

Post-September 11th Visa Woes Still Plague International Students and Scientists

Prospective international students and visiting scientists are facing greater security scrutiny and long delays before obtaining US visas. Those already in the US are being advised not to leave for fear of not being allowed to return.

The security clampdown on the US visa system in the wake of the September 11th terrorist attacks has created problems throughout the scientific and higher-education communities that are so numerous and complex that a comprehensive solution may be years away. "It's a nightmare," one high-ranking State Department official said of the denials, delays, and uncertainties that international students, scientists, and scholars face when trying to enter and work in the US.

The overall visa problem is really a morass of smaller problems that plague international students and visiting scientists in the US. The passage of new visa and security laws during the past two years, combined with the implementation of stricter regulations and enforcement throughout the visa process, means the nearly 600 000 international students studying at colleges and universities in the US are at risk of not being able to return to their schools if they leave the country.

Visiting scientists—even those with a well-documented record of working in the US—are finding it increasingly difficult to return if they leave. Those who leave, even briefly, must go through the entire visa process on their return to the US, as if they were applying for the first time. And that process, especially for researchers and advanced science students whose work is related to one of the many categories on a special technology alert list, often takes eight or nine months.

"The current situation is untenable," said Representative Sherwood Boehlert (R-N.Y.) at a House Science Committee hearing on visas in late March. Although security concerns are important in the war on terrorism, Boehlert continued, "unnecessarily impeding the flow of students and scholars in and of itself can erode our national security. Foreign students fill our graduate programs and foreign scholars fill our faculty and laboratory positions," he said.

To some degree, almost everyone familiar with the visa issue agrees with Boehlert. John Marburger, director of the Bush administration's Office of Science and Technology Policy, made the visa problem the sole subject of his speech at a recent science policy colloquium in Washington, DC. In the speech, Marburger said that, to deal productively with the visa problem, the science and higher-education communities needed a "frame of mind . . . that perhaps falls short of patience, but rises above hysteria."

"We are facing a serious challenge, and this administration is responding seriously to it," Marburger said of the visa issues. "We have evidence of cooperation among agencies, and appreciation for the importance of the task. If the devil is in the details, then so is the opportunity for good will to produce a favorable outcome."

Solution elusive

Finding a balance between increased security needs and reasonable but thorough visa procedures is the "favorable outcome" everyone is looking for, yet it is proving elusive. "There are so many aspects to this," said Irving Lerch, director of international affairs for the American Physical Society (APS). Lerch has become a clearinghouse for those fighting the visa wars and has personally intervened in about 200 visa cases. Most highlight the "reentry problem" that is plaguing international students and researchers already in the US.

Lerch tells of a Chinese student in the US who went back to China when his parents were killed in an accident, and then couldn't obtain a visa to return to school. There was a Russian woman who worked as an associate scientist at the US Department of Energy's Ames Laboratory in Iowa for 11 years. She went to Germany with her two-year-old child, Lerch said, and wasn't allowed to return. Her husband at Ames hired an attorney who used loopholes in the law to reunite the fam-

ily. There were 78 such cases of denied or delayed visas reported to APS between August 2002 and February 2003. They included Russian, Chinese, Israeli, Iranian, Mexican, and other international scientists trying to attend conferences in the US, and students trying to return to studies at Yale University, the University of Illinois, and a host of other schools. Even the minister for science under former Russian President Boris Yeltsin couldn't obtain a visa in time to attend a scientific conference in Santa Fe, New Mexico.

Lerch is not alone in trying to help stranded scholars and students. Nils Hasselmo, president of the Association of American Universities, intervened on behalf of a Swedish student at Michigan State University who was stymied in her attempt to return to the US for her PhD defense.

The visa problems are important because international students in science and technology have played a vital role in the US for more than 50 years. Lerch noted that, currently, "fully half of all doctorates in the physical sciences in the US are granted to foreign students. In all areas of science and technology, almost 35% of advanced degrees are conferred upon foreign scholars resident in the US." The US holds center stage in world science, he said, but that could change if international students and scientists can't get into the country.

In addition to the widespread reentry problem, the first-time entry issue has become particularly difficult for individuals who want to study at US schools. Prospective students must prove that they intend to return to their home countries, and it isn't clear exactly what constitutes such proof. Beyond that, the State Department has expanded its technology alert list. The list includes everything from nuclear engineering and chemistry to biotechnology and urban planning, and a visa-seeker who mentions one of the many key words on the list can trigger what is known as a Mantis review.

A Mantis review means the applicant's name is sent to Washington for investigation by relevant agencies. A Chinese nuclear scientist invited to do research at a US university, for example, might be reviewed by DOE, the

FBI, and the CIA. The reviews are done sequentially instead of concurrently and often lead to long delays. Consular officers are motivated to order Mantis reviews because, under new laws, the officers conceivably could be held criminally liable if they issue a visa to someone who later commits a terrorist act.

Countries of concern

In addition to Mantis reviews, which existed before September 11th, a new review program called Condor has been implemented. Condor flags "nationals of certain countries of concern" for additional security reviews. Condor investigations were originally supposed to be done within 30 days, but Janice Jacobs, the State Department's deputy assistant secretary for visa services, said the investigating agencies "found their resources strained" because of the increasing caseload, and the 30-day limit was dropped. Now the investigations have no time limit and visa applicants sometimes wait months for a determination.

Another headache is the Web-based Student and Exchange Visitor Information System that is intended to track the more than half a million international students, scholars, and scientists in the US. SEVIS, which originated in a 1996 congressional directive, was "fast-tracked" by Congress after September 11th. Participation in SEVIS became mandatory on 15 February of this year for all accredited colleges and universities in the country, as

well as for all of the national laboratories and other institutions that regularly host visiting scientists.

All international students must be entered into the system, and must update any change in address, course of study, or employment. But SEVIS has become notorious for its many flaws. The system regularly loses data, crashes, and sends data to unrelated sites. "Official government immigration forms that Stanford University in Palo Alto, California, attempted to print were later discovered at Duke University in Durham, North Carolina," David Ward, president of the American Council on Education, told the House Judiciary Committee in early April. "More worrisome, perhaps, confidential SEVIS forms printed by the Jet Propulsion Laboratory, a secure government installation, were printed at a school in San Francisco."

SEVIS is supposed to be a "real-time" system providing background data to consular officers while they are interviewing students or scientists who are trying to reenter the US. The "real-time" aspect rarely works, however, and consular officials often have to wait days to get files they request, according to congressional testimony by SEVIS users.

Creation of another screening group, known as the Interagency Panel on Advanced Science and Security (IPASS), was proposed by the Bush administration in 2002. IPASS is intended to bring some scientific

knowledge to the visa evaluation process, but there is now concern that it will add yet another layer to the visa process and slow things even more.

Some officials are also concerned about the visa system's "lack of memory." No matter how many times an international scientist travels to the US, the system reacts as if every visit is the first one and does not call upon the previous investigations. Given the possibility of severe personal liability against a consular official who lets a terrorist in, "the incentive to say 'no' is pretty strong," an official said. Security people "don't get merit badges for being nice," the official continued, and added that trying to create a speedier, more efficient visa process at the same time the Department of Homeland Security and others are stressing security is difficult.

The APS's Lerch has worked with a number of federal officials to try to find solutions, such as multientry science visas or a "parole" system for students who need to leave the US to attend meetings or deal with a family crisis. But convincing Congress to relax visa laws will be difficult in the current high-security climate. Officials are advising international scientists to apply for a visa at least two or three months before they plan to travel to the US.

"We don't want a bunch of bomb-carrying radicals coming into the country," Lerch said, "but our economy and security are dependent on foreign students and scientists."

Jim Dawson

NSF Nears Decision on Underground Lab Site

As a Canadian mining company appears determined to shut off the pumps that keep South Dakota's Homestake mine from flooding, the threat of high water is pressuring NSF to choose among three possible underground labs.

Some 20 years ago, University of Pennsylvania particle physicist Alfred Mann worked hard to create a national underground science laboratory in the US. He came close, but in the end couldn't generate enough interest in the physics community. He was forced to take his neutrino research to the Kamiokande II detector in Japan.

"I realized at the time that [neutrino] physics was going to become more and more important and there was no place in the US to do it," Mann said. There still isn't, and that in part explains why Mann, now 82, boarded an airplane and flew from Pennsylvania to South Dakota in mid-April to try to stop the threatened flooding of the Homestake gold mine near the

picturesque Black Hills town of Lead (pronounced *lead*).

The April intervention of Mann, Penn astrophysicist Ken Lande, and other scientists, combined with the efforts of South Dakota Governor Mike Rounds and several local politicians, saved Homestake from flooding by its owner, the Barrick Gold Corp of Toronto. The mine's fate now may be in the hands of NSF, which is expected to decide in early June which one of a short list of underground laboratory proposals will receive funding for an in-depth feasibility study.

If NSF chooses Homestake, efforts will resume to reach a permanent deal that will allow Barrick to donate the mine, and all of the environmental li-

ability that goes with it, to South Dakota. Regardless of what NSF does, Barrick intends to shut off the water pumps in the mine within weeks and allow about 500 gallons of water per minute to accumulate in the lower shafts. The mining company is spending about \$300 000 a month to keep the closed mine dry.

Homestake, a historic 125-year-old mine, produced 40 million ounces of gold and one Nobel Prize in Physics before being shut down in 2002. Physicist Raymond Davis won the 2002 Nobel Prize for an experiment he began in the mid-1960s with his chlorine neutrino detector nearly 1500 meters down in Homestake (see PHYSICS TODAY, December 2002, page 16). The decision several years ago to close the mine was made by Homestake Mining Co, which was acquired in December 2001 by Barrick. The announcement of the pending closure spurred the physics community to