

Scientists and immunity to immigration

Tighter visa restrictions implemented by the US government in the aftermath of the 11 September 2001 terrorist attack have alarmed the scientific community. The National Academy of Sciences in December 2002 noted that the new immigration procedures have delayed or prevented the entry of distinguished scientists into the US, including those invited to speak at major conferences and teach in US universities. The stricter visa regulations also delayed thousands of students from starting or resuming their studies. Although no one will dispute the need for tighter homeland security measures, especially given that some of the terrorists had been issued student visas, the long-term side effects on science of the new immigration rules are unacceptable.

Waiting for a visa is not a new problem, but antiterrorism vigilance has exacerbated the situation. At the recent Colloquium on Science and Technology Policy held by the American Association for the Advancement of Science, John Marburger, Director of the White House Office of Science and Technology Policy, said the delays in processing visas are due to more careful scrutiny of all submitted cases and increased numbers of cases requiring additional review. Before the US Immigration and Naturalization Service and US State Department tightened regulations, approval for student visas took about 4–6 weeks. Now students must wait an average of 3–6 months. The delays will worsen with the requirement, as of 1 August 2003, that every visa applicant between ages 16 and 60 must be interviewed. With no increased resources slated, this places additional pressure on an already overburdened system. Since the World Trade Center bombing in 1993, consular officials have been personally liable for the actions of individuals they admit into the US, a responsibility that cannot help but contribute to the backlog.

The repercussions of the US government's "secure borders, open doors" policy affect scientific progress and the US economy. International students made up 36% of all graduate enrollments in science and engineering in 2000 and were deemed vital for conducting federally funded research. The Institute of International Education and the Association of International Educators estimated that during the 2001–2002 academic year the 583,000 foreign students studying in the US contributed 12 billion dollars to the US economy. However, by 2002, the University of Minnesota, for example, had already experienced a drop of 21% in its international student population. And in an age when some of the best science is borne of international collaborations, the Human Frontier Science Program, which funds international collaborations between biologists, has reported a drop in the percentage of fellowship applications to work in the US from 75% in 2001 to 55% in 2002.

The global success and competitiveness of US industry is also dependent on foreign workers. According to Stephen Dahms,

Executive Director of the California State University System Biotechnology Program, the US biotechnology industry workforce has been growing 14–17% annually and must seek foreign expertise to meet demand. This is perhaps not surprising given the significant numbers of science and engineering PhD degrees in the US that are awarded to foreign scientists. For biology, the 2000 figures released by the National Science Foundation showed 23% of all PhD degrees went to non-US residents. The visa system thus contributes to resolving the shortage of American labor.

On Capitol Hill, John Marburger, in his role as science advisor to the president, admitted the situation was serious and has pledged to tackle the delays. Indeed, some progress has been made. In June 2003, the US Department of State instructed consulates to fast-track applications for returning visas of federal workers and grantees. However, this waiver does not apply to university students or researchers funded by other sources. Ominously, other politicians have begun to suggest that American science and technology workers cannot find jobs because of foreigners. Congressman Tom Tancredo (Republican from Colorado) has been one of the most vocal skeptics of the value of immigration. He sponsored a bill that attempted to permanently cap the H1-B temporary work visa program at the 1997 level of 65,000, and this year he introduced legislation (HR 2688) to terminate the H-1B visa program entirely. In another event the US Department of Agriculture decided to no longer sponsor any visa applications or extensions, citing an inability to follow the visa renewal process now expected of government agencies.

Although high security measures are needed, the visa delays could be alleviated without compromising homeland security. Congress should appropriate funds to cope with the increased security measures. Also, rather than screening all visa applicants similarly, devoting insufficient time to problem cases and causing untimely delays for legitimate visitors, the system should focus on those individuals who need special screening. The criteria to necessitate in-depth screening should be transparent and the system, predictable. The federal government should mandate strict time guidelines for standard visa applications and provide a special hotline for those cases that remain unresolved after this period. Other possibilities that may help streamline the system include introducing a special visa category for established scientists and reinstating a procedure for pre-security clearance for scientists with appropriate qualifications.

As Republican Sherwood Boehlert said recently in Congress, "The current situation is untenable." Although the US government is taking positive steps toward resolving these issues, speed is of the essence. Science is a global business requiring cooperation from all races, sexes, colors and creeds. As Louis Pasteur commented, "science knows no country, because knowledge belongs to humanity, and is the torch that illuminates the world."

