



Al Teich is director of Science and Policy Programs at the American Association for the Advancement of Science.



Wendy D. White is director of the Board on International Scientific Organizations at the National Academies.

## The High Cost of Coming to America

IMAGINE THAT YOU ARE A RECENTLY RETIRED PROFESSOR FROM A UNIVERSITY IN THE UNITED STATES. A democratic country friendly to the United States has invited you to give a lecture at a major scientific event. You are a life-long academic with an international reputation who has traveled often to that country. Aware of new visa regulations, you schedule an interview at one of four consulates in the United States. The average waiting time for the interview is 4 months, but you are successful, through the intercession of your hosts, in getting an earlier date. You fly to the nearest consulate, stand in line for several hours, and finally see an officer. You pay the \$100 application fee and your photograph and fingerprints are taken. You're asked to explain your research, starting with your Ph.D. thesis, completed over 40 years ago. You do this but to no avail, as the officer lacks scientific training and does not understand. Your application is refused and will be reconsidered only after you provide additional written information, the review of which will somehow ensure that you are not a security threat. This will take at least 2 more weeks. You return home without your visa and cancel your trip, because even if your responses pass scrutiny, your visa would be issued only after the date on which you have been invited to lecture.

An absurd scenario? Perhaps—but barriers like these face many scientists who apply for a visa to visit the United States. That most are willing to put up with them testifies to the importance of the United States in world science. But to some, the transaction costs are simply too high, and as we saw recently in the case of Goverdhan Mehta, more and more scientists are simply saying “no.” Like Mehta, a distinguished chemist from India who serves as president of the International Council for Science (ICSU), they find the process humiliating and unjustified. If other countries treated U.S. scientists like this, we would certainly protest.

After the attacks of September 11, 2001, the federal government enacted new security policies, but it quickly became apparent that they would cause serious problems for international collaboration in science and education. The number of visa applicants subject to review under Visas Mantis, a program used since 1998 to provide extra scrutiny for visitors with backgrounds in certain sensitive areas of science and technology, grew from about 1000 in 2000 to about 20,000 in 2003. The massive backlogs led to delays in visa issuance of 2 months and longer. The need to appear in person at a consulate to undergo an interview and submit biometric information has been a financial hardship for many. And dignity is an issue; many applicants have reported rude, insensitive treatment.

The research and higher education communities recommended improvements, and the State Department responded with efforts to address some of the problems. Compared to 2003, U.S. consulates today are better staffed and officers are better trained. There are more efficient clearance procedures in place, resulting in average processing times for Visas Mantis reviews of 14 days, once the applicant completes the interview process. There is more transparency in the system, as consulate Web sites provide information about appointments for interviews and average wait times.

But when, in 2006, the president of ICSU can still experience what he did, one has to question whether these incremental improvements are sufficient. Patching holes in the visa system is no longer enough. The scientific community needs to join with the Department of State to examine the fundamental assumptions that underlie current visa policies, especially as they apply to foreign scientists, engineers, and students. A joint working group could peel back the layers of policies and procedures to determine if, for example, the interviews and the Visas Mantis reviews are achieving their intended purpose; if a “trusted traveler” program would avoid subjecting frequent visitors to repetitive, irritating, and time-consuming screening; and if consular officers have the tools and training they need to do their jobs effectively. In short, the working group could help ensure that the benefits of the current system offset the monetary costs, damage to our nation's reputation, and harm to our scientific and educational enterprise. Our security, the strength of our nation's science, and our international technological competitiveness depend on getting the system right and on finding comprehensive solutions to the visa problem.



Al Teich and Wendy D. White

10.1126/science.1127775