIASA is one to baffle most observers. It is not as if Soviet and American scientists were pooling their skills on advanced technologies related to national security and technology transfer concerns. What preoccupies the IIASA systems analysts in their model-building exercises are global problems such as energy supply and consumption, climatic and atmospheric phenomena, demographic probabilities and their effects on life support systems and social institutions, and global food problems. The work is interdisciplinary, unclassified, and projective. The Institute's computer facilities are generations behind the state of the art. No national interests are threatened. Indeed, after interagency review of the NSF grant it was concluded that there would be neither an intelligence loss nor foreign policy disadvantages. On the contrary, the working premise of IIASA as an institution is precisely what it was when it came into being in the early 1970's: whatever the tensions between West and East, it makes sense for scientists from both sectors to work with each other and with scientists from a variety of other countries on long-term global problems that are disassociated from political and ideological rivalries.

Although the U.S. government unilaterally stopped paying dues to IIASA several years ago, the Soviets continue to meet their financial commitments and support the original understanding that the full-time director of IIASA should be an American. Meanwhile, the American Academy of Arts and Sciences has assumed the difficult burden of the U.S. national membership and has been searching for resources to pay the current and past dues owed by our side. In 1984 AAAS joined the American Academy in this effort. Although now in reduced straits, the Institute carries on good work under the leadership of its able American director. The Shultz message and the follow-on action by Congress have renewed hopes for restoring real vitality in IIASA. The Reagan-Gorbachev exchanges in the direction of accommodation and scientific cooperation have fortified these hopes. But the resistance from the bureaucracy is fast reaching a point of no return, and the clock is ticking down on continued American influence in IIASA.

A rejuvenated IIASA will not be enough to rescue East-West political relations. But what we have is a structure in place that provides novel opportunities for diplomacy-through-science. Viewing the shape that the East-West political relations are now in, and given the Geneva handshake on resumption of cultural and scientific exchanges, what possible downside can there be to normalizing a modest U.S. role in IIASA? We should get on with it.—WILLIAM D. CAREY