

Science Under Siege:

The Bush Administration's Assault on
Academic Freedom and Scientific Inquiry



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THE AMERICAN CIVIL LIBERTIES UNION is the nation's premier guardian of liberty, working daily in courts, legislatures and communities to defend and preserve the individual rights and freedoms guaranteed by the Constitution and the laws of the United States.

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Table Of Contents

Introduction	1
The Control Of Information	2
Overclassification	3
“Sensitive But Unclassified Information”	6
The Foreign Publishing Ban	10
The Costs Of Secrecy	12
Restrictions On Foreign Scholars	12
Personal Stories	17
Restrictions On Materials And Technology	20
Export Controls	25
Political Interference In Science	27
Centralizing Peer Review	27
Stacking Of Scientific Advisory Committees	29
Suppression And Distortion Of Environment And Public Health Information ..	30
Recommendations And Conclusion	31
Other Safe And Free Reports	35



Foreword

Immediately after the traumatic attacks of September 11, many observers in the United States cautioned that we must not react in ways that would hurt ourselves more than the terrorists ever could. This reflected a recognition that in the aftermath of a national tragedy, the reaction of a nation to an assault – like swelling in the human body – can sometimes do more damage than the injury itself.

Since 9/11 the ACLU has issued a series of reports charting the various ways in which this dynamic has unfortunately been taking place. These reports have addressed different aspects of this problem, including the vast new spying powers granted through the USA Patriot Act, the suppression of dissent in the “war on terror,” the mistreatment of immigrants, and the acceleration of a corporate-government “Surveillance-Industrial Complex.”

This special ACLU report, the 14th in our series on civil liberties since 9/11, examines the Bush Administration’s assault on scientific and academic freedom — yet another area where a hasty and poorly thought out response to the terrorist attacks is doing unnecessary harm to our nation in the name of furthering national security.

The ACLU is not a scientific or academic organization. But we have heard from many scientists and academics who feel the heavy hand of the government increasingly overshadowing their freedom to pursue scientific research and participate in the growing international community of researchers. Even at the local level, we now see efforts to discredit evolution as a scientific theory and replace it with sectarian dogma in public schools. This assault on science and academic freedom is something with which we have all too much familiarity here at the ACLU.

Attacks on scientific freedom are based on the same fallacies as attacks on political freedom: that the authorities know best, that security can be preserved by trying to clamp a lid on ideas and information, and that profiling is a legitimate security tool. I urge you to read this report and then join with us in helping to protect the health of American science, American global scientific leadership, and the future medical and material benefits that such leadership promises to bring to all of us.

A handwritten signature in black ink that reads "A. Romero". The signature is stylized and written in a cursive-like font.

Anthony D. Romero
Executive Director
American Civil Liberties Union

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INTRODUCTION

Academic freedom and scientific inquiry have come under sustained assault since September 11, 2001. Spurred by misguided and often disingenuous security concerns, the Bush Administration has sought to impose growing restrictions on the free flow of scientific information, unreasonable barriers to the use of scientific materials, and increased monitoring of and restrictions on foreign university students.

Such actions not only threaten the scientific advancement that has brought so many benefits to the United States and the world; they are also a misguided response to the threat of terrorism. Our ability to address problems or respond to disasters — whether they are caused by terrorists or not — is at least partially dependent on international scientific communication and cooperation. Hamstringing the free exchange of scientific ideas and information will do little if anything to prevent terrorist attacks, but will certainly diminish the capacity of the scientific community to address threats to public health and safety.

The right to engage freely in scholarly and scientific inquiry is guaranteed by the First Amendment of the U.S. Constitution. In this day and age, it is more important than ever to stand by this principle. Of course, there is no question that the freedom of scientists, like the freedom of others, is not unlimited. Research involving human experimentation, environmentally damaging practices, or hazardous substances, for example, is rightly subject to

regulation. But as a general rule, such intervention should occur not at the stage of basic scientific inquiry, but in those materials or processes used in or resulting from scientific experimentation. And such regulation must be carefully crafted and narrowly tailored in recognition of the importance of the underlying freedoms at stake.

A look at the Bush Administration's restrictive policies within the context of its broader environment and public health agenda makes it clear that these so-called "security measures" are in fact extensions of a particular attitude towards science and scholarship — one that appears to have more to do with manipulating science to serve a specific political agenda than with protecting the nation against terrorism.

The attempts to restrict scientific freedom being proposed under the current administration are not altogether new. Similar proposals were floated during the Cold War, for example. Fortunately, in that and other cases the government's attempt to constrain scientific freedom gave way to a prevailing spirit of openness and free inquiry, allowing the United States to play a leadership role in the global science and technology enterprise. A far different outcome occurred in the former Soviet Union, where a repressive approach to science led to stagnation, brain drain, and, ultimately, national weakness.

This report examines the growing assault on academic freedom and scientific inquiry since September 11, 2001. Specifically, it describes a

range of restrictive policies or actions taken or proposed by the Bush Administration in the following three areas:

- **The control of information** — including overclassification, the growing reliance on the categorization of some information as "sensitive but unclassified," outright censorship, prescreening of articles prior to publication, and interference with peer review.
- **Restrictions on individuals** — including increased monitoring of foreign university students, the exclusion of foreign students from access to research projects, and restrictions of foreign students and scholars from entry or reentry into the United States for study.
- **Restrictions on materials and technology** — such as increased restrictions on "select agents," including materials commonly used in basic scientific research, as well as proposals to expand export control regulations to apply to technology and equipment used in fundamental research.

This report explains why the Bush Administration's approach has been bad for science, bad for freedom, and ineffective in advancing our security.

THE CONTROL OF INFORMATION

In questions of science, the authority of a thousand is not worth the humble reasoning of a single individual.

— Galileo Galilei (1632)

It took centuries of hard experience for Western science to free itself from the interference of political authorities. Galileo, after identifying several key reasons why the heliocentric theo-

ry of the solar system was correct, was forced by the authorities of his day to recant his discoveries because they were considered "contrary to Holy Scripture."

The emergence of intellectual and scientific freedom as a basic human right has allowed individual scientists to follow their inquiries and interests — no matter how controversial — wherever they might lead. At the same time, established individual freedoms of thought, speech and publication have permitted and encouraged the formation of scientific communities. The pursuit of truth fundamentally depends on the degree to which information, ideas, and discoveries can be freely exchanged within these communities. Indeed, while the history of science is often celebrated as an individualistic "march of geniuses," historians recognize that most significant discoveries were products of the cumulative work of broad groups of scientists, collaborating and building upon each other's work. As Isaac Newton famously declared, "If I have seen further, it is by standing on the shoulders of giants."

Today, anyone who has participated in an online community knows the tremendous problem-solving power that a diverse group of individuals operating in a free and open environment can bring to bear on a difficult subject. Yet it is precisely these vital processes of individual expression and mutual exchange that are being threatened by the current administration. Restrictions on the production and flow of information that are having a detrimental impact on science and scholarship include:

- Overclassification
- Categorization of information as "Sensitive But Unclassified"
- Restrictions on publication

Overclassification

The United States has had in place since 1940 a formal system of classification that allows the U.S. government to restrict as secret certain areas of information or scientific research for purposes of national security. Only select individuals with both security clearance as well as a demonstrated "need to know" can obtain access to classified information. Institutions, including universities, that house classified research must follow strict guidelines, and sometimes a separate, stand-alone facility is required.

Over the last six decades, fierce debate has raged over what information should be classified, who should have access to it, and how unnecessary restrictions on freedom of research and scientific progress can be avoided. There have been many documented cases where the government has used its classification authority illegitimately to cover up mistakes and avoid public scrutiny.¹

There is no question that some kind of classification system is necessary to protect national security. Clearly, there are certain limited circumstances in which government secrecy is needed — and within those circumstances lie hard cases where the question of whether to err towards secrecy or openness requires keen judgment.

The current situation, however, does not involve hard cases. Instead, what we are witnessing is an era of excessive secrecy marked by sweeping overclassification, reclassification and delayed declassification.

A classification system gone wild can harm scientific and academic freedom in at least two ways. First, classification itself is inherently in tension with the freedom of inquiry and expression that scholarship depends upon. Any information marked "classified" cannot be accessed, analyzed or commented on by the vast majority of researchers and scholars who have not obtained security clearance. Overclassification exacerbates this fundamental problem by unnecessarily removing information from circulation. Second, when a perceived need for more classified research prompts a government to reallocate federal funding of basic research towards classified research, the scientific enterprise can suffer major disruptions. Avenues of important basic research may be discontinued and researchers who choose to remain in open, academic research environments left to compete for diminishing sources of funds.

Today's research community is experiencing both of these side effects of excessive classification. Unfortunately, while historical abuses of classification have made clear that classification must remain the exception rather than the rule, and that restrictions on research should remain precise and narrowly defined, the current administration has failed to heed this lesson.

A rising tide of secrecy

Since 9/11, the Bush Administration has moved aggressively to expand the government's classification authority. Through a 22-page executive order issued by President Bush

¹ In one sad example that reached the Supreme Court in 1948, the government insisted that disclosing a flight accident report to the families of dead soldiers would jeopardize secret military equipment and harm national security. It was not until 2004 that the truth finally emerged: the accident report was devoid of any information warranting secrecy, but did confirm what the families had suspected and deserved to know all along — the cause of the crash was faulty maintenance of the B-29 fleet. See *United States v. Reynolds*, 345 U.S. 1 (1953). See also Marcella Bombardieri, "Victim's daughter says US lied about crash," *Boston Globe*, 18 March 2003.

in March 2003 that swept away a highly successful Clinton-era declassification program,² as well as other measures, the Bush Administration has:

- **Extended classification authority to new agencies.** President Bush extended classification authority to several federal agencies that previously lacked it, including the Departments of Agriculture and Health and Human Services, and the Environmental Protection Agency. Each of these agencies funds research in a broad range of scientific areas, much of it carried out on university campuses.
- **Encouraged retroactive and reclassification.** A 2001 Bush Administration memorandum to the heads of all federal agencies obliged all agencies to classify any information that could "reasonably be expected to assist in the development or use of weapons of mass destruction" — including information that had never been classified or had already been declassified.
- **Created a presumption of secrecy.** Under President Clinton's declassification program, agencies were instructed to release information unless there was a strong reason not to. Bush's executive order, on the other hand, declares that "unauthorized disclosure of foreign government information is presumed to cause damage to the national security."³ In short, Bush flipped the presumption of openness to a presumption of secrecy, thereby

encouraging rather than counteracting the unfortunate tendency of government agencies to keep information hidden from the public.

- **Lengthened classification periods.** Bush's Executive Order makes it easier for the government to classify information for longer periods of time. Under Clinton, deadlines were imposed for the automatic declassification of classified documents. For example, an agency wanting to classify information for more than 10 years had to show that a release of the information could reasonably be expected to harm national security in one of nine specific ways. The Bush executive order eliminates this provision and allows officials to classify information for up to 25 years if the classification is merely warranted by "the sensitivity of the information."⁴
- **Reallocated federal resources towards classified research and away from basic university research.** The Defense Advanced Research Projects Agency (DARPA) at the Pentagon recently reported that while their budget for computer science research had risen since 2001, the portion going to university researchers had been cut nearly in half.⁵ Similarly, in the area of biodefense, the government has funneled millions of federal dollars into the construction of at least four new, high-security "biosafety level 4" laboratories for the conduct of research on the most dangerous and exotic pathogens,

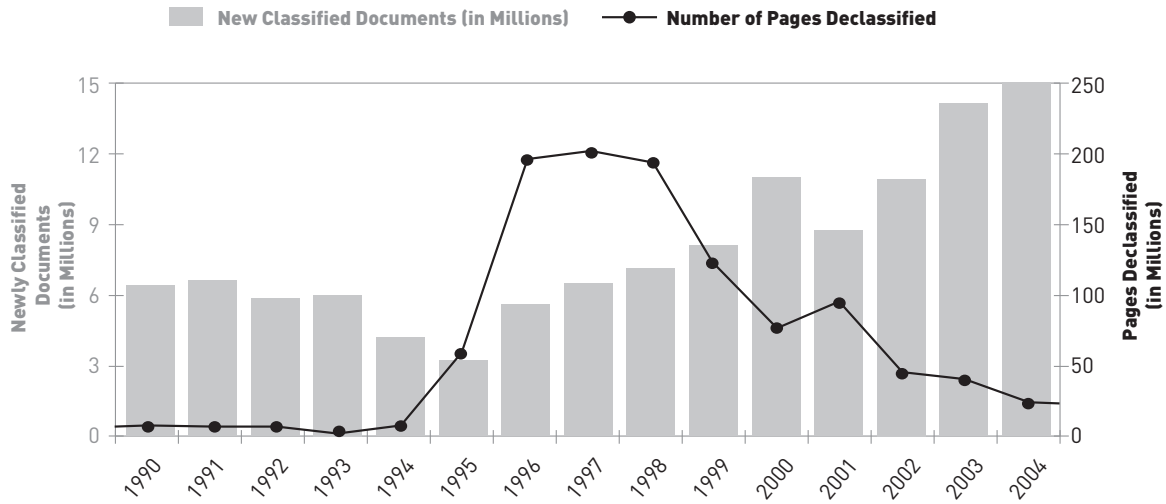
² Within its first six years Clinton's order resulted in the declassification of more than five times the number of records that had been declassified in the previous 14 years. *Public Citizen*, "Analysis of Executive Order 13292." Available at: <http://www.bush-secrecy.org/page.cfm?PagesID=31&ParentID=4&CategoryID=4>.

³ Executive Order 13292, Section 1.1(c). Available at: <http://www.fas.org/sgp/bush/eoamend.html>.

⁴ *Ibid.*, Section 1.5(b).

⁵ DARPA's overall budget for computer science research increased from \$546 million in 2001 to \$583 million in 2004, while the portion of this funding going to university researchers fell from \$214 million to \$123 million. See Markoff, John, "Pentagon Redirects Its Research Dollars," *New York Times*, 2 April 2005.

U.S. Classifies More, Releases Fewer 'Old Secrets'



Source: Information Security Oversight Office
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while funding for basic microbiology and genetics research at universities has declined.⁶

Evidence of abuse

Evidence that expanded classification authority is being overused and abused is already plentiful. According to the government's own statistics, classification rates have consistently increased under the Bush Administration. During the first two years after 9/11, classification rates were twice that of the Clinton Administration.⁷ And 2004 marked a record high: 15.6 million records were classified —

a ten percent increase over 2003.⁸

At the same time, declassification rates have dramatically declined. Since 9/11, declassification rates have fallen by 72%, and fewer pages of secret material were declassified in 2004 than in any other year of the past decade.⁹

Several senior government officials have admitted that much of this secrecy is unnecessary.¹⁰ In August, 2004, J. William Leonard, Director of the National Archives' Information Security Oversight Office, testified that the amount of information that should never have

⁶ Check, Erika, "Protest letter accuses health agency of biodefense bias," *Nature*, 1 March 2005. Available at: <http://news.nature.com/news/2005/050228/434007a.html>.

⁷ Schmitt, Christopher H. and Edward T. Pound, "Keeping Secrets," *U.S. News & World Report*, 12 December 2003. Available at: <http://www.howardlabs.com/12-03/Keeping%20Secrets.html>. See also OMB Watch, "Bush Administration Suppressing Documents in Classification Frenzy," 22 March 2004. Available at: <http://www.ombwatch.org/article/article-view/2099/1/210/>.

⁸ Information Security Oversight Office (ISOO), *Report to the President 2004*, 31 March 2005, p. 3. Available at: http://www.archives.gov/isoo/reports/2004_annual_report.html.

⁹ The Fund for Constitutional Government, *Secrecy Report Card: An Update*, 5 April 2005. Available at: www.openthegovernment.org.

¹⁰ Information Security Oversight Office (ISOO), *Report to the President 2003*, 31 March 2004, p. 6. Available at: http://www.archives.gov/isoo/reports/isoo_reports.html.

been classified in the first place is "disturbingly increasing, where information is being classified that is in clear, blatant violation of the order" and that over 50% of the information classified "really should not be classified."¹¹

In the meantime, the government's reallocation of federal funding towards classified research has severely affected many of America's scientists and engineers. Many university researchers have had their funding discontinued or have been squeezed out by diminishing federal support for basic research.¹² And as a larger portion of scientific research is driven into secrecy, open communication is hampered and our ability to respond to an act of terrorism or other public health threat is placed at risk.¹³

Classification has always been highly subjective, inconsistent, and susceptible to abuse, but these problems have intensified sharply under this administration. The full effects of overclassification are difficult to measure, due to the secret nature of the information itself. Nonetheless, it is clear that rampant overclassification will do nothing to protect national security. Instead, it can infringe on security by suppressing information that should be readily shared, obscuring research that should remain transparent, and by diluting respect for the laws protecting the narrower range of information that is deserving of real protection.

"Sensitive But Unclassified" Information

An even more ominous assault on the free flow of information is the creation of a broad category of restricted information, referred to as "sensitive but unclassified." Classification, despite its rampant overuse, is at least subject to a limited set of fairly well-specified rules, within which debates over public access to a particular piece of information or research can take place. By comparison, the move to designate whole areas of research or knowledge as "sensitive" based on only the vaguest criteria is a recipe for runaway secrecy with especially grave implications for scientific research and communication.

Cold War revisited

The effort to stamp certain unclassified information as "sensitive" is not new. Various federal agencies have used a number of designations to identify unclassified information as sensitive, such as "Official Use Only," "Limited Use Only," or "Law Enforcement Sensitive." Until recently, however, these designations have been narrowly applied.

The strongest push to designate vast categories of information as "sensitive" came in 1982, when the U.S. Department of Defense (DOD) proposed a set of broad constraints on scientific information. These included outright bans on the dissemination of some unclassified research results as well as denial of foreign nationals' access to "sensitive" research facilities and campuses.

¹¹ J. William Leonard, Response to question raised by Rep. Shays, "Too many secrets: A House Government Reform Subcommittee Hearing on Over-classification," 24 August 2004. Hearing transcript available at: <http://www.fas.org/sgp/congress/2004/082404transcript.html>.

¹² Markoff 2005.

¹³ A letter signed by 750 individuals — including two Nobel laureate and seven past presidents of the American Society for Microbiology — warned that current biodefense federal funding patterns are a detriment to the U.S. national interest and threaten public health. *See* Check 2005.

During the same year, the Reagan Administration also blocked the presentation of approximately 100 unclassified scientific papers at an international symposium on optical engineering in San Diego.¹⁴

The academic community rose up against this effort. Several universities (including MIT, Stanford and Caltech) informed the administration that they would refuse to participate in any "sensitive but unclassified" research, or any research with prepublication reviews. The National Academy of Sciences issued a report entitled "Scientific Communication and National Security" that concluded: "the long-term security of the US depends...on the vigorous research and development effort that openness helps to nurture."¹⁵

In response to the NAS report, the Reagan Administration backed down. In 1985, Reagan issued "National Security Decision Directive 189" that stated:

It is the policy of this Administration that, to the maximum extent possible, the products of fundamental research remain unrestricted... [and] that where the national security requires control, the mechanism for control of information...is classification.¹⁶

Overturing Reagan's policy

Reagan's reaffirmation of the freedom of research remained in effect through the 1980s and 1990s, and as late as November 2001 was reiterated by White House National Security Advisor Condoleeza Rice.¹⁷ Other officials in the Bush Administration, however, have simultaneously sought to unravel Reagan's policy. Three initiatives in particular have undermined the public nature of unclassified information:

- **Ashcroft memo on FOIA compliance.**

One month after 9/11, Attorney General John Ashcroft issued a memorandum to the heads of all federal departments and agencies encouraging them to resist the disclosure of unclassified documents through Freedom of Information Act requests. As in the case of classification, Ashcroft reversed the Clinton-era presumption that documents would be released unless there was a strong reason not to.¹⁸ Instead, agency directors were urged to give "full and deliberate consideration of the institutional, commercial, and personal privacy interests that could be implicated by disclosure of the information," and were promised that in cases where they withheld public records, "you can be assured that the Department of Justice will defend your decisions."¹⁹

¹⁴ Broad, William J., "U.S. Tightening Rules on Keeping Scientific Secrets," *New York Times*, 17 February 2002.

¹⁵ National Academy of Sciences, *Scientific Communication and National Security*, Washington, D.C.: National Academy Press, 1982. Available at: www.nap.edu/books/0309033322/html/. The report became known as the "Corson Report" after Dale Corson, President Emeritus of Cornell University and chair of the panel that wrote the report.

¹⁶ National Security Division Directive 189, 21 September 1985. Available at: www.aau.edu/research/ITAR-NSDD189.html.

¹⁷ "The key to maintaining U.S. technological eminence is to encourage open and collaborative basic research...National Security Decision Directive 189 shall remain in effect, and we will ensure that this policy is followed." Condoleeza Rice, Assistant to the President for National Security Affairs, Letter to Dr. Harold Brown, 1 November 2001. Available at: <http://www.fas.org/sgp/bush/cr110101.html>.

¹⁸ The Ashcroft memo replaced and is entirely contrary to its predecessor FOIA memorandum written by former Attorney General Janet Reno in 1993, which encouraged agencies to make "discretionary disclosures" wherever possible and stated that DOJ would defend FOIA exemptions only in cases where disclosure "would be harmful to an interest protected by that exemption." See Janet Reno, U.S. Attorney General, "Memorandum for Heads of Departments and Agencies," 4 October 1993. Available at: http://www.usdoj.gov/oip/foia_updates/Vol_XIV_3/page3.htm.

¹⁹ U.S. Attorney General John Ashcroft, "Memorandum for Heads of all Federal Departments and Agencies," 12 October 2001. Ashcroft's memo replaced U.S. Attorney General Janet Reno, "Memorandum for Heads of Departments and Agencies," 4 October 1993. Available at: http://www.usdoj.gov/oip/foia_updates/Vol_XIV_3/page3.htm.

- **White House memo on "sensitive" documents.** A memo issued in March 2002 by White House Chief of Staff Andrew Card to the heads of all federal departments and agencies similarly encouraged government agencies to think twice about releasing public information, and to safeguard "sensitive but unclassified information" by giving "full and careful consideration to all applicable FOIA exemptions" upon receiving requests for such information.²⁰ The term "sensitive" was never defined.

- **The Homeland Security Act.** The 2002 Homeland Security Act, which established the Department of Homeland Security (DHS), also created a tremendously broad and vague category of data called "sensitive homeland security information" (SHSI).²¹ The Act required the President to implement procedures for identifying such information and allowed for the establishment of limits on the use and reuse of SHSI given to states and localities.²²

Agency implementation of "Sensitive But Unclassified"

Some federal agencies responded quickly to the Ashcroft and Card memos, and by February 2002, had withdrawn from public release more than 6,600 technical documents related to so-called "sensitive" chemical and biological information. This included "critical infrastruc-

ture information" such as pipeline maps, surface water resources, locations of hazardous materials, and other environmental and public health data.²³ This is information that is relied upon by environmental scientists, local activists and others to assess potential risks associated with living in their communities — and information that they have a right to access under existing laws (such as the Emergency Planning and Community Right-To-Know Act of 1986).

Various federal agencies also developed or proposed their own guidelines for identifying and securing "sensitive" information:

- **Department of Defense.** The Pentagon proposed a policy that would have required scientists whose research was funded by the federal government to obtain prior approval from the government before publishing their work or discussing it at a scientific conference. Violators would have been subject to criminal sanctions. The Pentagon officially withdrew the proposal under a storm of criticism from scientists in and out of the government, but it has remained under discussion.²⁴

- **Department of Homeland Security.** In May 2004, DHS issued a directive establishing the term "For Official Use Only (FOUO)" for "sensitive but unclassified" information where unauthorized disclosure could harm "a person's privacy or welfare,"

²⁰ White House Memorandum for the Heads of Executive Departments and Agencies From: Andrew H. Card, Jr., The White House, Subject: "Action to Safeguard Information Regarding Weapons of Mass Destruction and Other Sensitive Documents Related to Homeland Security," 19 March 2002. Available at: <http://www.usdoj.gov/oip/foiapist/2002foiapist10.htm>.

²¹ "Homeland Security Information" is defined as: "Any information possessed by a Federal, State, or Local agency that - a) relates to the threat of terrorist activity; b) relates to the ability to prevent, interdict, or disrupt a terrorist activity; c) would improve the identification or investigation of a suspected terrorist or terrorist organization; and d) would improve the response to a terrorist act." See Sec. 892(f)(1). The Act does not define "sensitive" or "sensitive but unclassified" information.

²² Homeland Security Act of 2002, Public Law 107-296, Sec. 892. Letter to the Honorable Tom Ridge, Secretary, U.S. Department of Homeland Security, 27 August 2003.

²³ Broad, 2002.

²⁴ Kenzo, Genevieve J. CRS Report for Congress "Sensitive but Unclassified" and Other Federal Security Controls on Scientific and Technical Information: History and Current Controversy, 20 February 2004, p. 8. Available at: <http://www.fas.org/srg/crs/RL31845.pdf>.

"the conduct of Federal programs," or the "national interest."²⁵ FOUO information is not to be disseminated in any manner — orally, visually, or electronically — to unauthorized personnel.²⁶ Senior officials are authorized to designate any information under their jurisdiction as FOUO.²⁷ One month later, DHS issued another directive that exempts agencies from releasing sensitive information contained in Environmental Impact Statements to the public as required under the National Environmental Policy Act (NEPA).²⁸

- **Transportation Security Administration.** TSA bars the release of so-called "Sensitive Security Information" (SSI) to anyone without an established "need to know." TSA defines SSI to include a broad range of transportation-related information and records, screening processes, technical specifications, communications equipment, and more.²⁹

- **Department of Agriculture.** The USDA issued a similar regulation requiring that "sensitive security information" be made available only to those with a "need-to-know." Such information includes any that "could be expected to have a harmful impact on the security of Federal operations of assets, the public

health or safety...or the nation's long-term economic prosperity."³⁰

- **Federal Energy Regulatory Commission.** After 9/11, FERC — which oversees the energy industry — created its own category of "critical energy infrastructure information" (CEII). CEII was considered by the agency to be, by definition, exempt from disclosure under the Freedom Of Information Act (FOIA). The definition of CEII is extremely broad, including information that relates to the production, generation, transportation, transmission or distribution of energy and which "could be useful to a person planning an attack on critical infrastructure."³¹

Impacts on science, scholarship and democracy

The creation and widespread use of various terms to label and control so-called "sensitive" information represents a major extension of the government's power to hide its activities and information. This is a power that strikes directly at the principle of open government that democracy depends upon.

What's more, the vagueness of these terms means that there are no criteria for identify-

²⁵ U.S. Department of Homeland Security, *Safeguarding Sensitive But Unclassified (For Official Use Only) Information*, Management Directive 11042, 11 May 2004 (Section 4). Available at: <http://www.fas.org/sgp/othergov/dhs-sbu.pdf>.

²⁶ *Ibid.*, Section 6(H)(1).

²⁷ *Ibid.*, Section 6(D). While the directive states that FOUO designation does not render information exempt from disclosure under FOIA, it also requires such information transmitted outside of DHS to carry a warning label that it "may" be exempt (Section 6(C)(1)(a); Section 6(F)(1)(c)).

²⁸ AAAS, *Science and Security in the Post-9/11 Environment*: "Sensitive but Unclassified Information," July 2004. Available at: www.aaas.org/spp/post911/sbu/.

²⁹ 49 C.F.R. 1520. Representatives David Obey (D-WI) and Martin Sabo (D-MN) have requested the General Accountability Office (GAO) to conduct a review of TSA's designation process related to SSI information. Letter from D. Obey, Ranking Member, Appropriations Committee and M. O. Sabo, Ranking Member, Homeland Security Subcommittee, Appropriations Committee, U.S. House of Representatives, to D. Walker, Comptroller General, Government Accountability Office, 14 September 2004.

³⁰ U.S. Department of Agriculture, *Control and Protection of "Sensitive Security Information"*, Departmental Regulation 3440-2, 30 January 2003. Available at: <http://www.fas.org/sgp/othergov/usda3440-02.html>.

³¹ Hammitt, Harry, Written Testimony, House Subcommittee on National Security, Hearing on Emerging Threats and International Relations, 2 March 2005.

ing or challenging what may be deemed "sensitive." As a result, the applicability of these terms to almost any area of research has been of utmost concern to the scientific community. As a statement issued by the Presidents of the National Academies warned:

Experience shows that vague criteria of this kind generate deep uncertainties among both scientists and officials responsible for enforcing regulations. The inevitable effect is to stifle scientific creativity and to weaken national security.³²

Despite public outcry, the Administration's move to control "sensitive" information has extended well beyond the context of federal government agencies. In fact, the government is also imposing restrictions in a variety of other areas — export controls, select agents regulations, prepublication review, and restrictions on foreign scholars and students — in the name of safeguarding "sensitive" information. These areas are all discussed below.

The Foreign Publishing Ban

In addition to creating a broad category of "sensitive but not classified" information, the Bush Administration has sought to interfere directly with the process of publishing scientific as well as other academic information.

In 2003, the U.S. Treasury Department's Office of Foreign Assets Control (OFAC) declared that American publishers could not edit works authored in nations that are targets of trade embargoes, including Iran, Sudan and Cuba, with violators facing fines of up to a million dollars or prison terms of up to ten years.

In particular, OFAC declared that Americans could no longer consult with, or edit scholarly papers submitted by researchers living in embargoed nations, unless they obtained a special government license.³³ Specifically forbidden were "substantive or artistic alterations" to a manuscript as well as routine activities such as "the reordering of paragraphs or sentences, correction of syntax, grammar, and replacement of inappropriate words by U.S. persons, prior to publication."³⁴ OFAC's view was that such editing or reviewing of manuscripts constituted an economic "service" to an embargoed country.

In our view, this ruling was in clear violation of the U.S. Constitution (not to mention existing U.S. trade law³⁵). The notion that a publisher would have to ask permission of the government as to what can be published and how it can appear could not be more clearly in violation of the First Amendment.

Most scientific societies simply refused to acknowledge the rule, which applied to all U.S. publications, and continued to edit and publish articles submitted from embargoed nations. The world's largest professional society — The American Chemical Society — actually imposed a moratorium on such editing and

³² Statement on Science and Security in an Age of Terrorism, from Bruce Alberts, Wm. A. Wulf, and Harvey Fineberg, Presidents of the National Academies, 18 October 2002. Available at: www.nationalacademies.org/news/nsf/isbn/.

³³ Letter from R. Richard Newcomb, Director, Office of Foreign Assets Control, U.S. Department of Treasury, to Philippe M. Bruno, Esq., Dorsey & Whitney LLP, 30 September 2003.

³⁴ *Ibid.*

³⁵ U.S. law governing economic sanction was amended twice — first in 1989 and again in 1994 — to make it clear that transactions involving "information and informational materials" are exempt from trade embargos. Representative Howard Berman (D-CA), who authored the informational exemption in 1989 (the "Berman Amendment"), called OFAC's ruling "totally absurd and ludicrous." Miller, John Dudley, "Publishers steamed by U.S. ban," *The Scientist*, 2 March 2004.

publishing, but resumed normal publishing three months later, risking possible fines and imprisonment.³⁶ Many publishers pointed out the obvious contradiction the rule presented by cutting off opportunities for people living in sanctioned countries from having access to real intellectual freedom, as well as the rule's disservice to cross-cultural communication.³⁷

Even in the face of widespread outcry, the government stubbornly maintained this policy. In April 2004, OFAC issued an updated ruling that conceded that basic "style and copy editing" and peer review would be permitted, but only so long as publishers and reviewers did not "substantively rewrite or revise the manuscript." Moreover, the government continued to insist that a "collaborative interaction" between an author in a Sanctioned Country and one or more U.S. scholars resulting in co-authorship was prohibited.³⁸

In response to the revised ruling, a group of national free speech and publishing organizations, including the ACLU, signed a statement protesting the restrictions.³⁹ In September 2004, a group of American publishing inter-

ests filed suit against the Treasury Department, arguing that the regulations violated both the intent of Congress as well as the First Amendment.⁴⁰ Nobel Peace Prize-winning Iranian human rights activist Shirin Ebadi joined the lawsuit in October after the OFAC regulations prohibited U.S. publication of her book about her life and her work.⁴¹

In December 2004, OFAC backed down further from its original ruling, this time by granting all U.S. persons a general license to engage in "all transactions necessary and ordinarily incident to the publishing and marketing of" written materials, including substantive editing, collaborating, and payment of royalties.⁴² By granting a general license, however, as opposed to simply rescinding the original rule, OFAC continues to assert that it has the authority to regulate informational materials, leaving the door open to future restrictions.⁴³ Moreover, the very attempt to promulgate this unconstitutional policy raises disturbing questions about the Administration's respect for the values of openness and the free exchange of ideas, which form the basis not only of scientific inquiry but also of democracy itself.

³⁶ Miller 2004. *See also* Interview with Robert Bovenschulte, President of the publications division of the American Chemical Society, by Amy Goodman, *Democracy Now*, 24 February 2004. Available at: <http://www.democracynow.org/article.pl?sid=04/02/24/1557214>.

³⁷ PEN American Center, "2003 Nobel Peace Prize winner joins battle against Treasury Department for free speech," 26 October 2004. Available at: <http://pen.org/corefreedoms/90.html>. *See also* Complaint, Association of American University Presses v. Office of Foreign Assets Control (04 CV 7604), filed 27 September 2004. Available at: <http://aaupnet.org/ofac/index.html>.

³⁸ Letter from R. Richard Newcomb, Director, Office of Foreign Assets Control, U.S. Department of Treasury, to Nelson G. Dong, Esq., Dorsey & Whitney LLP, 2 April 2004.

³⁹ "Statement in opposition to the embargo of intellectual, scientific, and literary works," circulated by the National Coalition Against Censorship. Available at: <http://www.aaup.org/statements/SPCHState/Statements/ncacpet.htm>.

⁴⁰ "PEN, Publishers file suit to overturn information restrictions," PEN American Center press release, 27 September 2004. The lawsuit was filed by the Association of American Publishers (AAP), the Association of American University Presses, the PEN American Center, and Arcade Publishing.

⁴¹ "2003 Nobel Peace Prize winner joins battle against Treasury Department for free speech," PEN American Center press release, 26 October 2004. Available at: <http://www.fepproject.org/press/ebadi.html>.

⁴² "Treasury Department responds to lawsuit by changing its regulations to permit the publication of books and journals from authors in sanctioned countries," AAUP Press Release, 16 December 2004.

⁴³ Indeed, as of the time of this publication, the plaintiffs in the lawsuit had not yet dropped the lawsuit, precisely because of this remaining concern.

The Costs of Secrecy

The government's push to further cloak its information under a veil of secrecy and restrict information flow through controlling information and publishing is misguided and damaging to the national interest. To begin with, the rising tide of classification has real financial costs: the 14 million classification actions reported for FY 2003 were estimated to have cost U.S. taxpayers \$6.5 billion.⁴⁴

Worse, excessive secrecy and restrictions on information flow actually weaken efforts to protect against terrorism. Information that is classified, deemed "sensitive," directly censored, or tied up in regulatory delay is blocked not only from the general public, but from many individuals — including government officials — who could potentially help guard against terrorist threats.

Furthermore, categorizing research as "sensitive" is contrary to the basic tenets of science. And the lack of clarity over what constitutes "sensitive" research information leaves research vulnerable to arbitrary politicization. As Dr. Sheila Widnall, MIT scientist and former Secretary of the Air Force has stated:

Our scientific and engineering productivity flows from our open system of basic research combined with education... Cut off from...criticism and challenge, science deteriorates: subject to political rather than scientific judgments, producing fads, junk science and wishful thinking.⁴⁵

The Administration's policies of information control have resulted in a government in which White House officials and agency heads are permitted to guard over every scrap of information with iron fists — hardly a recipe for "connecting the dots" and successfully defeating terrorist plots. The 9/11 Commission, in fact, found that the failures behind that attack included a system that "implicitly assumes that the risk of inadvertent disclosure outweighs the benefits of wider sharing."⁴⁶ The Commission concluded that "security concerns need to be weighed against the costs. Current security requirements nurture over-classification and excessive compartmentalization of information among agencies."⁴⁷

The fact is, government agencies — particularly security agencies — are prone to secrecy and overclassification, and real leadership from the top is necessary to fight that tendency. Unfortunately, the nation's current leadership, far from fighting this undemocratic impulse, has actively encouraged it. An open approach to information has served our society well for many decades, and the current attempt to reverse that tide is dangerously short-sighted.

RESTRICTIONS ON FOREIGN SCHOLARS⁴⁸

At the same time that the government has issued new rules and regulations for the alleged purpose of keeping information away from potential terrorists, it has also pursued an approach to security that involves screening

⁴⁴ Information Security Oversight Office (ISOO), *2003 Report on Cost Estimates for Security Classification Activities*, July 2004. Available at: http://www.archives.gov/isoo/reports/2003_cost_report.html.

⁴⁵ Widnall, Sheila, Institute Professor and Professor of Aeronautics and Astronautics, Massachusetts Institute of Technology, Testimony before the Committee on Science, U.S. House of Representatives, 10 October 2002. Available at: <http://www.house.gov/science/hearings/full02/oct10/widnall.htm>.

⁴⁶ *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States*, 22 July 2004, p. 417. Available at: <http://www.9-11commission.gov/report/index.htm>.

⁴⁷ *Ibid.*, 417.

⁴⁸ The authors would like to thank Robin Goldfaden of the ACLU for her assistance with this section of the report.

people or restricting them from particular situations, places, or information.⁴⁹ This misguided approach to security has had its greatest effect on science and academia through a number of new policies that seek to restrict foreign students and scholars from entering the United States, accessing certain information or participating in certain areas of research.

The role of foreign students and scholars in American education and research

The importance of foreign students and scholars in the U.S. academic community is extraordinary and undisputed:

- More than 580,000 international students attended colleges and universities in the United States in 2002.⁵⁰
- These students contributed almost \$12.9 billion to the U.S. economy.⁵¹
- Over the past 20 years, noncitizens have accounted for more than 50% of the growth in the number of Ph.D.s earned in the United States. Most of this growth has occurred within the sciences.⁵²

- More than half of the students enrolled in science and engineering programs in the United States are foreigners.⁵³

- Approximately 40 percent of U.S. engineering faculty⁵⁴ and engineering, math, and computer sciences graduate students are foreign-born.⁵⁵

The contributions of foreign nationals to our society and to global security are immense. Many foreign nationals who study in the United States return to their native countries where they take on leadership positions with an understanding and appreciation of American culture and American values. The fact that nations around the world from Nepal to Saudi Arabia are seeded with leaders in a variety of fields who received their educations in the United States cannot be anything but an enormous boon for our country.

Other foreign nationals stay on in the United States to make invaluable contributions to our society. Consider that:

- More than a third of U.S. Nobel laureates are foreign-born.⁵⁶
- 38% of doctorate holders in America's science and engineering workforce are foreign-born.⁵⁷

⁴⁹ For a detailed discussion on post-9/11 surveillance and screening measures, such as government watch lists and airport passenger screening, see *The Surveillance-Industrial Complex: How the American Government is Conscripting Businesses and Individuals in the Construction of a Surveillance Society*, ACLU, August 2004. Available at: <http://www.aclu.org/surveillance>.

⁵⁰ Goodman, Allan E., President and C.E.O., Institute of International Education, Written Testimony, "Addressing the new reality of current visa policy on international students and researchers," Senate Foreign Relations Committee Hearing, 6 October 2004.

⁵¹ Jischke, Martin, President, Purdue University, Testimony Before the U.S. Senate Foreign Relations Committee, 6 October 2004.

⁵² "Academic freedom and national security in a time of crisis: A report of the AAUP's special committee," *Academe*, Vol. 89, No. 6 (November-December), 2003.

⁵³ Zakaria Fareed, "Rejecting the next Bill Gates," *Newsweek*, 28 November 2004 (citing National Science Board (NSB) Statistics from 2003).

⁵⁴ Gast, Alice P. *The impact of restricting information access on science and technology*, MIT, April 2003, p. 4. Available at: <http://www.aau.edu/research/Gast.pdf>

⁵⁵ Statement issued on 13 December 2002, by Bruce Alberts, president of the National Academy of Sciences; William A. Wulf, the president of the National Academy of Engineering; and Harvey Fineberg, the president of the Institute of Medicine. Available at: <http://www.aaup.org/publications/Academe/2003/03so/03sointer.htm>.

⁵⁶ Gast 2003, p. 4.

⁵⁷ Zakaria 2004 (citing National Science Board (NSB) Statistics from 2003).

- Nearly 50% of the scientific and medical professionals at the National Institutes of Health are foreign nationals.⁵⁸

Our nation's fortuitous position as a world leader in the sciences has been put at risk by ill-conceived "security" policies that will do far more harm than good to our nation by unduly restricting hundreds of thousands of talented foreigners of good will.

Post-9/11 policies restricting foreign students and scholars

The political pressure brought by the September 11th attacks led to many restrictions on foreign students and scholars. Shortly after it was discovered that one of the hijackers had entered the country on a student visa, the President ordered federal officials to undertake a thorough review of the student visa system. This turned out to be just the first step of many that together have resulted in cutting foreign students from American educational programs.

Major policy initiatives that have had a detrimental impact on the freedom of foreign students and scholars to study in the United States include:

- **SEVIS.** Section 416 of the USA Patriot Act mandated the full-scale implementation and expansion of a national electron-

ic foreign student tracking system, called the Student and Exchange Visitor Information System, or SEVIS.⁵⁹ SEVIS requires schools to enter and maintain current information about all of their foreign students and nonimmigrant exchange visitors (as well as their accompanying spouses and children), including details about enrollment, transfers, and any changes in course of study, employment, or home address. As of August 2004, SEVIS tracked information on more than 770,000 students and exchange visitors and more than 100,000 of their dependents.⁶⁰

- **Visa Condor Program.** In January 2002, the U.S. State Department initiated a "Visa Condor Program," under which visa applications from individuals determined to be "high risk" are forwarded to the FBI and compared against various government databases. As of September 2003, the FBI employed 119 full-time employees in its Name Check Unit and had responded to more than 97,600 Visa Condor name check requests.⁶¹

- **Technology Alert List.** The "TAL" is a list of academic subjects maintained by the State Department that are viewed as "sensitive." Established during the Cold War to help maintain technological superiority over the Soviet Bloc, the list was expanded in August 2002 to include not only unsurpris-

⁵⁸ Gast 2003, p. 4.

⁵⁹ SEVIS was initially established by Section 641 of the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996 (8 U.S.C. § 1372). The USA Patriot Act amended IIRIRA to require full implementation of SEVIS prior to 1 January 2003. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT) Act of 2001, Public Law 107-56, Section 416d. In addition, the Enhanced Border Security and Visa Entry Reform Act of 2002 added to the information collection requirements and requires an educational institution to report any failure of an alien to enroll within 30 days of the registration deadline. U.S. Immigration and Customs Enforcement, *Student and Exchange Visitor Information Fact Sheet*. Available at: http://www.ice.gov/graphics/news/factsheets/0212FINALRU_FS.htm.

⁶⁰ U.S. Immigration and Customs Enforcement (ICE), Fact Sheet, "Sevis — Year Two," 27 August 2004. Available at: <http://www.ice.gov/graphics/news/factsheets/082704sevisFS.htm>.

⁶¹ Testimony of Larry A. Mefford, Executive Assistant Director, Counterterrorism/Counterintelligence Division, FBI, Before the Senate Judiciary Committee, Subcommittee on Immigration and Border Security, 23 September 2003.

ing subjects like genetic engineering, immunology and virology, but also such varied fields as architecture, community development, environmental planning, geography, housing, landscape architecture, pharmacology and urban design. Worse, the list is now classified,⁶² and new fields and technologies are apparently being added without any consultation with universities or academic departments.⁶³

- **Visa Mantis.** Under a program called Visa Mantis, students and scholars applying for visas to study subjects or engage in activities that will involve exposure to technologies that are included on the State Department's TAL must undergo extra scrutiny and obtain additional security clearances. Individuals flagged for a Visa Mantis check are informed that their visa is being temporarily refused, pending clearance by multiple agencies, including the FBI and the State Department's Bureau of Nonproliferation.⁶⁴ Unlike other types of student visas that are granted for the duration of a foreign student's course of study, Mantis visas must be renewed every year.⁶⁵

- **National Security Entry-Exit Registration System (NSEERS).** In August 2002, the Bush Administration began imposing "special registration" requirements — including fingerprinting and photographing — on "certain nonimmigrant aliens."⁶⁶ Fingerprints were compared against a database of known and suspected terrorists and criminals.⁶⁷ Special registrants were then subjected to a complicated web of ongoing requirements, including re-registering 30-40 days after admission to the United States, annual registration, departure registration, and restrictions on U.S. port locations from which they could depart. The regulations sought to make removal a penalty for willful failure to register, and create a presumption of inadmissibility for those who fail, "without good cause" to comply with the departure registration requirements.⁶⁸ Beginning in November 2002, the government began imposing these requirements retroactively by issuing "call-in" notices to persons from 25 countries who had been admitted to the United States prior to the rule's

⁶² Phone conversation with State Department official, Office of Public Inquiries Division, 18 February 2005.

⁶³ Larry D. Maloney, "Academia Slams Visa Policies," *Design News*, November 8, 2004. The most recent public list from August 2002 can be viewed at: http://www.hio.harvard.edu/students_scholars/travel/technology_alert_list.php?view=print

⁶⁴ U.S. General Accounting Office, *Border security: Improvements needed to reduce time taken to adjudicate visas for science students and scholars*, February 2004, pp. 6-7. Available at: <http://www.gao.gov/new.items/d04371.pdf>.

⁶⁵ In response to repeated criticism that the onerous process for obtaining security clearance under Visa Mantis was discouraging foreign scholars and scientists from coming to the United States, the State Department issued a rule on 11 February 2005 that extended Mantis security clearances to four years for students and two years for exchange visitors, provided that their course of study or work remains the same. However, individuals required to obtain a visa through Visa Mantis must still renew their visas annually and consular officers can request a Visa Mantis clearance during any visa adjudication, at their discretion. See U.S. Department of State, Office of the Spokesman, "Extension of validity for science related interagency visa clearances," 11 February 2005. Available at: <http://www.state.gov/t/pa/prs/ps/2005/42212.htm>.

⁶⁶ Those subject to the rule routinely included persons admitted to the United States as nonimmigrants on or after 11 September 2002, who were citizens or nationals of designated countries or who were thought to meet undisclosed criteria established by the Attorney General. 67 Fed. Reg. 52584, 52592 (12 August 2002). Available at: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2002_register&docid=02-20642-filed.pdf.

⁶⁷ "Immigration Alert: Recent news from DOS, DOJ, and INS," Haynes and Boone, LLP, 30 September 2002. Available at: http://www.haynesboone.com/knowledge/knowledge_detail.asp?groupid=all&page=pubs&pubid=845.

⁶⁸ For example, "Any nonimmigrant alien subject to special registration who fails, without good cause, to be examined by an inspecting officer at the time of his or her departure...shall thereafter be presumed to be inadmissible...as an alien whom the Attorney General has reasonable grounds to believe...seeks to enter the United States to engage in unlawful activity." 67 Fed. Reg., 52592 (12 August 2002).

effective date.⁶⁹ In December 2003, the government announced that it had suspended NSEERS re-registration requirements in favor of a more "tailored program" pursuant to which select individuals would be notified of future registration obligations.⁷⁰

- **US-VISIT.** As the most onerous provisions in NSEERS were being retracted, the government was moving towards building a database, US-VISIT, to register all incoming foreign visitors. US-VISIT requires all foreigners to be fingerprinted and digitally photographed upon arrival in the U.S.

- **USA Patriot Act.** Section 411 of the USA Patriot Act permits the government to exclude foreign scholars from the country if in the government's view they have "used [their] position of prominence to endorse or espouse terrorist activity or to persuade others to support terrorist activity."⁷¹ It is becoming increasingly apparent that the government has been using this authority broadly to deny admission to those whose political views it disfavors.⁷²

Impacts on Individual Students, Scholars and Educational Institutions

These changes in visa policies have presented foreign scholars, researchers, and students seeking to work or study in the U.S. with extraordinary obstacles, including the following:

- **Inefficiencies and errors.** Under SEVIS, university administrations have complained that information provided to the government is frequently lost, and that the system is not kept up to date. Major delays have been reported even with such seemingly simple matters as listing a change in a student's academic major.⁷³

- **Visa backlog.** The government's misguided security policies have led to a massive visa backlog. In the fall of 2002, an estimated 25,000 people were waiting for a determination on their student visa applications.⁷⁴ Even the FBI admitted to being "overwhelmed by the increase in names to be checked" under the Visa Condor Program.⁷⁵

- **Unreasonable Delays.** A U.S. General Accounting Office (GAO) study found that security checks for Visa Mantis cases sent for review in the spring of 2003 took on average 67 days to process and approximately 10% pended for more than 5 months.⁷⁶ The

⁶⁹ National Immigration Law Center, "DOJ expands 'call-in' special registration to additional nationalities," *Immigrants' Rights Update*, Vol. 16, No. 8, 23 December 2002. Available at: <http://www.nilc.org/immlawpolicy/arrestdet/ad060.htm>. See also 67 Fed. Reg. 77,136-38 (December 16, 2002) (original notice); 67 Fed. Reg. 77,642-44 (December 18, 2002) (revised notice).

⁷⁰ 68 Fed. Reg., 67578 (December 2, 2003). While the program has been scaled back by the December 2003 ruling, the authority to impose special registration requirements remains under the modified NSEERS rule, and the departure registration and other requirements continue to apply.

⁷¹ USA PATRIOT Act, Section 411 (iii)(VI).

⁷² On March 16, 2005, the ACLU filed a Freedom of Information Act (FOIA) request for records concerning the government's reliance on Section 411 of the Patriot Act in excluding scholars from the U.S. See "ACLU seeks records on use of Patriot Act to deny U.S. entry to prominent foreign scholars," 16 March 2005. Available at: <http://www.aclu.org/SafeandFree/SafeandFree.cfm?ID=17741&c=206>

⁷³ See "Academic Freedom and National Security in a Time of Crisis: A Report of the AAUP's Special Committee," *Academe*, Vol. 89, No. 6 (November-December) 2003.

⁷⁴ Dillon, Sam, "U.S. slips in attracting the world's best students," *New York Times*, 21 December 2004.

⁷⁵ Testimony of Robert J. Garrity, Jr., Acting Assistant Director, Records Management Division, FBI, Before the House of Representatives, Committee on Government Reform, 10 July 2003.

⁷⁶ U.S. General Accounting Office 2004, p. 11. Similarly, surveys conducted by the Association of American Universities indicated a 179% increase in student visa delays from 2001-2002 and an additional increase of 41% the following year. "AAU Summarizes 2003 Visa Survey Results For AAU Universities, Makes Recommendations for Improving Process," AAU, 14 November 2003. Available at: <http://aau.edu/homeland/students.cfm>

study also found that wait times for interviews were as long twelve weeks.⁷⁷

• **Declines in student visa issuances.** Overall refusal rates on foreign student visas were a record high of 35% in 2003.⁷⁸ 2002 and 2003 brought the two largest drops in visa issuances (20% followed by another 8%) since the government began tracking student statistics in 1952.⁷⁹

• **Round-ups and removals.** Under the NSEERS "call-in" component, the government subjected more than 80,000 men and boys over the age of 16 from twenty-five countries (all but one of which are predominantly Muslim) to controversial, burdensome special registration requirements. More than 13,000 of these people — some of them scholars and students — have since been placed in deportation proceedings as a result of their voluntary cooperation with the program or unknowing violation of the rules.⁸⁰ None of these individuals have been charged with or convicted of a crime of terrorism.⁸¹

• **Harassment, discrimination and abuse.** Many students, scholars, and other individuals have reported that they have been targeted by immigration and law enforcement authorities in a discriminatory manner, or that they have been victims of outright harassment or abuse, as a result of these programs.⁸²

Personal Stories

In 2003, Elena Casacuberta, a postdoctoral student at the Massachusetts Institute of Technology (MIT) returned to Spain for winter break. Elena had renewed her work visa three times since she had been coming and going to the United States starting in 2000, so she did not anticipate any problems. Five months later, Elena was still in Spain, awaiting Visa Mantis security clearance. In the meanwhile, her NIH-funded research on the genetics of fruit flies was put on hold indefinitely.⁸³

In May 2004, Reza Chamanara, an Iranian postdoctoral fellow in the department of mathematics at Indiana University, left for England to give a lecture and found himself blocked from returning to the United States. Seven months later, university administrators were still unable to get an answer from the FBI as to why his visa renewal was being held up and whether he would be able to return.⁸⁴

⁷⁷ U.S. General Accounting Office 2004, p. 17. Interview wait times under Visa Mantis have been compounded by a requirement issued by the State Department in May 2003 that nearly all applicants for nonimmigrant visas undergo an interview at the U.S. Embassy or Consulate as part of their visa application. See U.S. Department of State, "Border Security: Waiver of personal appearance for nonimmigrant visa applicants — Revision to the regulations (Washington, DC: 21 May 2003). Available at: http://www.fin.ucar.edu/hr/foreignvisitors/appts_cable.html.

⁷⁸ According to the U.S. State Department, 128,195 foreign student visas were refused in 2003, and 235,579 issued. Refusal rates for the Visa Mantis program, specifically, are likely to have been even higher for this period, given the more stringent requirements under the program. The State Department does not track statistics specific to this program, however, such as the number of cases they process, issuance and refusal rates, and the number of students and scholars that must undergo a Visa Mantis check each year. See U.S. General Accounting Office 2004, p. 9.

⁷⁹ Maloney, Larry D. "Academia Slams Visa Policies" *Design News*, 8 November 2004. Available at: <http://www.design-news.com/article/CA478164.html>.

⁸⁰ Swarns, Rachel, "Program's value in dispute as a tool to fight terrorism," *New York Times*, 21 December 2004.

⁸¹ Administration officials initially claimed that they had arrested six men with links to terrorism activities as a result of the call-in programs. However, the 9/11 Commission reported last year that it had found little evidence to support this claim. Swarns 2004.

⁸² Twibell, Ty S. Wahab, "The road to internment: Special registration and other human rights violations of Arabs and Muslims in the United States," *Vermont Law Review*, Vol. 29 (forthcoming 2005). For example, Saudi Arabian twin brothers at a university in northern Missouri were held for violating their student status by having "never enrolled" on bonds of \$10,000 each, and subjected to intensive investigation, including searches of their dorm rooms and confiscation of their passports and computers, despite having been enrolled continuously with the university for almost two years and having received exemplary grades. The INS agreed that there was no basis on which to charge the twins only after they filed discrimination charges. (Twibell, pp. 56-58). In another case, a Saudi Arabian doctoral student in Lawrence, Kansas was repeatedly followed and harassed by FBI officials, who would show up at his home or locations where he studied, unannounced, and as him questions in a threatening manner. (Twibell, pp. 59-61).

⁸³ Field, Kelly, "Fixing the visa quagmire," *Chronicle.com*, Vol. 51, Issue 7, Page A40.

⁸⁴ *Indianapolis Star* Editorial, 5 December 2004. Available at: <http://opendoors.iienetwork.org/?p=53075#Indy>.

Stefan Gilb, a postdoctoral researcher at Lawrence Berkeley National Lab, was told he had to fly home to Germany to renew his visa when he moved his chemistry laboratory from Colorado to Berkeley. Once back in Germany, U.S. officials informed him that he had to undergo a Mantis security check. Gilb was forced to stay in Frankfurt for three months waiting for clearance, all the while risking losing his position at the lab, incurring travel expenses, and paying for an empty apartment in Berkeley.⁸⁵

In July 2004, the State Department — apparently at the request of the Department of Homeland Security — revoked the visa of Dr. Tariq Ramadan, a Geneva-based professor and prominent Islamic intellectual. Ramadan was scheduled to arrive in the United States and begin teaching at the University of Notre Dame in Indiana only two weeks after his visa was revoked. The U.S. government has not provided any evidence that Ramadan poses a security threat or that there was an error in the State Department's initial decision to issue him a visa.⁸⁶

In March 2003, Yahya Jalil, a Pakistani student at the University of Pennsylvania's Wharton School of Business, was returning from spending his spring break in London when he was stopped at Newark airport and barred from re-entering the United States. Jalil had accidentally and unknowingly failed to comply with NSEERS departure registration requirements.⁸⁷ Only after the administration at UPenn launched a campaign that included an online petition and visits to the U.S. ambassador to Pakistan and several other U.S. officials was Jalil allowed to return to complete his requirements, graduate, and reunite with his wife.⁸⁸

Together, these policies are having a devastating effect on our higher education system.

Research has been delayed, classes have been left without instructors, department enrollment quotas have gone unfilled, and conferences and meetings have been missed.⁸⁹

Programs like NSEERS, Visa Mantis, US-VISIT, and Visa Condor have scared away or sparked resentment among thousands of talented foreign students and scholars who would otherwise have been excited to study or work in America. Forty-two percent of universities responding to a survey conducted by Association of American Universities (AAU) in 2004 attributed a decline in foreign student enrollment to the applicants opting to study in another country.⁹⁰ Many individuals and groups have refused to travel to the United States for academic conferences and meetings because of these security programs.⁹¹ Foreigners understandably do not relish the prospect of being fingerprinted and monitored by American security agencies that have badly mistreated many innocent foreign nationals since 9/11.⁹²

The result of these policies has been a significant decline in foreign applications and enrollment in U.S. universities:

⁸⁵ Natchtigal, Jeffrey, "Access denied: Are tightened security measures harming science at Cal?" *Berkeley Science Review*, Vol. 4, No. 1, Spring 2004, pp. 19-23.

⁸⁶ SAR press release: "US revokes visa of Islamic scholar to visit Scholars at Risk Network member University of Notre Dame," 3 September 2004. Available at: http://scholarsatrisk.nyu.edu/pr04_09.html.

⁸⁷ Ahmed, Sameer, "INS prevents alum from U.S. re-entry," *Stanford Daily*, 15 April 2003.

⁸⁸ Ibid.

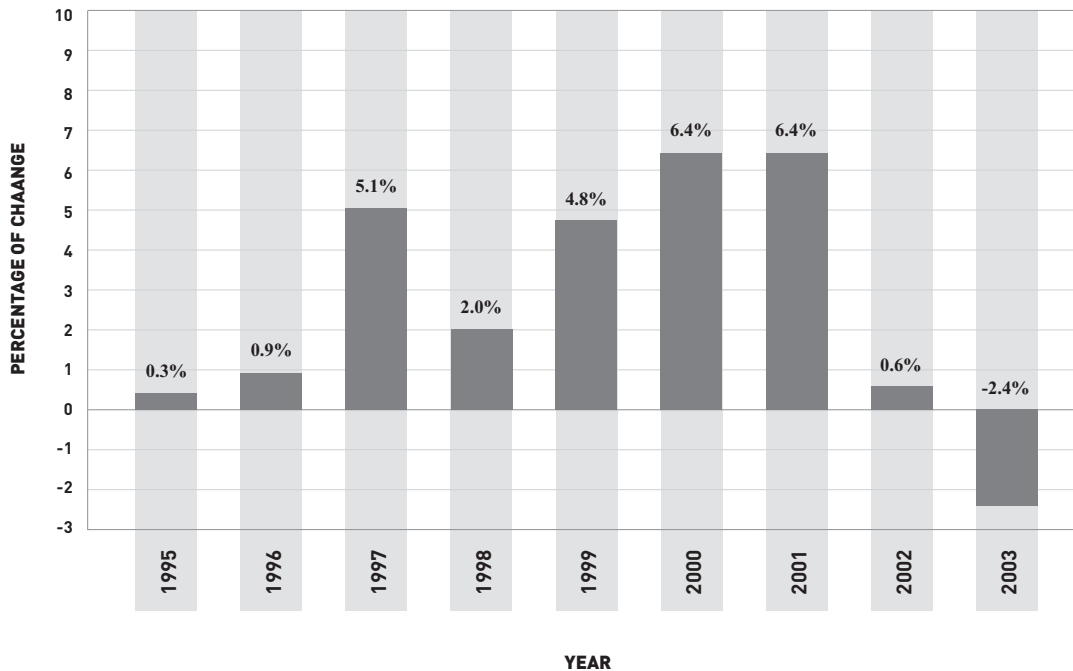
⁸⁹ For example, educational institutions responding to a 2003 AAU survey reported the following consequences of international students' missing their academic start dates as a result of visa delays: 49% reported delays to scientific research; 67% reported increased time to degree for students; 28% reported classes left without instructors; 44% reported students lost fellowship support; and 74% reported financial costs to the institution. See AAU 2003. See also U.S. General Accounting Office, 2004, p. 21.

⁹⁰ Association of American Universities (AAU), "AAU summarizes 2004 visa survey results for AAU universities," 10 November 2004. Available at: <http://www.aau.edu/homeland/students.cfm>.

⁹¹ Gast 2003 p. 5.

⁹² Department of Justice, Office of the Inspector General *The September 11 Detainees: A Review of the Treatment of Aliens Held on Immigration Charges in Connection with the Investigation of the September 11 Attacks*, June 2003. Available at: <http://www.usdoj.gov/oig/special/0306/index.htm>. See also: Department of Justice, Office of the Inspector General, *Supplemental Report on September 11 Detainees' Allegations of Abuse at the Metropolitan Detention Center in Brooklyn, New York*, December 2003. Available at: <http://www.usdoj.gov/oig/special/0312/final.pdf>. See also ACLU, *America's Disappeared: Seeking International Justice for Immigrants Detained After September 11*, January 2004. See also ACLU Report *Worlds Apart: How Deporting Immigrants After 9/11 Tore Families Apart and Shattered Communities*, December 2004.

Percent Change in Foreign Students by Year



- In 2003, total enrollment of foreign students in the United States fell for the first time in three decades, following only a minimal increase in 2002. Total enrollment in 2003 fell by 2.4%, and 2002 enrollment had increased by only 0.6%, as compared to increases of 6.4% the previous two years.⁹³

- The figures for graduate programs alone are even more alarming. In a survey conducted by the AAU, all but one educational institution reported a decline in international graduate student applications for fall 2004.⁹⁴ The Council of Graduate Schools

estimates that graduate school enrollment has decreased between 6 and 10% for each of the last three consecutive years, following a decade of steady growth.⁹⁵ In 2004, foreign applications to American graduate schools declined by 28%, and admissions by 18%.⁹⁶

- The sciences have been hit hardest by these policies. An AAU survey from 2003 indicated that 74% of international students and 81% of scholars who missed their start dates due to visa delays were in the physical or biological sciences or engineering.⁹⁷

⁹³ Goodman, Allan E., "Addressing the New Reality of Current Visa Policy on International Students and Researchers," Statement before the U.S. Senate Foreign Relations Committee, 6 October 2004. Available at: <http://foreign.senate.gov/hearings/2004/hr041006a.html>.

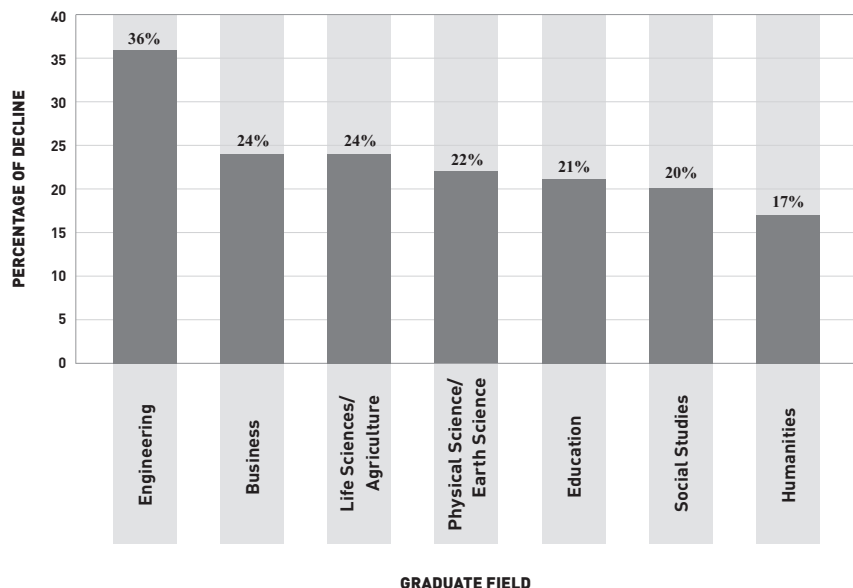
⁹⁴ American Association of Universities, "AAU Summarizes 2004 visa survey results for AAU universities," 10 November 2004. Available at: <http://aau.edu/homeland/students.cfm>.

⁹⁵ Council of Graduate Schools (CGS), "Council of Graduate Schools Finds Decline in New International Graduate Student Enrollment for the Third Consecutive Year," 4 November 2004. Available at: <http://www.cgsnet.org/>.

⁹⁶ Ibid.

⁹⁷ American Association of Universities, "AAU Summarizes 2003 visa survey results for AAU universities, makes recommendations for improving process," 14 November 2003. Available at: <http://www.aau.edu/homeland/students.cfm>.

Decline in Foreign Student Applications by Academic Field, 2003 - 2004⁹⁸



Evidence of brain drain can also be seen outside the academic community. From 2001-2002, the number of temporary worker visas issued for jobs in science and technology plummeted by 55 percent.⁹⁹

A colossal error

Once famous for its open arms and its ability to attract talented and enterprising individuals from around the world, the United States is rapidly losing out in the competition for global brainpower. Our Administration's misguided border policies have already had the disastrous effect of excluding or repelling some of the world's best and brightest minds. This loss will be felt not only by America's thousands of colleges and universities; it will reverberate throughout our corporate, medical, scientific, and engineering communities for decades to come.

At the same time, these reflexive and misguided policies have done little if anything to improve national security, and may even be making us less safe. As James Ziglar, former commissioner of the INS said about the NSEERS program:

"As expected, we got nothing out of it....To my knowledge, not one actual terrorist was identified...what we did get was a lot of bad publicity, litigation and disruption in our relationships with immigrant communi-

ties and countries that we needed help from in the war on terror."¹⁰⁰

Ziglar's conclusion about NSEERS might well be applied to the Administration's entire treatment of scientists and students from other countries.

RESTRICTIONS ON MATERIALS AND TECHNOLOGY

Another area where the U.S. government has taken steps to restrict scientific research and technology since 9/11 is the production and use of "select agents" in biomedical and other research.

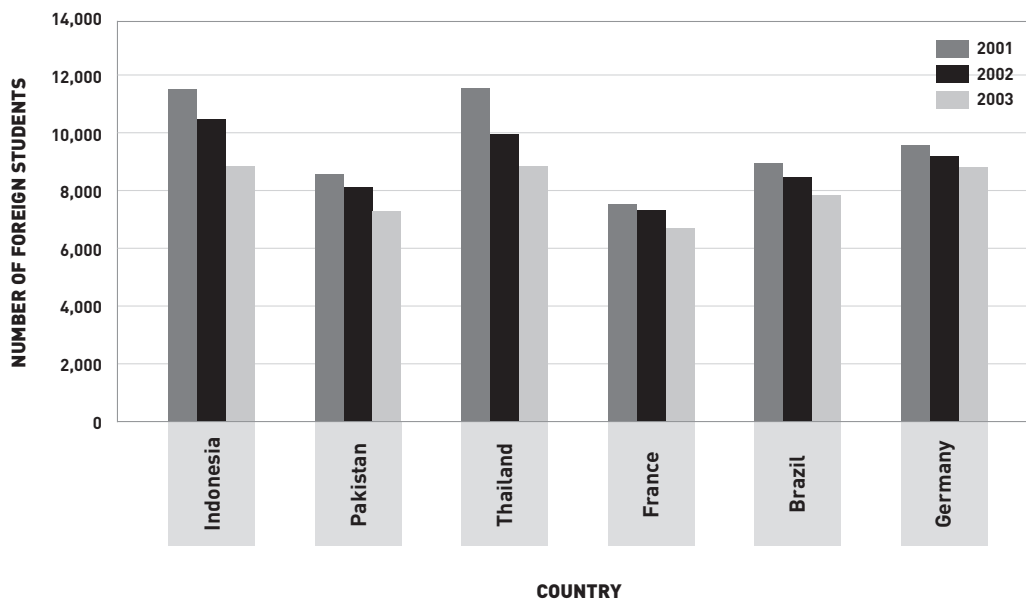
Unlike restrictions on publishing or on basic scientific inquiry, government regulation of dangerous agents and materials can be justified. But biological organisms and agents present a difficult challenge for regulatory agencies because of their "dual use" character. While microbiology and genetics can be used to develop biological

⁹⁸ Council of Graduate Schools 2004.

⁹⁹ Glanz, James, "Study warns of lack of scientists as visa applications drop," *New York Times*, 20 November 2003.

¹⁰⁰ Swarns 2004.

Decline in Foreign Students by Country of Origin, 2001 - 2003



weapons, these same processes are used in labs around the country to develop disease therapies or vaccines and for basic research. The problem is made even more difficult by the fact that the biological organisms and agents that this research depends upon are commonplace, exist in nature, and have everyday uses.

The dual use dilemma means that it would not be hard for a potential terrorist wanting to cause harm through the use of these materials to get hold of them. It means that international pressure of the kind placed on rogue nation states conducting nuclear research would have little effect. And it means that regulations curbing the use of or access to such agents would have broad effects on the conduct of science.

Dual use dilemma calls for caution

The "dual use" character of biological agents means that any regulation of these materials must be implemented with extreme sensitivity

and thoughtfulness so that beneficial biomedical research is not restricted. In fact, restricting research, far from improving public safety, would erode the very research capacity that we depend upon to protect us in the event of an actual act of bioterrorism.

Because of this difficulty in striking the right balance between caution and encouragement, regulation in the area of "select agents" proceeded cautiously prior to 9/11. In 1997, the Department of Health and Human Services, acting at the direction of Congress, established a list of select biological agents considered to constitute the greatest threats to human health.¹⁰¹ The Centers for Disease Control (CDC) was placed in charge of registering scientists to send or receive "select agents" and monitoring facilities engaged in their transfer.

After September 11, however, all semblance of care and caution in the regulation of select agents was cast aside by the USA Patriot Act. That law:

¹⁰¹ Antiterrorism and Effective Death Penalty Act of 1996 (Public Law 104-132).

- **Expanded the list of the CDC's select agents.** The CDC's original list was expanded to include sixty-four different pathogens, many of which are commonplace in labs around the nation.

- **Imposed new controls on scientists who use select agents.** Prior to the Patriot Act, scientists engaged in research using select agents were required to register with the CDC, but did not have to report specific quantities of these materials that they had on hand or explain why they possessed them. Now researchers must specifically document the types and quantities of select agents in their possession as well as the purpose of their research.¹⁰²

- **Barred certain researchers from working with select agents.** "Restricted persons" included international students who are nationals from a country considered to be a "state sponsor of terrorism" (with no exception available for such students involved in legitimate research projects), but also U.S.-born researchers who have been convicted of any crime carrying a sentence of one year or more (even if the sentence was suspended), unlawful users of controlled substances, and anyone with a dishonorable military discharge.¹⁰³

- **Required mandatory background checks for U.S. researchers.** Among other things, the checks are intended to ensure that they are not "restricted persons" as defined in the Act.

- **Criminalized possession of biological agents.** The law made it a criminal offense for any person "to knowingly possess any biological agent, toxin, or delivery system of a type or in a quantity that is not reasonably justified by protective, bona fide research."¹⁰⁴

As if the Patriot Act's restrictions were not broad enough, Congress in June 2002 passed the Public Health Security and Bioterrorism Preparedness Act.¹⁰⁵ This law further broadened the regulatory obligations for labs working with select agents, extended CDC's monitoring to all facilities possessing and using select agents, and imposed new requirements for inventorying and reporting select agents and for registering the names of researchers working with those agents for DOJ background checks.

In March 2004, the Secretary of Health and Human Services (HHS) announced the formation of a new National Science Advisory Board for Biosecurity to monitor dual-use research and advise the government on strategies for developing guidelines to improve biosecurity oversight, including publication guidelines for "sensitive" life sciences research.¹⁰⁶

Impacts on universities and individual scientists

A full 200,000 institutions in the United States make use of select agents as defined by the current list,¹⁰⁷ and this extensive set of regulations has created an extraordinary burden for universities and research institutions. In addition, the unprece-

¹⁰² Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (PL 107-188). Available at: <http://www.fda.gov/oc/bioterrorism/bioact.html>.

¹⁰³ USA PATRIOT Act Section 817.

¹⁰⁴ *Ibid.*

¹⁰⁵ Public Law 107-188.

¹⁰⁶ AAAS, "Science and security in the post-9/11 environment: Select agents," August 2004. Available at: www.aaas.org/spp/post911/agents/.

¹⁰⁷ John H. Marburger, Statement Before the Committee on Science U.S. House of Representatives, 10 October 2002. Available at: <http://www.fas.org/sgp/congress/2002/101002marburger.html>.

dened restrictions imposed on U.S.-born researchers working with select agents could force universities to bar researchers from having access to select agents who were once arrested for smoking marijuana, participating in an antiwar demonstration, or who were discharged from the military for being gay.

Major research universities, such as MIT, have already speculated that they may need to abandon large areas of research because of the administration's approach to regulating select agents:

It is likely that in the current climate, the number of agents on the list will grow and the restrictions placed on personnel, physical access, and publication of research findings may grow as well. At some point, MIT may rightfully decide that on-campus research in areas governed by these regulations is no longer in its interest or in line with its principles.¹⁰⁸

The government has singled out and severely reprimanded in a draconian manner a few scientists who were allegedly in violation of these complicated new rules. In 2001, for example, a University of Connecticut graduate student named Tomas Foral who was studying the West Nile virus moved some anthrax samples from a broken freezer to one where his own research samples were stored. The FBI put Foral through more than a year of repeated questioning, searches, and a lie detector test. He was charged with unlawful possession of anthrax, even though investigators had no evidence that he had any criminal intentions. The Justice

Department finally agreed not to prosecute Foral in exchange for community service and some activity restrictions.¹⁰⁹

In another case that received widespread attention, a bubonic plague expert at the University of Texas named Thomas Butler was charged in 2003 with illegally transporting plague samples from Tanzania and for lying to the FBI as to how he disposed of the samples. While Butler was ultimately cleared of these onerous charges, he was found guilty of 47 other violations.¹¹⁰ It appears that the FBI's aggressive pursuit of Butler and devotion of resources to this case was intended to send a chill through the scientific community, rather than to protect public safety. A joint letter written by the presidents of the National Academy of Sciences (NAS) and the Institute of Medicine complained in a letter to Attorney General John Ashcroft about the implications of Butler's prosecution, stating, "We are particularly concerned about the impact that Dr. Butler's case may have on other scientists who may be discouraged from embarking upon or continuing crucial bioterrorism-related scientific research."¹¹¹

Indeed, some researchers have opted to discontinue their research rather than take on the liability associated with abiding by these new regulations. Dr. Stanley Falkow, a professor of microbiology and immunology at Stanford, for example, destroyed his plague cultures in 2003, stating, "These rules affect not just the scientists who work with me, but those who clean

¹⁰⁸ "In the Public Interest: Report of the Ad Hoc Faculty Committee on Access to and Disclosure of Scientific Information," Massachusetts Institute of Technology, 12 June 2002, p. 25. Available at: <http://web.mit.edu/faculty/reports/publicinterest.pdf>.

¹⁰⁹ Thomas, Patricia, "From saviors to suspects: New threats to infectious disease research," Chapter 8 in *The War on Our Freedoms: Civil Liberties in an Age of Terrorism*, Richard C. Leone and Greg Anrig, Jr., Eds., *Public Affairs*: 2003, pp. 193-219.

¹¹⁰ AAAS, "Science and security in the post-9/11 environment: Select agents," August 2004. Available at: www.aaas.org/spp/post911/agents/

¹¹¹ Ellias, Paul "Academic Freedoms Said Hindered by 9/11" Salon.com, 11 September 2003.

labs and all who have access to them. It's just not worth it."¹¹²

University researchers have been further stymied in their ability to carry out research on select agents by the government's shifting of federal funding away from open, transparent, basic research at universities and toward classified, applied biodefense research at high-security laboratories.¹¹³ Driving a larger portion of "select agents" research into secrecy infringes on the scientific community's ability to communicate openly and may jeopardize our ability to respond to an act of bioterrorism.¹¹⁴

Self-imposed censorship

At the same time, increasing government scrutiny of a number of biotechnology publications has prompted several journals, publication clearinghouses, and scientific societies to implement self-imposed restrictions on publishing. These measures — apparently attempts to ward off threats by the Bush Administration of more draconian, government-imposed censorship¹¹⁵ — include the following:

- The American Society for Microbiology (ASM), whose journals collectively receive more than 10,000 manuscripts per year,

instituted formal procedures as part of their peer-review process for reviewing the potential national security risks of research results involving select agents. Reviewers are required to flag "sensitive" manuscripts dealing with select agents for "special screening."¹¹⁶

- In February 2003, the editors of more than twenty major journals in the life sciences published a joint statement on "Scientific Publication and Security." The statement acknowledges that "the prospect of bioterrorism has raised legitimate concerns about the potential abuse of published information" and recommends that "scientists and their journals should consider the appropriate level and design of processes to accomplish effective review of papers that raise such security concerns" and that, under circumstances where the potential harm of publication outweighs the potential societal benefits, "the paper should be modified, or not published."¹¹⁷

- The National Academy of Sciences has moved in similar directions. In a report centered on the risk of bio-terrorism, the NAS proposed a system of prior review at the federal level of an initial (but gradually expanding) list of 7 categories of scientific "experiments of concern." Such experi-

¹¹² Miller, Judith, "New germ labs stir a debate over secrecy and safety," *New York Times*, 10 February 2004. Similarly, Daniel Portnoy, a biologist at the University of California, Berkeley, decided to destroy his bubonic plague samples because conforming to the new regulations would be too difficult. Wahlberg, David, "CDC Tightens Oversight on Labs Capable of Fueling Bioterrorism." *The Tech*, 31 October 2003. Available at: http://www-tech.mit.edu/V123/N53/cde_long4_53.53w.html.

¹¹³ Since 9/11, millions of federal dollars have been funneled into the construction of at least four new "biosafety level 4" laboratories for the conduct of research on the most dangerous and exotic pathogens, while funding for basic microbiology and genetics research has declined. (See Miller, Judith 2004. See also Check, Erika, "Protest letter accuses health agency of biodefense bias," *Nature*, 1 March 2005. Available at: <http://news.nature.com/news/2005/050228/434007a.html>)

¹¹⁴ A letter signed by 750 individuals — including two Nobel laureate and seven past presidents of the American Society for Microbiology - warned that current federal funding patterns are a detriment to the U.S. national interest and threaten public health. See Check, 2005.

¹¹⁵ Seattle Post-Intelligencer Editorial Board, "Not so fast on self-censorship," *Seattle Post-Intelligencer*, 28 February 2003. Available at: http://seattlepi.nwsourc.com/opinion/110406_biopubed.shtml.

¹¹⁶ National Academy of Sciences, National Research Council, *Biotechnology Research in an Age of Terrorism: Confronting the Dual Use Dilemma*, 8 October 2003, p. 97. Available at: http://books.nap.edu/execsumm_pdf/10827.pdf

¹¹⁷ "Statement on Scientific Publication and Security," *Science Online* 299 (5610):1149. Available at: <http://www.sciencemag.org/cgi/reprint/299/5610/1149.pdf>.

ments would be reviewed by university "Biosafety Committees" as well as by the federal Recombinant DNA Advisory Committee (RAC). Local biosafety committees would have the power to block the performance or publishing of experiments, while the RAC would have the ability to cut off federal funding.¹¹⁸

These self-censoring concessions have been the subject of intense controversy within the scientific community and may not have succeeded in holding off the Administration, which has suggested that further restrictions may be necessary.¹¹⁹

Export Controls

Undermining the fundamental research exemption

In a related vein, the government has also attempted to broaden the application of export control laws to scientific research in a way that strikes at the heart of academic freedom.

Currently, almost all university research performed in the United States is considered "fundamental research,"¹²⁰ which exempts it from a broad range of export control regulations that govern the export or release of sensitive technology, equipment, or software for purposes of

national security. Without that exemption, any academic making use of a broad, ever-expanding list of hundreds of "controlled" technologies would have to institute complex and burdensome procedures to prevent any "release" of those technologies to any foreign national, whether through visual inspection, oral exchange of information, or direct technical training.¹²¹

The U.S. Department of Commerce Inspector General, however, has formally recommended that these crucial exemptions be virtually eliminated. Specifically, in a report issued in March 2004,¹²² the DOC IG recommends that any use of controlled equipment be subject to export control, "even if the research being conducted with that equipment is fundamental."¹²³ The result of this proposal would be that:

- Foreign students, faculty, visitors, technicians and others would not be able to participate in many fundamental research projects without an export license.
- Universities would have to monitor access to "controlled equipment" and ensure that non-licensed foreign students or visitors are denied access to such equipment. A vast array of equipment commonly found on university campuses — from fermenters to GPS locators —

¹¹⁸ National Academy of Sciences 2003, pp.113-118.

¹¹⁹ Nicholas Wade, "Science Panel Urges Review of Research Terrorists Could Use," *New York Times*, 9 October 2003.

¹²⁰ "Fundamental research" has been construed quite broadly. The Export Administration Regulations state, "Research conducted by scientists, engineers or students at a university normally will be considered fundamental research." (15 C.F.R. § 734.8(b).) National Security Decision Directive 189, issued during the Reagan Administration, defines "fundamental research" as: "basic and applied research in science and engineering, where the resulting information is ordinarily published and shared broadly within the scientific community." See National Security Division Directive 189, 21 September 1985. Available at: www.aau.edu/research/ITAR-NSDD189.html.

¹²¹ 15 C.F.R. § 734.2(b)(3); 15 C.F.R. § 734.3(b)(3)(ii) and (iii).

¹²² The Commerce Department report was one of three reports issued by U.S. government agencies in 2004. The other reports, issued by the Defense and Energy Departments, also contain recommendations for expanding export control regulations that threaten scientific freedom, although they are not as extreme as those found in the Commerce Department's report.

¹²³ Department of Commerce Inspector General, *Deemed Export Controls May Not Stop the Transfer of Sensitive Technology to Foreign Nationals in the U.S.* (IPE-16176), March 2004. Available at: <http://www.oig.doc.gov/oig/reports/2004/BIS-IPE-16176-03-2004.pdf>.

would have to be housed in separate locations, placing an extraordinary burden in terms of financial costs, personnel time, and administrative hassle.

- Universities would also have to exclude foreign students and faculty or severely limit and control the subjects taught in classrooms.

The Commerce Department's IG Report also recommended that country of birth rather than most recent citizenship or permanent residency be adopted as the criterion for deemed export control requirements.¹²⁴ Under this change, U.S. organizations would be required to apply for export licenses for employees or visitors who happened to have been born in a country of concern, even if they hadn't lived there for many years.

On March 28, 2005, the DOC put forth these recommendations in the form of a proposed rulemaking.¹²⁵ If enacted, these changes will constitute a major assault on both the role of foreigners in American university research and the universities themselves.

"Troublesome clauses"

At the same time that the fundamental research and education exemptions under export law are being directly challenged by the Commerce Department, sponsors of university research — primarily government sponsors — are actively undermining these exemptions by attaching clauses to contracts that restrict publication or the inclusion of foreign nationals in research, or both.

Starting in the spring of 2001, several universities began reporting an increase in contract or grant language they were receiving that contained one or more of an array of these troublesome clauses.¹²⁶ These clauses are especially problematic because current export control regulations hold that academic research is not considered "fundamental research" (and therefore not exempted from export regulations) if a university or its researchers accept "other restrictions on publication of scientific and technical information resulting from the project or activity."¹²⁷ The acceptance of restrictive contract clauses, in other words, means that the research in question is no longer exempt under export control laws. In short, the very existence of these kinds of clauses have the same impact on individual projects that the Commerce Department's proposal would have on research as a whole.

In addition to that pernicious effect, the content of these clauses is also deeply troubling. The most common restriction forbids the university from disclosing *any unclassified information* without prior approval from the Contracting Officer, unless the information is already public.¹²⁸ Contractual restrictions have also come in the form of requirements that the names and employment eligibility documentation of foreign nationals be submitted for review and approval, or that an export license be obtained before assigning any foreign persons to perform work under the contract.¹²⁹

Most universities have either rejected these troublesome contracts outright, or entered into negotiations to revise the language. MIT, for example, has to date refused to accept any such

¹²⁴ *Ibid.*, pp. 16-17.

¹²⁵ Federal Register, Vol. 70, No. 58 (28 March 2005).

¹²⁶ Norris, Julie T., *Restrictions on Research Awards: Troublesome Clauses: A Report of the AAU/COGR Task Force*, April 2004. Available at <http://www.aau.edu/research/rpt4.8.04.pdf>

¹²⁷ 15 C.F.R. 734.8(b).

¹²⁸ DFARS 252.205-7000.

¹²⁹ Norris 2004, p. 7.

restrictions, even where that has meant turning down funding.¹³⁰ But some universities have felt compelled to accept the contracts with the troublesome clauses. They will be required to seek and be granted export control licenses if they wish to allow their own graduate students, postdoctoral students and faculty who are foreign citizens access to this research. The application process for these licenses can range from a few weeks to years.¹³¹

These restrictive clauses have greatly disrupted academic research. The delays required by negotiating the contracts or by applying for export licenses can infringe on a student's ability to complete a dissertation or thesis, and students and faculty may feel compelled to take different research routes, rather than deal with these hassles.

In short, the government is using restrictive research contract clauses as a means of forcing scientific researchers to comply with a set of restrictive export control laws from which they would otherwise be exempt. Fortunately, most institutions of higher education have succeeded in resisting this stratagem, but it is yet another direction from which they are coming under pressure.

POLITICAL INTERFERENCE IN SCIENCE

The Bush Administration has repeatedly claimed that the restrictions that have been imposed on science and academia during its tenure are necessary for protecting national

security and public safety. But if one looks beyond the measures that are plausibly relevant to national security to the larger context of the Administration's actions on science, it becomes clear that at least part of what motivates these so-called national security measures is a general desire on the part of this Administration is to increase political control over scientific and academic inquiry, and often to distort it for particular political purposes.

In the last four years, we have witnessed an extraordinary level of political interference across many scientific disciplines,¹³² and especially in the areas of environment and public health. As Russell Train, EPA administrator under Presidents Nixon and Ford has observed:

How radically we have moved away from regulation based on independent findings and professional analysis of scientific, health and economic data by the responsible agency to regulation controlled by the White House and driven primarily by political considerations.¹³³

Centralizing Peer Review

One particularly aggressive attempt by the Administration to exert control over the scientific process has come in the form of the establishment of a centralized peer review process applicable to all federal agencies and to be overseen by the White House's Office of

¹³⁰ For example, MIT turned down a \$1 million DOD contract in November 2002, after the Pentagon refused to remove a contract clause limiting foreign researchers. See Borrego, Annie Marie, "Colleges See More Federal Limits on Research," *Chronicle of Higher Education*, 1 November 2002.

¹³¹ Norris 2004 p. 13.

¹³² For a comprehensive survey of the various disciplines that were affected by political intrusion into the scientific process under the Bush Administration see *Politics and Science in the Bush Administration*, prepared for Rep Henry A. Waxman, 13 November 2003 [herein referred to as "Waxman Report"]. Available at: http://www.house.gov/reform/min/politicsandscience/pdfs/pdf_politics_and_science_rep.pdf.

¹³³ Union of Concerned Scientists, "Statement: Restoring Scientific Integrity in Policymaking." Available at: http://www.ucsusa.org/global_environment/rsi/page.cfm?pageID=1320 [herein referred to as "UCS Report"].

Management and Budget (OMB). OMB's self-insertion into scientific peer review threatens to undermine — rather than enhance — the integrity of regulatory science.

When federal agencies conduct scientific studies towards the purpose of developing new regulations or guidelines, they typically invite outside experts to review the soundness of their science. Requirements for such "peer review," as well as determinations of who should serve on peer review panels, have traditionally been left to the discretion of the relevant regulatory agency. There are many good reasons for this, having to do with the nature and purpose of regulatory science. Most notably, regulatory science tends to be interdisciplinary, time-sensitive (due to its key role in the development of regulations intended to protect public health and safety), and politically sensitive (due to its direct policy applications).¹³⁴ Federal agencies responsible for protecting the public must have flexibility to respond rapidly or to determine that precaution and lower standards of proof are warranted in the face of scientific uncertainty; for example, where children are at risk of harm.

OMB's initial draft proposal to centralize peer review was so alarming in its potential to denigrate regulatory science that it immediately sparked calls to rescind the proposal in its entirety, including a letter signed by 20 former federal officials from the Nixon, Ford, Carter, Bush and Clinton Administrations.¹³⁵

In response to the outrage generated by the original proposal, the White House scaled back a number of the worst provisions in the proposal. However, OMB's final rule, published in December 2004,¹³⁶ remains fundamentally flawed for the following reasons:

- **Inappropriate expansion of OMB's authority.** OMB has granted itself unprecedented authority over federal agency peer review — including authority to designate information as requiring more or less stringent levels of peer review, issue exemptions, and establish or approve processes for selecting reviewers. This is entirely inappropriate given OMB's undeniable political motivations, inherent in its White House orientation, not to mention its negligible scientific or peer review expertise.
- **Insufficient flexibility.** While the new rule is significantly more flexible than its predecessor, it undermines necessary federal agency autonomy and flexibility by imposing highly rigid peer review requirements for scientific assessments, especially those determined to be "highly influential." Such assessments are broadly defined to include those that have potential cost impacts of \$500 million or more for any one year or those that involve "precedent-setting, novel and complex approaches."¹³⁷

¹³⁴ For a discussion of differences between "regulatory science" and "research science" see S. Jasanoff, *The Fifth Branch: Science Advisers as Policymakers* (Cambridge, MA: Harvard University Press, 1990). See also Jasanoff, Sheila. Comment on Office of Management and Budget (OMB) Proposed Bulletin on Peer Review and Information Quality, 15 December 2003. Available at: <http://www.whitehouse.gov/omb/inforeg/2003iq/159.pdf>.

¹³⁵ Signatories included prominent regulators such as former EPA administrators Russell Train and Carol M. Browner. Letter available at: <http://www.whitehouse.gov/omb/inforeg/2003iq/162.pdf>. Likewise, the American Public Health Association called on OMB to "withdraw or significantly revise" the Proposed Bulletin. American Public Health Association, Comment on Proposed Bulletin on Peer Review and Information Quality, 11 December 2003. Available at: <http://www.whitehouse.gov/omb/inforeg/2003iq/86.pdf>.

¹³⁶ OMB, "Final Information Quality Bulletin for Peer Review," 16 December 2004. Available at: <http://www.whitehouse.gov/omb/memoranda/fy2005/m05-03.pdf>.

¹³⁷ Office of Management and Budget, Revised Information Quality Bulletin on Peer Review. Federal Register Vol 69, No. 82 (28 April 2004) 23230-23242. Available at: <http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/2004/04-9572.htm>.

- **Regulatory delay.** The rule's excessive bureaucratic requirements will undoubtedly result in serious delay in the dissemination of important scientific information and the development of new regulations or guidelines.

In short, OMB's peer review ruling shifts the power to review the legitimacy of scientific findings from communities of scientists to the White House. As such, it will do little to improve the quality of regulatory science, and instead, leave it more vulnerable to political whim.

Stacking of Scientific Advisory Committees

Collaboration between scientific experts and policy makers is critical both for the advancement of science in the public interest and the development of scientifically sound public policy. Scientific advisory committees provide the key forum for this exchange. Because of their crucial role in policymaking, it is vital that scientific advisory committees reflect the best available scientific expertise on a given matter.¹³⁸

During its tenure, the Bush Administration has repeatedly and blatantly sought to bias the scientific advice produced by such panels by dismissing experts whose opinions are politically inconvenient and replacing them with those whose research and advice appears driven by political ideology and their ties to industry rather than a quest for sound policymaking. Examples include:

- Jerry Thacker, a marketing consultant who has referred to AIDS as "the gay plague" and has promoted attempts to "reform" homosexuals through religion was appointed to the Presidential Advisory Committee on HIV/AIDS.¹³⁹ (Thacker withdrew following extensive criticism of his appointment.)

- Dr. William Banner, a former expert witness for a lead paint manufacturer, was appointed to CDC's Advisory Committee on Childhood Lead Poisoning Prevention. Banner testified that a lead level of 70 micrograms per deciliter is safe for children's brains, even though research suggests that cognitive development may be impaired at levels as low as 5 micrograms per deciliter.¹⁴⁰

- Dr. Joe McIlhaney, an abstinence-only advocate when it comes to sexual education programs, was appointed to a CDC advisory committee. In 2002, McIlhaney testified before Congress that "there is precious little evidence" that comprehensive sexual education programs are "successful at all." This statement is in direct contrast to a 2001 review that found that such programs both delay the onset of sexual activity and encourage the use of contraceptives.¹⁴¹

In addition, a number of scientists have endured inappropriate questioning about their political beliefs and opinions during government advisory committee confirmation processes. For example, several scientists

¹³⁸ The Federal Advisory Committee Act states that scientific advisory committees should be "fairly balanced in terms of points of view represented." See Federal Advisory Committee Act, 5 U.S.C. Appendix 2, Sections 5(b)(2)-(3).

¹³⁹ Waxman Report, p. 20.

¹⁴⁰ Waxman Report, p. 21.

¹⁴¹ Waxman Report, p. 7.

reported having been asked whether or not they voted for President Bush.¹⁴²

Suppression and Distortion of Environment and Public Health Information

Many examples of the Bush Administration's assault on scientific freedom can be found in the areas of energy, the environment and public health. These fields are greatly dependent on scientific findings, and yet implicate deep ideological divisions as well as powerful economic interests. As a result, they have always been prone to politicization. Yet never before have we seen anything like the all-out campaign of aggressive interference with scientific independence that the Bush Administration has undertaken.

A few of the many egregious examples of the Administration's suppression and distortion of environmental and public health information include the following:

- **Mercury emissions.** The White House suppressed an EPA study on mercury emissions that included the finding that 8% of women between the ages of 16 and 49 have blood levels of mercury that could lead to developmental defects in their children. The report was only released after an EPA official leaked it to a reporter at the Wall Street Journal.¹⁴³ Subsequently, the EPA's own inspector general reported that agency scientists had been instructed to

violate established scientific practices in developing mercury emissions reduction standards.¹⁴⁴ A recent U.S. GAO study confirmed that the EPA had distorted its analysis of the health impacts of mercury in order to favor the Administration's desired approach to regulating mercury emissions.¹⁴⁵

- **Global climate change.** The Administration has consistently attempted to undermine and distort the scientific view held by the vast majority of climate scientists that human activity is contributing to global warming. In June 2003, the White House attempted to directly tamper with the section of EPA's draft Report on the Environment dedicated to this issue, demanding, among other things, the removal of all references to a review conducted by the esteemed National Academy of Sciences, and the insertion of a reference to a discredited study funded by the American Petroleum Institute. EPA scientists ultimately chose to remove the section entirely rather than agree to the White House's demands for major alterations that they felt would have undermined their credibility.¹⁴⁶

- **Sexual education.** In 2002, Bush Administration officials at the Department of Health and Human Services directed staff at the Centers for Disease Control to remove a comprehensive condom fact sheet from the CDC website and replace it with one emphasize-

¹⁴² For example, during her confirmation process for the Council of the National Institute on Drug Abuse, Dr. Claire Sterk was asked whether she had voted for President Bush. Similarly, Dr. Richard Myers, a distinguished biochemist and chair of the Department of Genetics at Stanford University, faced what he characterized as "highly inappropriate" politically charged questioning during the confirmation process for his appointment to an NIH council position, including his views on stem cell research and his opinion of President Bush. See Union of Concerned Scientists *Scientific Integrity in Policy Making* July 2004 [herein referred to as "USC Report."]

¹⁴³ UCS Report, p. 9.

¹⁴⁴ Miller, Alan C. and Tom Hamburger, "EPA faults findings on mercury," *Los Angeles Times*, 4 February 2005.

¹⁴⁵ Vedantam, Shankar, "EPA distorted mercury analysis, GAO says," *Washington Post*, 8 March 2005, p. A9.

¹⁴⁶ UCS Report, p. 5.

ing condom failure rates and the effectiveness of abstinence¹⁴⁷ — this in the age of AIDS, when the use of a condom can mean the difference between life and death.

• **Mountaintop removal mining.** J. Stephen Griles, Deputy Secretary of the U.S. Department of the Interior and a former lobbyist for the National Mining Association, instructed agency scientists to disregard any possible options for more environmentally benign alternatives to current mountaintop removal mining practices in the preparation of an Environmental Impact Statement (EIS) on mountaintop removal mining in Appalachia.¹⁴⁸ The withholding of consideration of known alternative practices is scientifically and intellectually dishonest, and has opened the EIS up to legal challenge and extensive public outcry.

Emergency contraception. Steven Galson, Acting Director of the FDA's Center for Drug Evaluation and Research, overruled the recommendation of FDA's own expert advisory panel and declined to approve over-the-counter (OTC) status for the emergency contraception drug, Plan B. Galson claimed that his decision was based on a lack of safety data, despite nearly unanimous agreement by the FDA advisory committee that the drug was safe for OTC use.¹⁴⁹

In February 2004, the Union of Concerned Scientists released a statement signed by 60 prominent scientists voicing concern over these and other systematic misuses and mis-

characterizations of science by the Bush Administration. The open statement currently has more than 6,000 signatories, including 49 Nobel laureate.¹⁵⁰

RECOMMENDATIONS AND CONCLUSION

The security and scientific communities have long maintained fundamentally different approaches to handling information. In the security world, information is tightly controlled, confined to the fewest possible number of people, and shared only with those who have a demonstrable "need to know." The scientific paradigm, on the other hand, assumes that information is uncontrolled, open to all, and distributed as broadly as possible. What we have seen in examining the current Administration's policies and proposals can be characterized as an attempt to replace the open and free scientific paradigm with the values of spy agencies: secrecy, control, and confinement of information.

Whether through the heedless expansion of classification, the creation of a vague "Sensitive But Unclassified" category of information, or the indiscriminate and unjust exclusion of foreign nationals from research, it is a terrible idea to try to graft the none-too-successful habits of secrecy and compartmentalization of our intelligence community into the heart of American science.

Allowing security practices to bleed into science is a mistake for three reasons:

¹⁴⁷ UCS Report, p. 11.

¹⁴⁸ 7% of Appalachian forests have been cut down, and 1,200 miles of streams buried or polluted from 1985 to 2001. See UCS Report, p.8.

¹⁴⁹ In December 2003, FDA's joint advisory committee on Nonprescription Drugs and Reproductive Health Drugs voted 23-4 to allow Plan B to be made available without a prescription. See Krisberg, Kim, "FDA rejects over-the-counter emergency contraception sales: Reproductive rights march draws crowd," *The Nation's Health* June/July 2004.

¹⁵⁰ USC Report

- **Bad for science.** Science is inherently both collective and unpredictable. Without open sharing, even the most brilliant men and women will be severely restricted in their ability to solve the medical and scientific problems that confront us. Likewise, discoveries and advances in one area of science are often made possible only through advances in far different areas. A discovery in an area of virology that the government considers dangerous, for example, could prove to be the key to unlocking the mysteries of cancer or Alzheimer's disease.

- **Bad for freedom.** Restrictions on information through unnecessary classification or deeming it "sensitive" endanger core democratic values. If citizens do not know what their government is doing, they cannot demand change and push for new political leadership and oversight. Similarly, proposals for prepublication review of research represent a dangerous erosion of American principles of free speech that can never be justified by the vague and misguided security concerns that animate those proposals.

- **Not effective.** As security experts have pointed out, secrecy is a brittle form of security because once the secret is out — whether through leaks or because it is independently discovered — security protections are shattered. Excessive classification and secrecy only harms the ability of American intelligence agencies to do the kind of wide-ranging, imaginative and entrepreneurial work that might have stopped the 9/11 attack. And blocking scientists from developing expertise in an area of research that is deemed "sensitive" will leave us more vulnerable to attacks because we will have foregone opportunities to learn how best to respond. Indeed, the best way to be prepared for terrorism is to have the very best talent — regardless of origin — in this country.

Recommendations

Even at a time when fears of terrorism run so high — especially at such a time — we must resist the temptation to allow the crude, excessive and questionably effective regime of secrecy that dominates our security agencies to cloud the open operation and steady progress being made under our scientific tradition. In the limited circumstances where use of the blunter tools of secrecy and control may be justified, such regulation must be carried out with a great deal of caution and sensitivity toward our vital freedoms. Specifically, we offer the following recommendations:

- **No "Sensitive But Unclassified" information.** The "sensitive but unclassified" and equivalent categories that effectively bar public access to information must be eliminated. All information should either be properly classified or unrestricted.

- **Stop overclassification.** Our classification program should emphasize a presumption of openness and declassification and place the burden of proof of the need for extended secrecy on the classifier.

- **No censorship or publication restrictions.** Proposals to ban certain authors from publishing information in the United States — such as that of the Treasury Department — are completely contrary to the First Amendment of the Constitution and must not be tolerated in any form.

- **Remove unnecessary restrictions on foreign students and scholars.** A far more rigorous effort is needed to win back the trust of potential foreign students and scholars. The restrictions threaten both our freedoms and our economy. The changes that have been made to date are too

little, too late.¹⁵¹ Balance must be restored in our immigration policies, and once granted a visa to study, teach, or carry out research in the United States, no foreign national should be denied access to courses, research, or publications generally available on campus, or treated differently from other students or scholars.

- **Maintain the fundamental research exemption.** The fundamental research exemption provided to universities must not be narrowed or eroded, either directly through regulatory action or indirectly through contractual restrictions.
- **Protect science from undue political interference.** Science — especially regulato-

ry science — will never operate completely free from political interference. Nonetheless, no administration should use its power to censor, obstruct, tamper with or distort the findings of scientists to fit its political agenda. Federal science-based agencies must retain the capacity to carry out independent scientific research and should not be subjected to political influence in establishing peer review standards.

We invite all Americans to join us in opposing the misguided efforts we have described in this report and in helping to maintain an open environment where science and scholarship can flourish.

¹⁵¹ Improvements have occurred in Visa Mantis approval efficiency. See U.S. General Accounting Office, *Border Security: Streamlined Visa Mantis Program Has Lowered Burden on Foreign Science Students and Scholars, but Further Refinements Needed*, February 2005. Available at: <http://www.gao.gov/new.items/d05198.pdf>. Nonetheless, these improvements have only come after scores of foreign students have been lost to the U.S. educational system, and have failed to dispel the perception among many international visitors that the U.S. is less welcoming of them than other countries. In May 2005, a statement of recommendations signed by the heads of 41 academic associations urged the federal government to take further action to removing the considerable remaining barriers to international students and scholars. See *Recommendations for enhancing the U.S. visa system to advance America's scientific and economic competitiveness and national security interests*, 18 May 2005. Available at: <http://www.aaas.org/news/releases/2005/0518recommendations.shtml>.

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