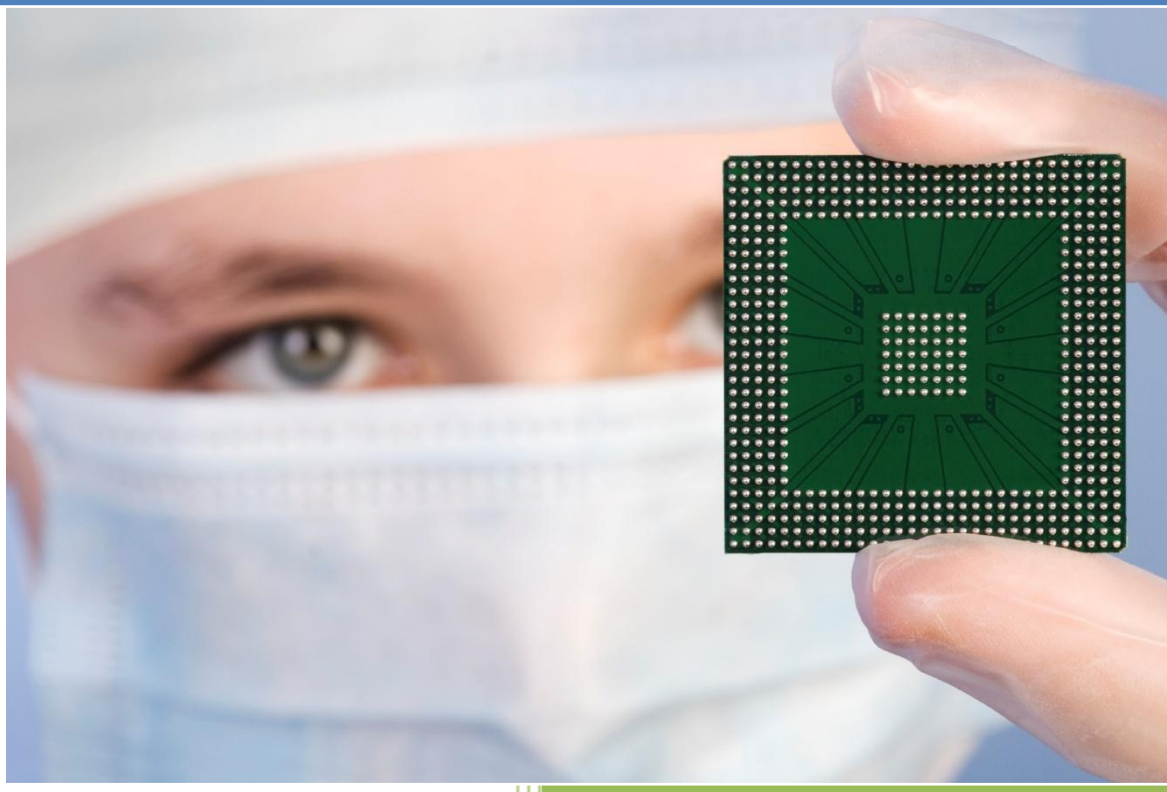
RESTRICTIONS ON RESEARCH AWARDS: TROUBLESOME CLAUSES 2007/2008



A REPORT OF THE

COUNCIL ON GOVERNMENTAL RELATIONS (COGR)

ASSOCIATION OF AMERICAN UNIVERSITIES (AAU)

July 2008

This report was prepared with the assistance and participation of the Federal Demonstration Partnership (FDP), under the auspices of the FDP Contracts Task Force chaired by Alexandra McKeown, Associate Dean for Research Administration, Bloomberg School of Public Health, Johns Hopkins University. COGR and AAU greatly appreciate the assistance and contributions of the FDP and Ms. McKeown to this report. Primary contract persons for this report are Robert Hardy, Director, Contracts and Intellectual Property Management, COGR and Tobin Smith, Associate Vice President for Federal Relations, AAU.

Executive Summary

Over the past several years, U.S. universities have raised concerns that federal agencies increasingly are adding clauses to contracts and grants for basic research projects that restrict publication of research results and limit the participation by foreign nationals. These "troublesome clauses" appear to contradict the federal government's policy under National Security Decision Directive (NSDD) 189—which states that fundamental research and its products should remain unrestricted and that any restrictions should be handled through the classification system—as well as the fundamental research exclusion in federal export regulations.

The Council on Governmental Relations (COGR) and the Association of American Universities (AAU) first examined these concerns in a report delivered in April 2004 to the White House Office of Science and Technology Policy (OSTP), which documented that such restrictions were, in fact, being frequently applied among a group of 20 representative universities. The report made two major recommendations: that federal agencies should adhere to the spirit of NSDD-189 by not imposing publication or foreign national restrictions on fundamental research undertaken by universities, and that agencies should distinguish between the open nature of university research and research performed by industry under restricted circumstances. Agencies should make clear to industrial prime awardees that restrictions on publications and foreign national participation need not "flow down" to university subawardees where the purpose is fundamental research.

The two associations joined with the Federal Demonstration Partnership (FDP) to conduct a follow-up survey in 2007, the results of which are contained in this report. The new survey found 180 total instances of troublesome clauses, as compared with 138 in the previous survey. The frequency of restrictions on publications and foreign nationals were quite similar during the two time frames examined by the surveys. The increase reported in the new survey was due almost entirely to new types of restrictions that were not reported four years ago.

Based on the experience of the 20 universities that were included in the two surveys, which we believe are reasonably representative of the U.S. university research community broadly, federal research funding agencies are expanding the nature of the controls imposed in award terms and conditions, including use of such terms in grants and cooperative agreements in addition to contracts.

As a result of the new survey, COGR and AAU developed the nine recommendations that follow. The goal is to assist government agencies to balance legitimate concerns of national security while enabling universities' ability to navigate quickly and effectively the government contracting process. Implementation of these recommendations would help avoid lengthy negotiations and reduce the possibility of burdensome restrictions that result in universities refusing to conduct the research.

1. Both the previous and present surveys identified the Department of Defense (DOD) as the largest source of troublesome clauses. The previous COGR-AAU report recommended that DOD revise the Defense Federal Acquisition Regulations Supplement (DFARS) prescription guidance to prevent the DFARS 7000 clause from being used in contracts for university

research, either directly or as a flow down from industry contracts. Just as important, DOD should revise its guidance to contracting officers stipulating that no controls should be imposed on publications or foreign national participation for fundamental research either in direct awards or sub-awards.

2. DOD also should develop a uniform policy that discourages DOD offices and programs from issuing "home-grown" award terms and arbitrary mandates that do not follow established DOD policy and DFARS clauses. The Undersecretary of Acquisition Technology and Logistics should develop appropriate acquisition guidance accordingly. On June 26, 2008 the DOD issued an internal memorandum on "Contracted Fundamental Research" which calls attention to NSDD-189 as governing DOD agency-wide policy. The memorandum also indicates that DOD awards for the performance of fundamental research should, with rare exceptions, not be managed in a way that they become subject to restrictions on the involvement of foreign researchers or publication restrictions and that exceptions must be approved by senior DOD leaders. The issuance of this memorandum represents a very positive development. It will now be critical that all DOD contracting officers uniformly abide by this agency-wide policy. Moreover, DOD contracting officers must be informed of the policy and properly trained to ensure that it is fully implemented.

3. Both the previous COGR-AAU report and the report from the National Academies' Committee on a New Government-University Partnership for Science and Security recommended that *all* federal research agencies follow the principles of NSDD-189 in funding research. The relevant federal acquisition regulation (FAR) provision should be incorporated into all unclassified federal research contracts to universities. The FAR Secretariat should issue specific guidance to this effect for all agencies.

4. The White House Office of Management and Budget (OMB) should issue guidance to federal agencies, perhaps through revisions to Circular A-110 (2 CFR 215), which states that restrictions on publications or participation by foreign nationals are inappropriate for federal agencies to use in university grants and cooperative agreements. The guidance should be broad enough to encompass the newer forms of restrictive designations, such as "confidential," "proprietary" or "sensitive" information.

5. Export control compliance clauses should be used more selectively by federal agencies (and prime contractors). Their use should be restricted to situations where the agency or contractor knows it is providing export controlled information to the university. Agencies and contractors should avoid using export control compliance clauses where the research is clearly fundamental in nature and, therefore, is excluded from export control requirements.

6. The federal government should implement a government-wide, comprehensive training program for contracting officers to address these issues.

7. The NAS Committee on Science and Security report called for establishing a federal science and security commission to address ongoing shared concerns of the security and academic research communities, such as implementation of NSDD-189. A university-government working group also should be established, perhaps under the auspices of the commission, to address current issues, evaluate results and monitor future issues in science and security. The group also should be charged with identifying and implementing ways to engage industry in providing appropriate flow down terms to universities.

8. Senior university officials must continuously educate faculty, staff, and administrators about their responsibility to comply with export controls, select agents and other security-related issues. Senior officials should ensure that their institutions have policies to address these matters. Likewise, university associations should continue working to educate and train their members about compliance issues surrounding science and security requirements.

9. FDP, as an organization of university and agency members, should use the results of this new survey to engage its membership in improving contracting and monitoring restrictions on assistance awards. FDP should explore solutions within the context of the next phase of the Demonstration. In particular, both agency and university personnel could benefit from a collaborative Web site that collects data, describes the issues, and discusses the meaning and implications of certain grant and contract terms. On the latter issue, this would include a discussion of why accepting certain language in contracts might be objectionable and how such language might harm research activities downstream. It would be particularly helpful for the Web site to provide examples of negotiated language that is mutually beneficial in particular kinds of projects, while continuing to emphasize that any agreement to restrict publication and other access to results destroys the fundamental research exclusion.

Implementation of this report's recommendations would not necessarily resolve all of the issues regarding troublesome clauses, but it would significantly improve what has become an increasingly untenable situation. Such action must be undertaken jointly by the federal government and the university research community.

Overview

In April 2004, COGR and AAU delivered a report to the White House Office of Science and Technology Policy (OSTP) entitled *Restrictions on Research Awards: Troublesome Clauses*. The report was prompted by concerns raised by a number of universities that federal agencies increasingly were including clauses in federal research awards to restrict publication or participation by foreign nationals. The two associations had created a task force of 20 institutions in August 2003 to track over a six-month period the continuing emergence of these clauses and to identify the agencies that were requiring them.

The COGR-AAU task force sought to identify award terms and conditions that were inconsistent with Administration policy as embodied in National Security Decision Directive (NSDD)-189. The task force also sought to identify controls on research projects that might contradict the fundamental research exclusion under export regulations.

The 2003-2004 review identified two general types of restrictions: publication restrictions and restrictions on participation of foreign nationals in federally funded research projects. The most common single restriction was the use of Defense Federal Acquisition Regulations Supplement (DFARS) Clause 252.204-7000 *Disclosure of Information*, which requires that a government contracting officer approve release of any unclassified information pertaining to a contract and that the clause be included in all subcontracts.

Based on these findings, the report made two general recommendations: (1) that agencies adhere to the spirit of NSDD-189 by not imposing publication and/or foreign national restrictions on fundamental research projects undertaken by universities; and (2) it encouraged agencies to distinguish between the open nature of university research and that done by industry under restricted circumstances. Agencies must make clear to industrial prime awardees that restrictions on publications and foreign national participation need not be flowed down to university subawardees where the purpose is fundamental research.

In 2005, the National Science Foundation (NSF) and National Institutes of Health (NIH) requested the National Academies of Science Committee on Science, Technology, and Law (STL) to establish an ad hoc committee to examine the government-university partnership in science and security. The two agencies would provide the necessary funding. The Committee on a New Government-University Partnership for Science and Security ("NAS Committee on Science and Security" or "Committee") was charged with organizing regional campus-based meetings to bring together university faculty, research administrators, government officials both from research agencies and the security community, and congressional representatives to focus on restrictive clauses in federal contracts and grants. The Committee also would examine the dissemination of scientific information, "sensitive but unclassified" information, and the management of biological agents in academic research. The Committee's report, *Science and Security in a Post 9/11 World*, was issued on October 18, 2007.

The Committee's report contained 14 recommendations, of which three were directly relevant to the troublesome clause issue. Recommendation 3, which was specifically addressed to COGR and AAU, stated that: "The data collected in the 2004 (COGR and AAU) report, *Restrictions on Research Grants and Contracts*, should be updated annually. The report should be expanded to include review of other restrictive clauses and should specifically review the use of the "sensitive but unclassified" (SBU) category." While the Committee's report on science and security was pending, COGR and AAU continued to hear from member universities

that the situation with troublesome clauses had not improved since the 2004 report. The Federal Demonstration Partnership, a cooperative initiative of 10 federal research funding agencies and about 100 institutional recipients of federal research funds, received similar reports. Discussions among COGR, AAU, and FDP representatives led to a decision to update the 2003-2004 survey, using the same 20 institutions as the 2004 survey base.

A new survey was conducted during the period July 1- December 31, 2007. The results found that the frequency of publication restrictions and restrictions on the participation of foreign nationals imposed on the 20 institutions were quite similar during the two time frames examined by the surveys. However, the new survey found a fairly substantial increase in the total number of instances of troublesome clauses reported by these institutions due to new types of restrictions that were not reported four years ago. The primary finding of the new survey has been that, based on the experiences of the 20 institutions included in the original COGR-AAU survey, the situation with troublesome clauses clearly has not improved since 2003-2004. Federal research funding agencies are expanding the nature of the controls imposed in award terms and conditions, including use of such terms in grants and cooperative agreements in addition to contracts.

Both the current and previous surveys highlighted several critical issues which both universities and the government must cooperatively address. These include the need to (1) preserve the vital university open research environment, and academic freedom and integrity; (2) resolve the conflicts between core academic principles of openness and the free flow of information and sponsor approval over publication; (3) reconcile conflicts between government requirements to approve foreign national participation in funded research projects and policies regarding non-discrimination in campus activities; (4) address the adverse effects of protracted negotiations on faculty and students, as well as on the national interest when universities are forced to "walk away" from government-funded projects (or not compete for them); and (5) ameliorate issues associated with increased compliance requirements (such as implementation and oversight of technology control plans, and staffing and cost implications.)

Initiation of the First COGR-AAU Survey

In the spring of 2001, COGR and AAU began hearing from their member universities about an increase in the number of research awards that carried restrictive, or "troublesome," clauses. After a number of discussions with OSTP representatives, COGR and AAU in the spring and summer of 2003 solicited examples of such clauses from their member institutions, which they passed on to OSTP. After further discussions with OSTP and in an effort to provide more systematic information about troublesome clauses, the two associations created a task force in August 2003 to track the continuing emergence of these clauses and identify the federal agencies that were requiring them.

In particular, the COGR-AAU task force sought to identify award terms and conditions that were inconsistent with Administration policy as embodied in National Security Decision Directive (NSDD) -189. The directive states that fundamental research and its products should remain unrestricted, and that "where the national security requires control, the mechanism for control of information generated during federally funded fundamental research in science, technology and engineering at colleges, universities and laboratories is classification…No restriction may be placed upon the conduct or reporting of federally funded fundamental research that has not received national security classification, except as provided in applicable

U.S. Statutes."[1] The task force also sought to identify controls on research projects that might compromise the fundamental research exclusion under export regulations.[2]

Members

COGR and AAU selected 20 institutions to participate in the task force. The selection sought to assure a mix of public and private institutions as well as geographic balance and inclusion of several institutions with strong engineering programs. The specific institutions who participated in the study were:

California Institute of Technology
Carnegie Mellon University
Duke University
Georgia Institute of Technology
Harvard University
Massachusetts Institute of Technology
Northwestern University
The Pennsylvania State University
Stanford University
Texas A&M University
University of California, Berkeley
University of California, San Diego
University of Cincinnati
University of Colorado, Boulder
University of Maryland, College Park
University of Michigan
University of Minnesota
University of Texas at Austin
University of Wisconsin, Madison
Washington University in St. Louis

Each university was asked to report instances where troublesome clauses were included in government awards, either directly or in subcontracts, over a roughly six-month basis (July 2003 to January 2004). The data was submitted via a Web-based form and tabulated periodically. Conference calls also were held regularly among the campus participants and COGR-AAU representatives.

The 2004 COGR-AAU review of troublesome clauses identified two general types of restrictions: (1) publication restrictions, and (2) restrictions on participation of foreign nationals in federally funded research projects. The most common single restriction was the use of Defense Federal Acquisition Regulations Supplement (DFARS) Clause 252.204-7000 *Disclosure of Information*. That clause requires that a government contracting officer approve release of any unclassified information pertaining to a contract and that the clause be included in all

[1] NSDD 189 was issued originally in the mid-1980s and twice confirmed by the current Administration. It is available at http://www.fas.org/irp/offdocs/nsdd/nsdd-189.htm.

[2] Export Administration Regulations (EAR) 734.8; 734.3 (b)(3); http://www.access.gpo.gov/bis/ear/ear_data.html ; International Traffic in Arms Regulations (ITAR) 120.11; http://pmddtc.state.gov/official_itar_and_amendments.htm.

subcontracts.[3] Over the course of the 2004 reporting period, 14 of the 20 participating institutions reported 47 instances of receiving the clause, 31 of which involved a subcontract from industry where the clause flowed down to the institutions. In 15 instances, the clause was received directly in a Department of Defense (DOD) contract; in one case it originated from another government agency. Other restrictions reported in the 2004 review included 58 instances of other publication restrictions, 29 instances of restrictions on foreign national participation, and four other access/dissemination restrictions. The table below includes the overall reporting results.

Findings from the April 2004 COGR-AAU Report

TROUBLESOME CLAUSES CLASSIFIED BY SPONSOR

Sponsor	Total # of instances reported	The 7000 clause	Other publication restrictions	Foreign national restrictions	Other access or dissemination restrictions
DOD	**19**	15	4		
DoE	0				
NASA	**1**		1		
Other Govt	**32**	1	15	14	2
-Security Agencies	*11*	*1*	*1*	*9*	
-NSF	*2*			*2*	
-DOJ	*6*		*3*	*3*	
-DHHS	*6*		*5*		*1*
-Fed Reserve	*1*		*1*		
-HUD	*1*		*1*		
-NRC	*1*		*1*		
-DOT	*2*		*2*		
-FHWA	*1*				*1*
-ITC	*1*		*1*		
National Laboratories	**4**		4		
DOD via industry	**77**	31	31	13	2
Other sponsors via industry	**5**		3	2	
TOTALS	**138**	**47**	**58**	**29**	**4**

The 2004 report also presented information on the eventual disposition of these restrictions by the institutions. In nearly all cases, the terms and conditions were negotiated between the institutions and the sponsors. Three institutions rejected awards due to the inability to negotiate the terms of the DFARS 7000 clause, while six rejected awards that contained other terms restricting publication. Four awards were rejected because of foreign national restrictions, and two were rejected because of other restrictions on access to or dissemination of research results. In many instances, alternative terms and conditions were successfully negotiated. However, where the participating institutions were unable to negotiate any

[3] Full text of the clause is available at http://www.acq.osd.mil/dpap/dars/dfarspgi/current/index.html.

changes, they accepted the 7000 clause or other publication restrictions in 29 instances and accepted restrictions on foreign nationals in 10 instances.

In circumstances where the participating institutions accepted the 7000 clause, they indicated that it was done reluctantly and only after long negotiation with the sponsors. In some cases, institutions reported that the decision to accept was based on the nature of the research or that inclusion of the clause was unlikely to harm graduate students or faculty; the programmatic value in performing the research outweighed the risk of rejecting the award.

The report indicated that in 75 percent of these cases, resolution of the issues took more than one month; in 25 percent of the cases, resolution took between three and six months. Three cases took more than six months. The report noted that "failure to reach timely resolution of these troublesome clauses creates hardships, sometimes quite severe. Delays may cause students not to be hired to work on projects and may delay significantly completion of theses and dissertations. Faculty and researchers are often forced to turn their attention and talents toward research projects that do not involve these difficulties. For a sponsoring agency, delays may unduly restrict an agency in its mission to have research performed…."

The report also noted that lengthy negotiations harm the conduct of research of high value to the nation. The federal government and industry increasingly depend on universities to perform fundamental research that sustains the nation's leadership in education and innovation. Unfettered transmission of knowledge is a core value of higher educational institutions. Most have a formal policy against accepting sponsor restrictions on publication or information disclosure; many also preclude discrimination on the basis of nationality in activities conducted on campus. Significant time delays imposed by negotiation of these restrictions, and, in some cases, failure to reach agreement, threaten the ability of universities to pursue research of national importance.

The report made two general recommendations: (1) that agencies adhere to the spirit of NSDD-189 by not imposing publication and/or foreign national restrictions on fundamental research projects undertaken by universities; and (2) that agencies distinguish between the open nature of university research and that done by industry under restricted circumstances, and make clear to industrial prime awardees that restrictions on publications and foreign national participation need not be flowed down to university subawardees where the purpose is fundamental research. The report specifically recommended that DOD revise the DFARS prescription guidance to provide that the 7000 clause not be used in contracts for university research, either directly or as a flow down.

Developments After April 2004

The COGR-AAU *Troublesome Clauses* report was well-received by OSTP officials, who expressed appreciation for the effort to provide data in an area previously characterized almost exclusively by anecdotal information. COGR and AAU representatives held several meetings with officials from OSTP and other federal agencies regarding the report's findings and recommendations. Association staff also gave presentations about the report at a number of higher education association and scientific organization meetings. Despite these meetings and discussions, federal government policies did not change.

Among the scientific organizations with whom the findings were discussed was the National Academies. In the summer and fall of 2002, the National Academies was encouraged by the U.S. House of Representatives Committee on Science and Technology to convene a series of science and security roundtable discussions around the nation to solicit suggestions on how best to balance the requirements of national security and unfettered scientific inquiry in a post-9/11 world. In September 2002, the Committee asked OSTP to identify a federal agency to fund the project. But it was not until 2005 that the National Science Foundation (NSF) and the National Institutes of Health (NIH) requested the National Academies Committee on Science, Technology and Law (STL) to establish an ad hoc committee to examine these issues and agreed to fund it. The Committee on a New Government-University Partnership for Science and Security ("NAS Committee on Science and Security" or "Committee") was created and charged with organizing regional campus-based meetings to bring together university faculty, research administrators, government officials both from research agencies and the security community, and congressional representatives to focus on restrictive clauses in federal contracts and grants. The Committee also would examine the dissemination of scientific information, "sensitive but unclassified" information, and the management of biological agents in academic research.

The Committee included individuals with a wide variety of backgrounds in academe and government. Those with a background in government service included representatives with experience in both research and security agencies, as well as individuals with experience in Congress, the military, and at OSTP. Also among the members was the former chair of the COGR-AAU Troublesome Clause task force.[4]

A kickoff meeting was held by the Committee in Washington, D.C., followed by three regional campus meetings held at the Massachusetts Institute of Technology, Georgia Institute of Technology/Emory University, and Stanford University between January and September 2006.[5] The Committee heard a wide variety of views, including those of senior representatives from the intelligence/security and the academic research communities. Its report, *Science and Security in a Post 9/11 World*, was issued on October 18, 2007.[6]

The report contained 14 specific recommendations, of which three were directly relevant to the troublesome clause issue:

- **Recommendation #1** called for federal research funding agencies to ensure that grants and contracts for fundamental research awarded to U.S. institutions of higher education follow the principles of NSDD-189. Relevant instructions and guidance should be incorporated in each agency's contracting and granting procedures. It also suggested that the Federal Acquisition Regulation (FAR) clause setting forth NSDD-189 principles be incorporated into all federal research contracts to universities.[7]

- **Recommendation #2** called for federal agencies to make clear that restrictions on publications and foreign nationals placed in prime government awards to industry should not be passed down to university subawardees conducting fundamental

[4] Julie Norris, Director Emeritus, Sponsored Projects Office, MIT. A full listing of the Committee members, along with biographical information, can be found on the STL Web site at: http://www7.nationalacademies.org/stl/S_and_S_homepage.html.

[5] Unedited transcripts from these meetings are available at: www.nationalacademies.org/stl.

[6] National Academies Press; http://www.nap.edu.

[7] FAR 27.404-4(a), November 7, 2007 (available at http://www.arnet.gov/far/); previously found at FAR 27.404(g)(2).

research. Where the content of the university subaward is not known in advance, agencies should inform industry prime contractors that agency permission is not needed to remove the restrictive provisions from university subawards. As with Recommendation #1 above, it called for the FAR provision on NSDD-189 to be incorporated into all research contracts to universities.

- **Recommendation #3** was addressed to COGR and AAU and stated that: "The data collected in the 2004 (COGR and AAU) report, *Restrictions on Research Grants and Contracts*, should be updated annually. The report should be expanded to include review of other restrictive clauses and should specifically review the use of the "sensitive but unclassified" (SBU) category. The results of this report should be provided to the U.S. Office of Science and Technology Policy and the proposed new Science and Security Commission (Recommendation 12) and released to the broader academic community."[8]

While the National Academies' report was pending, COGR and AAU continued to receive reports from member universities indicating that the situation with troublesome clauses had not improved since the 2004 report. The Federal Demonstration Partnership[9], a cooperative initiative of 10 federal research funding agencies and about 100 institutional recipients of federal research funds, also was concerned about these issues. Discussions among COGR, AAU, and FDP representatives led to a decision to update the 2003-2004 survey, using the same 20 institutions as the survey base. Added impetus was provided by discussions with members of the NAS Committee on Science and Security, who indicated their desire to see the COGR-AAU data be updated annually with the results reported to senior members of the Administration.

The New Survey

The new survey was conducted under the auspices of the FDP, a forum for exchanging issues, ideas, and solutions among FDP-member institutions and agencies. In collaboration with COGR and AAU, FDP initiated an effort to determine how often FDP-member institutions received government awards with clauses that required lengthy negotiations for acceptance or which were so burdensome that the award terms could not be accepted. Part of the goal was to enable the FDP membership to negotiate and execute contracts more effectively and efficiently. Through this survey and continued collection and evaluation of data, FDP hoped to identify common practices to streamline the contracting process. All FDP institutions were encouraged to report any troublesome clauses.

[8] The report findings and recommendations received, and continue to receive, high visibility. The co-chairs have presented the recommendations to senior policymakers in both the executive and legislative branches, who reportedly have expressed interest in pursuing at least some of them. In particular, the Department of Defense established a Joint Analysis Team (JAT) to review issues associated with DOD restrictions on publication of academic research, involvement of foreign nationals in university research, "sensitive but unclassified" information, and export controls. The June 26, 2008 DOD memorandum discussed in the Recommendations is a direct outcome of the JAT review.

[9] http://thefdp.org/.

Subject Matter

The COGR-AAU survey analysis focused only on the 20 task force institutions that had participated in the earlier survey. The reporting period was July 2007 to January 2008, with some flexibility to accommodate late submissions, as was the case in the first survey. Representatives from COGR, AAU, FDP, and participating task force institutions conferred regularly by conference call during the data collection process.

Each participating institution documented particularly problematic terms in requests for proposals and awards from the following sources:

- Federal grants, contracts, or cooperative agreements;
- Industry federal flow-through funding provided through subcontracts;
- Flow-through contracts/subcontracts from universities and other nonprofit organizations; and
- Federal national laboratory contracts/subcontracts.

The survey aimed to capture all federal and federal flow through requests for proposals and awards (including research and development and training) that an institution received or was actively negotiating during the demonstration period that contained the following terms or conditions:

- Approval rights to publish;
- Federal ownership of data/other intellectual property which would effectively prohibit publishing;
- Limitations on the involvement of foreign nationals;
- Export control restrictions; and
- Any other controls which might compromise the fundamental research exclusion under current export control regulations.

Methodology

In designing and overseeing the new survey, care was taken to ensure consistency with the previous survey by limiting the subject matter to the same criteria—clauses which had science and security implications—and by gaining the participation of all 20 original task force institutions. The principal logistical difference from the previous survey was the involvement of FDP. The group invited all of its 100-some member institutions to participate, hosted the Web site for collection of the clauses, and oversaw the day-to-day collection of data. FDP also granted access to the three non-FDP institutions that participated in the previous survey for consistency's sake.[10]

Each participating institution assigned an administrator, who was responsible for granting access to the Web-based system for any user within the institution. All universities participating in the demonstration monitored their federal awards that contained relevant issues over the six-month period and recorded the data in the project system using FDP's Web

[10] In both the previous and new surveys all survey institutions were COGR members. Most, but not all, were members of AAU. In the new survey, all but three institutions were members of FDP and they were granted the same access to the system as the member institutions.

form. [11] Participants were asked to update each file once negotiations on the award were completed, in order to record the outcome. All FDP- member institutions were allowed access to the system, including not just universities but also other research institutions and federal agencies All entries made into the system during this demonstration were viewable on an anonymous basis by personnel granted access by the member institution.

The initial data capture covered all proposals and awards participants received and/or that were negotiated during the period beginning July 1, 2007 and ending December 31, 2007. For that reason, an award received December 31, 2007 was included in the data set, as were proposals submitted but not yet awarded during this period.

The raw data was analyzed for relevancy to science and security issues, and tabulated. The full raw data results appear in Appendix IA.

A wide variety of clauses were reported. Many of them involved complex terms and conditions with nuances that were difficult to capture in the analysis. For example, in two cases, universities reported receiving agreements that required the use of software controlled under International Traffic in Arms Regulations (ITAR). Since there were no outright restrictions in the award terms and conditions, these cases were not included in the report. However, the results were little different. The ITAR restrictions required that each institution develop a technology control plan for its project that ultimately restricted access; in one case, the institution had to develop special computing facilities.

Analysis of the data focused on understanding the issues facing institutional participants and ensuring that the labels assigned to the wide variety of terms and conditions from various government sponsors were as consistent as possible. Many of these clauses, because of their complexity, could be reported in several different ways. Project managers decided to categorize the issues consistent with the previous COGR-AAU survey.

In some cases, multiple issues were split out and an additional entry was created, or re-labeled for consistency. For example, universities often identified a clause as a foreign-national restriction rather than as an export control issue. Foreign national restrictions were limited to those circumstances where a sponsor imposed outright restrictions on the use of foreign nationals.[12]

Universities also showed a wide variety of interpretations of similar contract clauses. For instance, clauses that included export-controlled information and/or SBU information were identified by some as a proprietary information issue, while others saw the clause as an issue of foreign national control or publication control. Other universities did not readily identify which issue was of concern and instead classified the entry into the other category. This disparity illustrates how difficult it can be for universities to interpret these terms and how differently they may view similar language.

The fact that universities make different interpretations of award language- and therefore vary in their willingness to accept certain clauses - may be caused, in part, by a misunderstanding of the language in a specific restriction. But it also may be caused by specific

[11] See sample form attached as Appendix III.

[12] In another example, all DFARS 352.227-9000 entries were considered to be both export-controlled and a foreign-national restriction. The final summary of results of the data analysis and tabulation appears in Appendix I.

campus or state policies. For example, many universities (such as the University of California system) have non-discrimination policies that prohibit discrimination in campus activities based on citizenship. Prohibiting foreign nationals from participating in research activities conducted on campus is interpreted as violating these policies. Such restrictions also may violate state law. Other universities, however, accept certain levels of foreign national restrictions without policy or state law implications.

Universities' varying interpretations of clauses also can be attributed to clauses that contain multiple, subtle restrictions. One university received an award from the General Services Administration (GSA) that contained a "sensitive but unclassified" condition, which required project personnel to provide fingerprints, personal information, and identification documents for background checks. The university also had to establish procedures for safeguarding information and both the institution and its personnel had to sign an agreement to abide by these requirements. In this case, the restrictions appeared directly in the GSA Schedule Contract under which the award was made.

Compare and Contrast: Past and Present Results

The new survey used the analytic framework of the first COGR-AAU report in order to gauge whether there had been any significant changes in federal government practices regarding troublesome clauses since the first report was issued. However, the data and information in the submissions were rich and nuanced, so there may be other ways to compile and present this data. AAU and COGR will consider developing additional reports based on this or future data and will investigate with FDP the feasibility of collecting this data on an ongoing basis.

Table I presents the results of the 2007 survey in a format similar to the previous survey. The participating institutions reported what appears to be a significant overall increase in instances where restrictive clauses were included in federal award terms and conditions (180 v. 138). However, the numbers reported for publication restrictions and restrictions on foreign national participation are quite similar to the previous survey. A total of 91 publication restrictions were reported, 44 of which involved the DFARS 7000 clause, compared to 105 and 47 respectively in the first survey. The vast majority of those instances appear in flow downs to universities from prime DOD industry contractors. Restrictions on foreign national participation were reported in 26 instances, compared to 29 in the previous survey. This survey also included for the first time the appearance of clauses which specifically imposed "sensitive but unclassified" requirements, which was of particular interest to the NAS Committee on Science and Security.

Disposition of these restrictive award terms by the institutions is also of interest (Tables II—VII). Awards with these terms were rejected in 15 instances in the previous survey, when acceptable alternative language could not be negotiated. The comparable figure in this survey is 16.[13] In most situations where universities accepted some level of restrictive terms, they did so with hesitance after protracted negotiations, and with sign-off by involved parties to assure compliance (often including implementation of a technology control plan). In some cases, a university accepted a restriction on a short term basis to complete an initial phase of the

[13] We did not include a detailed analysis of time delays to resolution in the recent survey. The specific numbers as well as the negative effects were discussed in detail in the previous report. However, see footnote 15.

project, but the scientists declined to be involved on the project on a long-term basis if the restrictions were included. In several unfortunate cases, graduate students were precluded from participating on the projects.

The increase in the total number of troublesome clauses is attributable to the marked increase in clauses that specifically mention export controls (26) or other access/ dissemination restrictions (37). More than half of the participants reported receiving such clauses, compared to the previous survey where reports of such restrictions were negligible. The increase may reflect a more refined reporting mechanism as well as participants' greater experience in handling restrictive clauses since the last survey. But the task force representatives also agreed that companies are including more explicit terms and conditions in their subcontracts to universities and that government contracting officials are more frequently including restrictive terms in their awards to industry and universities. The latter trend may be caused, in part, by federal officials simply becoming more cautious about ensuring compliance with federal export regulations. But it also may be the result of the constant turnover in the government contracting workforce. Not only do contracting officers have widely varying knowledge and understanding of the applicability of these requirements, but they may impose restrictions for protective reasons, regardless of their appropriateness. These practices have had a significant impact on universities.[14]

In one case, for example, a university received a flow through from an information company doing work for the Defense Advanced Research Projects Agency (DARPA). The university had negotiated acceptable terms and been performing work under the subcontract for a full year when the company sent a notice that said DARPA wanted all publications to include a statement to the effect that "this publication may contain export- controlled information." Both the university and another university subcontractor under the same prime contract are protesting the requirement—which was not included in either subcontract—because the university portion of the research is fundamental. The two universities have asked DARPA to amend the prime contract to include a statement that the university portions of the research are fundamental and, therefore, excluded from export controls. The issue is still pending.

Export Controls

As noted, the new survey showed a marked increase in the number of award terms that mention export controls. The example of an export control clause below shows how the generality of the provisions can cause difficulty for both companies and universities in knowing how the provisions apply and the specific implications of the terms.

> **A.** Subcontractor agrees to comply with all U.S. export control laws and regulations, specifically including but not limited to, the requirements of the Arms Export Control Act, 22 U.S.C. 2751-2794, including the International Traffic in Arms Regulation (ITAR), 22 C.F.R. 120 et seq.; and the Export Administration Act, 50 U.S.C. app. 2401-2420, including the Export Administration Regulations, 15 C.F.R. 730-774; including the requirement for obtaining any export license or agreement, if applicable. Without

[14] Where the situation is not successfully resolved (16 instances in the new survey), the effect continues to be a significant waste of resources on the part of both the government agencies and institutions and a loss to the government in using the unique expertise of a university – both the Principal Investigator and the students.

limiting the foregoing, Subcontractor agrees that it will not transfer any export controlled item, data, or services, to include transfer to foreign persons employed by or associated with, or under contract to Subcontractor or Subcontractor's lower-tier subcontractors, without the authority of an export license, agreement, or applicable exemption or exception.

B. Subcontractor agrees to notify [Prime] if any deliverable under this Subcontract is restricted by export control laws or regulations.

Although this clause could be interpreted as merely a reminder that all domestic entities are subject to export control laws, it does not highlight the fact that the research was fundamental and, therefore, there would not be a "controlled item." Further, the clause places sole responsibility on the university to identify if a deliverable is considered restricted at the inception of the project or could subsequently become controlled (highly unlikely in the case of fundamental research.) The effect is to create an environment of uncertainty which fosters difficult and protracted negotiations.[15] In instances where universities reported that negotiated language carried some restrictions, they often reported having developed technology control plans for the project. This finding was not reported in the previous report.

Restrictive Grants

Another principal difference between the 2003-2004 and the 2007 surveys is the expansion of the use of restrictive clauses to other types of awards and agreements. The use of restrictive terms has spread beyond procurement situations into federal assistance activities. The earlier survey found restrictive clauses only in direct contracts from federal sponsors and subcontracts under industry prime contracts. In the new survey, institutions reported restrictive clauses in seven cooperative agreements and in 13 other awards, eight of which were grants.

The previous report expressed particular concern about publication restrictions, which were the clear majority of cases reported. The report noted that such restrictions threaten the ability of universities to pursue research in the national interest. These concerns fully apply to the restrictions reported in the new survey. But they are heightened by the proliferation of these restrictions to other funding mechanisms, including grants and cooperative agreements.

Grants (and cooperative agreements) are by statute used to support activities initiated by recipients that serve a public purpose rather than acquiring property or services for the direct benefit or use of the United States Government.[16] The inclusion of requirements for agency review of grant-supported research findings or grant-related information is, therefore, a particularly questionable practice.

Some of the terms that restrict the ability of universities to disseminate information take the form of approval requirements similar to the DFARS 7000 clause. However, other restrictions allow the government to review and object to content in a publication, without

[15] The average reported elapsed time until the terms were successfully negotiated or accepted was 67 days.

[16] 31 USC 6304

prohibiting publication outright.[17] In other cases, the government may require universities to label information as confidential, proprietary or sensitive. Examples follow:

> **7353 DISCLOSURE OF INFORMATION (NOV 2007)**
>
> The Recipient and the Government agree to confer and consult with each other prior to publication or other disclosure of the results of work under this contract to ensure that no classified or proprietary information is released. Prior to submitting a manuscript for publication or before any other public disclosure, the Recipient will offer the government ample opportunity (not to exceed 60 days) to review proposed publication or disclosure, and to submit objections, and to file application letters for patents in a timely manner. The Recipient will include a similar requirement in each subcontract awarded under this grant.
>
> **Export Control/SBU**
>
> The parties understand that information and materials provided pursuant to or resulting from this Award may be export controlled, sensitive but unclassified, for official use only, or otherwise protected by law, executive order or regulation. The Recipient and sub-recipients of this Award shall use their own security procedures and protections to protect information developed, generated or distributed under this award, including but not limited to, a DHS-approved Non-Disclosure Agreement. A copy of the security procedures and proposed Non-Disclosure Agreement shall be submitted to DHS for DHS's review and approval within 2 weeks of this Award. The Recipient and sub-recipients shall ensure that sensitive information be protected in such a manner that it is safeguarded from public disclosure in accordance with applicable state or Federal laws and recipients and sub-recipients DHS-approved security procedures. Transmission of information developed, generated or received by this Award designated as SBU or FOUO shall be transported via secure security methods.

One institution received a grant from the Department of State (DOS) with a confidentiality of information clause, which required that DOS review any confidential information before it could be disclosed by the grantee. The clause follows:

> **Confidentiality of Information**
>
> (a) Confidential information, as used in this Provision, means: 1) information or data of a personal nature about an individual or 2) information or data submitted by or pertaining to an institution or organization.
>
> (b) In addition to the types of confidential information described in (a)(1) and (2) above, information which might require special consideration with regard to the timing of its disclosure may derive from studies or research, during which public disclosure of preliminary invalidated findings could create erroneous conclusions which might threaten public health or safety if acted upon.

[17] Many universities are concerned about clauses that give the government rights to object without outright approval because they may feel compelled to comply with objections to avoid jeopardizing future funding.

(c) The Grants Officer and the Recipient may, by mutual consent, identify elsewhere in this award specific information and/or categories of information which the Government will furnish to the Recipient or that the Recipient is expected to generate which is confidential. Similarly, the Grants Officer and the Recipient may, by mutual consent, identify such confidential information from time to time during the performance of the agreement…

(e) Confidential information, as defined in (a)(1) and (2) above, shall not be disclosed without the prior written consent of the individual, institution or organization (DOS).

(f) Written advance notice of at least 45 days will be provided to the Grants Officer of the Recipient's intent to release findings of studies or research, which have the possibility of adverse effects on the public or the Federal agency, as described in (b) above. If the Grants Officer does not pose any objections in writing within the 45-day period, the recipient may proceed with disclosure.

(g) Whenever the Recipient is uncertain with regard to the proper handling of material under the Cooperative Agreement, or if the material in question is subject to the Privacy Act or is confidential information subject to this Provision, the Recipient shall obtain a written determination from the Grants Officer prior to any release, disclosure, dissemination, or publication.

(h) Paragraph (e) of this Provision shall not apply when the information is subject to conflicting or overlapping provisions in other Federal, State, or local laws.

In the above clause, the definition of "confidential" is overly broad and difficult to interpret. Furthermore, the clause gives the appearance that DOS could unilaterally determine that information is confidential, including research findings and conclusions. It is worth noting that this clause is virtually identical to the U.S. Department of Health and Human Services grant language found to be unconstitutional by the Federal District Court in the Board of Trustees of the Leland Stanford Junior University v. Sullivan, 773 F.Supp. 472 (DDC 1991). In the case of the DOS grant, the university ultimately was able to negotiate a change.

In another example, two institutions reported a clause in the program announcement for the Department of Defense (DOD) *National Security Science and Engineering Faculty Fellowship Competition*, which requires personnel participating in the project to obtain a DOD secret security clearance. Although labeled a fellowship program, the award takes the form of a grant to the institution. Because the program requires awardees to acquire a security clearance, it is nearly impossible for foreign nationals to participate. In both cases, the universities determined that such a restriction would qualify as a "national security control" and therefore could make the research work ineligible to be considered fundamental research under the export control regulations.[18] The clause follows:

Although the intent for the basic research is to be unclassified, each Fellow must be able to obtain and maintain a Department of Defense security clearance…Fellows must be granted and maintain a final Secret clearance to receive program funding.

[18] There were reports by two institutions of approximately 20 submissions (ten each) for this BAA. Therefore, this was counted as two instances of classified references.

Intellectual Property Restrictions

More recently, agencies have begun including intellectual property restrictions in their awards to universities.[19] Such restrictions not only harm universities' basic mission of ensuring the open exchange of ideas and public access to research results, but they prevent universities from claiming the fundamental research exclusion from export controls. If a university is unable to reserve rights to the products of its research, its ability to publish results may be limited. This, in turn, may prevent the institution from using the fundamental research exclusion from export controls. As a result, intellectual property restrictions may require institutions to secure export licenses from the State Department or the Commerce Department

Several universities have found funding agencies unwilling to follow the standard FAR prescription for the use of the Alternate IV to FAR 52.227-14 when engaging with universities. Without Alt. IV, universities cannot automatically claim copyright and must obtain permission from the contracting officer to disseminate the work product. In one case, NASA expected the university to assign ownership of software to NASA, where software was the main deliverable under the contract. In such a circumstance, a university that publishes a paper in a journal may not be able to claim the fundamental research exclusion since results can only be considered "normally publishable" if the software also is released. Without the copyright, the university would be unable to do so.

There also were instances where the sponsor used the FAR/DFARS Special Works clause, or the prime contractor included "Work-Made-For-Hire" language in the subcontract, both of which have the effect of assigning ownership of university-created intellectual property to the sponsor or prime contractor. The following are examples:

> **52.227-17 Rights in Data—Special Works (also DFARS 252.227-7020)**
>
> (a) Definitions. As used in this clause—
> "Data" means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing, or management information...
>
> (b) Allocation of Rights.
>
> (1) The Government shall have—
>
> (i) Unlimited rights in all data delivered under this contract, and in all data first produced in the performance of this contract, except as provided in paragraph (c) of this clause.
>
> (ii) The right to limit assertion of copyright in data first produced in the performance of this contract, and to obtain assignment of copyright in that data, in accordance with

[19] These were not specifically reported in the previous survey but presumably may have been included under "Other access or dissemination restrictions." Four such "Other" restrictions were reported last time; in the new survey we found 38.

paragraph (c)(1) of this clause.

(iii) The right to limit the release and use of certain data in accordance with paragraph (d) of this clause.

(2) The Contractor shall have, to the extent permission is granted in accordance with paragraph (c)(1) of this clause, the right to assert claim to copyright subsisting in data first produced in the performance of this contract.

(c) Copyright—

(1) Data first produced in the performance of this contract.

(i) The Contractor shall not assert or authorize others to assert any claim to copyright subsisting in any data first produced in the performance of this contract without prior written permission of the Contracting Officer. When copyright is asserted, the Contractor shall affix the appropriate copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to the data when delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. The Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license for all delivered data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.

(ii) If the Government desires to obtain copyright in data first produced in the performance of this contract and permission has not been granted as set forth in paragraph (c)(1)(i) of this clause, the Contracting Officer shall direct the Contractor to assign (with or without registration), or obtain the assignment of, the copyright to the Government or its designated assignee.

(2) Data not first produced in the performance of this contract. The Contractor shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract and that contain the copyright notice of 17 U.S.C. 401 or 402, unless the Contractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in paragraph (c)(1) of this clause.

(d) Release and use restrictions. Except as otherwise specifically provided for in this contract, the Contractor shall not use, release, reproduce, distribute, or publish any data first produced in the performance of this contract, nor authorize others to do so, without written permission of the Contracting Officer…

Work-Made-For-Hire

Seller agrees that all items developed and acquired by Seller under this subcontract and charged to Buyer including, but not limited to Intellectual Property, Software, Software Programs, Technical Data and documents, etc shall be considered “work for hire” on behalf of the Buyer. Seller agrees to assign all right, title and interests, including, but not limited to copyrights and patents to Buyer. Upon completion,

expiration or termination of this subcontract, Seller shall return all items developed and acquired by Seller in performance of this Subcontract to the Buyer.

Homegrown Clauses

The new survey highlights a group of restrictions that are consistently included in university awards by many sponsors, but which may be implemented differently by sub-units within a single agency. Such "homegrown" clauses are used to impose additional, nonstandard restrictions. As an example, the DARPA custom clause below imposes restrictions on publications (but includes contradictory language indicating that the research results may be unclassified fundamental research, and therefore, not restricted):

G- 9000 (DARPA) PUBLIC RELEASE OR DISSEMINATION OF INFORMATION

(a) There shall be no dissemination or publication, except within and between the Contractor and any subcontractors, of information developed under this contract or contained in the reports to be furnished pursuant to this contract without prior written approval of the Contracting Officer Representative (COR). All technical reports will be given proper review by appropriate authority to determine which Distribution Statement is to be applied prior to the initial distribution of these reports by the Contractor. Papers resulting from unclassified contracted fundamental research are exempt from prepublication controls and this review requirement, pursuant to DoD Instruction 5230.27 dated October 6, 1987.

(b) When submitting material for written approval for open publication as described in subparagraph (a) above, the Contractor/Awardee must submit a request for public release to the DARPA TIO via the COR and include the following information:

(1) Document Information: document title, document author, short plain-language description of technology discussed in the material (approx. 30 words), number of pages (or minutes of video) and document type (briefing, report, abstract, article, or paper);
(2) Event Information: event type (conference, principle investigator meeting, article or paper), event date, desired date for approval;
(3) DARPA Sponsor: DARPA Program Manager, DARPA office,
(4) SPAWARSYSCEN San Diego COR name and contract number; and
(5) Contractor/Awardee's Information: POC name, e-mail and phone.
Allow four weeks for processing; due dates under four weeks require a justification. Unusual electronic file formats may require additional processing time. Requests can be sent via e-mail to the COR _____.

This clause is difficult to interpret because it relies on the judgment of the university contracting officials to determine if the award is contracted fundamental research. The need to make these determinations can cause delays in award acceptance. Further, without the government-wide vetting, which is typical of a FAR clause and which results in a prescription for the use of the clause, there is no guarantee that a homegrown clause- and the concomitant restrictions- will be appropriately applied or interpreted by the government and university contracting personnel.

Conclusion

Summary Findings

The primary finding of the new survey is that the situation with regard to troublesome clauses clearly has not improved since the previous survey in 2003-2004, based on the experiences of the 20 institutions included in the original COGR/AAU survey, which we believe are reasonably representative of U.S. research universities broadly.

Overall, results from the two surveys showed little change in the frequency of publication restrictions and restrictions on the participation of foreign nationals.[20] However, the second survey showed a fairly substantial increase in the number of instances of troublesome clauses. This was almost entirely due to the addition of new forms of restrictions not reported in the first survey. The new survey indicates that federal agencies are expanding the type of controls they impose in award terms and conditions and are using more sophisticated (and varying) technical language and approaches for implementing restrictions that affect university research projects. Particularly alarming is the spread of restrictive award terms by federal agencies beyond contracts to federal assistance mechanisms, such as grants. The increase in the total number of instances also is attributable to industry prime contractors adding protective terms to university subcontracts, such as those pertaining to export controls. The findings suggest that federal agencies have become more control-oriented in their dealings with universities and that both agencies and industry prime contractors have become more careful to set forth compliance expectations in security-related areas.

The wide scope and variety of troublesome clauses reported in the new survey may also indicate that universities have become more vigilant in reviewing awards and more sophisticated in identifying restrictive terms in contract language. Another possibility is that the reporting mechanism used by FDP for the second survey was more refined than the one used for the first survey and, therefore, better able to record the variety of issues encountered by the institutions.

Universities participating in the survey showed a broad range of views about what restrictions they would accept without compromising the fundamental research exclusion. That variation indicates that institutions have different levels of understanding about the implications of accepting certain terms under certain circumstances. An acceptable clause to one university may be viewed as unacceptable by another.[21] Where one university has negotiated language which is not optimal but it views as "livable," another university under similar circumstances will have declined the award. Clearly, there is inconsistency in decision making among the participating institutions. It also may be that participating universities are under-reporting clauses that they found acceptable but which, in fact, could be troublesome.

[20] DOD continues to be the primary source of troublesome clauses (both direct and flow down). In particular, the DOD 7000 clause included in industry flow downs to universities, remains a significant problem.

[21] For example, the question of whether or not DARPA G9000 is a troublesome clause was widely debated among the task force institutions. The only consensus was that the decision often depended on the "color of money"- which is an elusive fact under most circumstances- and whether the work was truly fundamental – a determination which is left completely up to the university. However, the funding category is seldom obvious from funding documents and is not necessarily an accurate indicator of the nature of the research.

Issues

Results of both surveys have highlighted several critical issues that must be addressed cooperatively by universities and government agencies. Similar issues were identified in the NAS Committee on Science and Security report. They include:

1. How to preserve universities' open research environment, academic freedom and integrity when they perform important cutting-edge research for the government;

2. Conflicts between core academic principles of openness and the free flow of information and sponsor approval over publication;

3. Conflicts between government requirements to approve foreign national participation in funded research projects and policies regarding non-discrimination in campus activities;

4. Adverse effects of protracted negotiations over research awards on faculty and students, as well as on the national interest when universities are forced to "walk away" from government-funded projects (or not compete for them); and

5. Issues associated with increased compliance requirements (e.g. implementation and oversight of technology control plans, staffing and cost implications, etc.).

Recommendations

The following recommendations are highlighted in no particular order by COGR-AAU as among those that could assist government agencies to balance legitimate concerns of national security while enabling universities to navigate quickly and effectively the government contracting process. Implementation of these recommendations would help avoid lengthy negotiations and reduce the possibility of burdensome restrictions that force universities to reject awards.

1. Both the previous and present surveys identified the Department of Defense (DOD) as the largest source of troublesome clauses. The previous COGR-AAU report recommended that DOD revise the Defense Federal Acquisition Regulations Supplement (DFARS) prescription guidance to prevent the DFARS 7000 clause from being used in contracts for university research, either directly or as a flow down from industry contracts. Just as important, DOD should revise its guidance to contracting officers stipulating that no controls should be imposed on publications or foreign national participation for fundamental research either in direct awards or sub-awards.

2. DOD also should develop a uniform policy that discourages DOD offices and programs from issuing "home-grown" award terms and arbitrary mandates that do not follow established DOD policy and DFARS clauses. The Undersecretary of Acquisition Technology and Logistics should develop appropriate acquisition guidance accordingly. On June 26, 2008 the DOD issued an internal memorandum on "Contracted Fundamental Research." The memo calls attention to NSDD-189 as the governing policy and indicated that DOD awards for the performance of fundamental research should, with rare exceptions, not be managed in a way that they become subject to restrictions on the involvement of foreign researchers or publication restrictions. Exceptions must be approved at senior DOD levels. The issuance of this memorandum

represents a very positive development in response to concerns raised in this report. It will now be critical that all DOD contracting officials uniformly abide by this agency-wide policy. Moreover, DOD contracting officers must be informed of the policy and properly trained to ensure that it is consistently implemented.[22]

3. Both the previous COGR-AAU report and the report from the National Academies' Science and Security Committee recommended that *all* federal research agencies follow the principles of NSDD-189 in funding research. The relevant federal acquisition regulation (FAR) provision should be incorporated into all unclassified federal research contracts to universities. The FAR Secretariat should issue specific guidance to this effect for all agencies.

4. The White House Office of Management and Budget (OMB) should issue guidance to federal agencies, perhaps through revisions to Circular A-110 (2 CFR 215), which states that restrictions on publications or participation by foreign nationals are inappropriate for federal agencies to use in university grants and cooperative agreements. The guidance should be broad enough to encompass the newer forms of restrictive designations, such as "confidential," "proprietary" or "sensitive" information.[23]

5. Export control compliance clauses should be used more selectively by federal agencies (and prime contractors). Their use should be restricted to situations where the agency or contractor knows it is providing export controlled information to the university. Agencies and contractors should avoid using export control compliance clauses where the research is clearly fundamental in nature and, therefore, is excluded from export control requirements.

6. The federal government should implement a government-wide, comprehensive training program for contracting officers to address these issues.

7. The NAS Committee report called for establishing a federal science and security commission to address ongoing shared concerns of the security and academic research communities, such as implementation of NSDD-189. A university- government working group also should be established, perhaps under the auspices of the commission, to address current issues, evaluate results and monitor future issues in science and security. The group also should be charged with identifying and implementing ways to engage industry in providing appropriate flow down terms to universities.

8. Senior university officials must continuously educate faculty, staff, and administrators about their responsibility to comply with export controls, select agents and other security-related issues. Senior officials should ensure that their institutions have policies to address these matters. Likewise, university associations should continue working to educate and train their members about compliance issues surrounding science and security requirements.

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[22] Memorandum to Secretaries of the Military Departments; Chairman, Joint Chiefs of Staff; and Directors of Defense Agencies, "Contracted Fundamental Research," issued by John J. Young, Jr., Undersecretary of Defense for Acquisition, Technology and Logistics, U.S. Department of Defense, June 26, 2008.

[23] Recently the White House issued a memorandum establishing a new single, categorical designation of "Controlled Unclassified Information" (CUI) to replace "Sensitive But Unclassified" and similar designations. Implementation is assigned to the National Archives and Records Administration as Executive Agent. This new category is too recent (May 7, 2008) to be reflected in the survey results.

9. FDP, as an organization of university and agency members, should use the results of this new survey to engage its membership in improving contracting and monitoring restrictions on assistance awards. FDP should explore solutions within the context of the next phase of the Demonstration. In particular, both agency and university personnel could benefit from a collaborative Web site that collects data, describes the issues, and discusses the meaning and implications of certain grant and contract terms. On the latter issue, this would include a discussion of why accepting certain language in contracts might be objectionable and how such language might harm research activities downstream. It would be particularly helpful for the Web site to provide examples of negotiated language that is mutually beneficial in particular kinds of projects, while continuing to emphasize that any agreement to restrict publication and other access to results destroys the fundamental research exclusion.

Implementation of this report's recommendations would not necessarily resolve all of the issues regarding troublesome clauses, but it would significantly improve what has become an increasingly untenable situation. Such action must be undertaken jointly by the federal government and the university research community.

Table I

TROUBLESOME CLAUSES CLASSIFIED BY SPONSOR

Sponsor	Total # of Instances Reported	The 7000 Clause	Other Publication Restrictions	Foreign National Restrictions	Export Controls	Other Access or Dissemination Restrictions
Department of Defense	23	5	6	6	2	4
DoD via Industry	88	37	16	10	16	9
DoD via U/Nonprof	7	2	0	2	3	0
Department of Energy	3	0	1	1	0	1
DoE via Industry	4	0	2	0	1	1
Department of Health and Human Services	3	0	2	0	0	1
DHHS via Industry	5	0	1	1	1	2
DHHS via Univ/Nonprofit	3	0	1	0	0	2
Department of Homeland Security	4	0	3	0	1	0
DHS via industry	1	0	1	0	0	0
DHS via Univ/Nonprofit	2	0	2	0	0	0
National Aeronautics and Space Administration	7	0	1	1	1	4
NASA via Industry	1	0	0	1	0	0
NASA via Univ/Nonprofit	2	0	0	0	0	2
National Laboratories	2	0	0	0	0	2
Other Sponsors • *Security Agencies* • *GSA* • *EPA* • *NRC* • *FHWA* • *Census* • *Dept of State* • *U.S. Dept Ed* • *NIST* • *DOT* • *FAA*	13 *2* *2* *1* *0* *0* *2* *1* *2* *2* *0* *1*	0 *0* *0* *0* *0* *0* *0* *0* *0* *0* *0* *0*	6 *1* *1* *0* *1* *0* *1* *1* *1* *0* *0* *0*	2 *0* *0* *1* *0* *0* *0* *0* *0* *0* *0* *1*	0 *0* *0* *0* *0* *0* *0* *0* *0* *0* *0* *0*	5 *0* *1* *0* *0* *0* *1* *0* *1* *2* *0* *0*
Other Sponsors via Industry • *SecurityAgencies* • *GSA* • *EPA* • *NRC* • *FHWA* • *Census* • *Dept of State* • *U.S. Dept Ed* • *NIST* • *DOT*	6 *4* *0* *1* *0* *0* *0* *0* *0* *0* *0* *1*	0 *0* *0* *0* *0* *0* *0* *0* *0* *0* *0* *0*	2 *1* *0* *0* *0* *0* *0* *0* *0* *0* *0* *1*	2 *1* *0* *1* *0* *0* *0* *0* *0* *0* *0* *0*	0 *0* *0* *0* *0* *0* *0* *0* *0* *0* *0* *0*	2 *2* *0* *0* *0* *0* *0* *0* *0* *0* *0* *0*
Other Sponsors via Univ//Nonprofit	6	0	3	0	1	2
TOTALS	180	44	47	26	26	37

Table II

PUBLICATION CONTROLS: The 7000 Clause

Number of Instances Reported	Number of Universities Receiving Clause	Number of Acceptances as Proposed	Number Negotiating Alternative Language	Number Rejecting Awards	Number Pending as of 05/29/08
44	13	11	20	6	7

In cases where the clauses were accepted, all were attributable to three universities. All three universities have secure facilities and policies/practices which permit the restriction with the implementation of a technology control plan. In eight cases, negotiations lasted more than 30 days, and more than half took longer than 60 days.

Table III

PUBLICATION CONTROLS: Other Clauses

Number of Instances Reported	Number of Universities Receiving Clause	Number of Clauses Referencing SBU/FOUO	Number of Acceptances as Proposed	Number Negotiating Alternative Language	Number Rejecting Awards	Number Pending as of 5/29/08
47	16	5	9	25	1	12

In cases where the clauses were accepted, all were attributable to four universities. Two of them have secure facilities and policies/practices which permit restrictions with the implementation of a technology control plan. Others determined after lengthy negotiations that the language could be accepted without affecting the fundamental research exclusion.

Table IV

FOREIGN NATIONAL CONTROLS

Number of Instances Reported	Number of Universities Receiving Clause	Number of Acceptances as Proposed	Number Negotiating Alternative Language	Number Rejecting Awards	Number Pending as of 05/29/08
26	11	4	11	5	6

In cases where the clauses were accepted, all were attributable to three universities. Two of them have secure facilities and policies/practices which permit restrictions with the implementation of a technology control plan.

Table V

EXPORT CONTROL RESTRICTIONS

Number of instances reported	Number of universities receiving clause	Number of acceptances as proposed	Number negotiating alternative language	Number rejecting awards	Number pending/other as of 05/29/08
26	13	4	14	3	5

"Export Controls" was not a category in the data input form. For purposes of the full analysis, export control clauses were found listed as Proprietary Data Restrictions, Foreign

National Controls, Publication Restrictions, and Other. In cases where the clauses were accepted, all were attributable to four universities.

Table VI

OTHER ACCESS/DISSEMINATION RESTRICTIONS

Number of instances reported	Number of universities receiving clause	Number of acceptances as proposed	Number negotiating alternative language	Number rejecting awards	Number pending/other as of 05/29/08
37	10	10	14	1	12

This category encompasses instances recorded as an Intellectual Property Restriction, Proprietary Data Restriction and Other Controls or Restrictions.

Table VII

NON-CONTRACT AWARD RESTRICTIONS ENTRIES

Type of Award	Number of Instances Reported	Government Sponsor	Flow Through Organization	Type of Restriction
Grant	8	6	2	Publication Control/SBU-FOUO Background Checks Security Clearances
Cooperative Agreement	7	6	1	Publication Control Background Checks Foreign National Control Export Control Intellectual Property Restriction
Nat'l Lab	2	2	0	Intellectual Property Restriction
Other	3	3	0	Publication Control Foreign National Control Classification Reference
TOTAL	20	17	3	

APPENDIX IA

SUMMARY OF TROUBLESOME CLAUSES REPORTED BY ALL UNIVERSITIES (Raw Data, by Input Category)

Restriction	Accepted as Proposed	Negotiated Alternate Language	Rejected Award	Negotiation in Progress/Other	Total
FAR 7000 clause	13	21	5	9	48
Other publication	9	21	1	17	48
Foreign National	7	13	5	15	40
Export Controls[1]	0	0	0	0	0
Other Access/Dissemination	13	7	0	17	37
Proprietary Data Restrictions	4	3	0	1	8
IP Restrictions	1	4	1	5	11
Input Errors					4
TOTALS	47	69	12	64	196

[1]Export Controls was not a listed category in data input form.

APPENDIX IB

SUMMARY OF TROUBLESOME CLAUSES REPORTED BY TASK FORCE UNIVERSITIES (Compiled Data, by Category)

Restriction	Accepted as Proposed	Negotiated Alternate Language	Rejected Award	Negotiation in Progress/Other	Total
FAR 7000 clause	11	20	6	7	44
Other publication	9	25	1	12	47
Foreign National	4	11	5	6	26
Export Controls	4	14	3	5	26
Other Access/Dissemination • Background checks • Classification Reference/ Security Clearances	4 4 0	4 1 3	0 0 0	6 1 5	14 6 8
Proprietary Data Restrictions	4	1	0	0	5
IP Restrictions	2	9	1	6	18
TOTALS	38	84	16	42	180[2]

[1] This includes six clauses which referenced SBU and/or FOUO restrictions.
[2] Thirty (30) entries related to the submission of a proposal.

APPENDIX II

INSTITUTIONAL REPORTING OF INSTANCES OF TROUBLESOME CLAUSES INCLUDED IN ANALYSIS
(Compiled Data)

Institution	Number of Instances Reported in Database[1]
California Institute of Technology	5
Carnegie Mellon University	2
Duke University	15
Georgia Institute of Technology	3
Harvard University	4
Massachusetts Institute of Technology	10
Northwestern University	10
The Pennsylvania State University	17
Stanford University	3
Texas A&M University	0
University of California, Berkeley	12
University of California, San Diego	16
University of Cincinnati	11
University of Colorado, Boulder	2
University of Maryland, College Park	33
University of Michigan	5
University of Minnesota	11
University of Texas at Austin	14
University of Wisconsin, Madison	6
Washington University in St. Louis	1

[1]All universities participated. If the clause did not implicate science and security, the entry was not counted.

APPENDIX III

FDP DATA INPUT FORM

Add/Modify Entry

Part One

Entry No.	Not Assigned	Contact Name	
Institution	NAS University	Contact Phone	
Date Recv'd			
Award Mechanism	Select Mechanism	Prime Sponsor	Add New Sponsor
Related To	Select One	Flow Thru Org.	
Yr 1 Funding	0	Funding Stream	
Total Funding	0	Federal Funding	Select One
		SBIR/STTR	Select One

Issue: Select Issue Type

Issue Desc. & Background

Clause No.

Upload File: Browse...

Full Clause (if no identiying number is available)

Do you have a policy or practice covering this situation?

Select One

Part Two - Current Status or Outcome

Outcome	Select Outcome
Date Resolved	
Time to Resolution	
Upload File	Browse...
Negotiated Language	

Variance from policy (Include Rationale for Acceptance)	
Impact	
Additional Info	

Save Clear