

AC 2009-1568: FEDERAL TITLE IX REVIEWS: WHAT THEY REALLY MEAN

Catherine Pieronek, University of Notre Dame

Catherine Pieronek, J.D., is Assistant Dean for Academic Affairs in the College of Engineering at the University of Notre Dame. She serves the Society of Women Engineers as Title IX Lead and chair of the Society's Government Relations and Public Policy Committee for FY09. She holds a B.S. in aerospace engineering and her J.D. from the University of Notre Dame, and an M.S. in aerospace engineering from UCLA.

Federal Title IX Reviews: What They Really Mean

Over the last three years, the federal government has stepped up its efforts to perform Title IX compliance reviews in science and engineering, in response to criticisms in a 2004 report published by the U.S. Government Accountability Office. The mere thought of using Title IX to “do for science and engineering what it has done for athletics”¹ has fomented a great deal of controversy.^{2,3} Moreover, the lack of visibility into what actually has resulted from these reviews has limited any development of public awareness and understanding of why these reviews can benefit academic institutions in general and their science, technology, engineering and mathematics (STEM) departments in particular.^{3,4}

This paper presents the results of Title IX reviews completed over the last three years by the National Aeronautics and Space Administration and the U.S. Department of Energy. It will present the rationale used for selecting an institution for review, the data examined during the reviews, and the outcomes, which include both promising practices and areas for improvement. The paper will also look briefly at the more generic – that is, non-STEM – Title IX reviews performed by the U.S. Department of Education, which focus on the policies and procedures used institution-wide to address claims of gender-based discrimination as well as sexual harassment.

Ultimately, the goal of this paper is to explain how these reviews have a great deal of relevance for STEM educators attempting to diversify their student and faculty populations. Understanding the STEM-focused reviews will aid educators in evaluating their own programs for gender equity, and understanding the more general reviews will aid educators in understanding the deals their institutions may be making with the Department of Education that could affect their ability to challenge institutional decisions under Title IX.

History and Background

Title IX of the Education Amendments of 1972⁵ states that “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance”⁵ As legislation enacted pursuant to congressional authority under the Spending Clause of the United States Constitution,⁶ the statute forms a contract between the federal government and the federal funding recipient. The terms of that contract condition the grant of federal funds on the funding recipient’s promise not to discriminate on the basis of gender.

In the 37 years since the enactment of the statute, women have made tremendous progress in higher education in particular. Admissions gates once limited or barred women from certain academic institutions or fields of study. But today, women comprise more than half of all college students, earn more than half of all bachelor’s and master’s degrees, and earn nearly half of all doctoral and first professional degrees.⁷ Quaint notions of how women should behave as student-athletes once relegated women to second-class sports programs across the country,⁸ but fervent enforcement of Title IX has contributed to providing equivalent participation opportunities.⁹ Yet, engineering and the physical sciences seem immune to the law’s effects, as women currently comprise less than 20 percent of all engineering students at all levels.⁷

Early in the 21st century, this disparity caught the attention of lawmakers. Speaking at a 2002 hearing on “Title IX and Science” before the U.S. Senate Subcommittee on Science, Technology, and Space, of the Senate’s Commission on Commerce, Science, and Transportation, former U.S. Senator Birch Bayh (D-IN), key among Title IX advocates in 1972, stated that he thought that the greatest benefits of Title IX “would come from opening the doors of our education system so that girls, young women, faculty members and administrators could fully utilize their God-given talents in the academic area.”¹⁰ Senator Ron Wyden (D-OR), former chair of that same Senate Committee, echoed Senator Bayh’s sentiments when he commented that “Title IX has yet to be applied stringently enough in traditionally male-dominated fields such as the hard sciences, math and engineering – disciplines where our nation needs competent workers now more than ever.”¹¹

As a result of these concerns, Senator Wyden and Senator Barbara Boxer (D-CA) requested a report from the United States Government Accountability Office (GAO) that focused on Title IX in the science, technology, engineering and mathematics (STEM) disciplines in institutions of higher education. That report, entitled “Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX,”¹² focused on three questions:

- (1) How do the Department of Education (Education), the Department of Energy (Energy), the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF) ensure that federal grant recipient institutions comply with Title IX in STEM fields?
- (2) What do the data show about women’s participation in STEM fields?
- (3) What promising practices exist to promote the participation of women in STEM fields?¹²

In response to the first question, the report found that the four listed agencies, which together provided more than \$5 billion in science-related grants to higher education in 2003, had not conducted all compliance monitoring activities required by the law. As a result, the report recommended that Energy, NASA and NSF take steps to conduct compliance reviews of grant recipients, and that the agencies coordinate their reviews.¹² In 2005, these agencies, together with the Department of Education and the Department of Justice, formed an Interagency Working Group on Title IX to coordinate reviews so that institutions do not encounter multiple reviews by different agencies, and to achieve some consistency in the scope of the reviews.¹³

NASA has a key position in the Title IX compliance effort. In 2002, Senator Wyden directly challenged NASA to develop a plan “to help triple the number of women graduating college with degrees in science, math and engineering by the year 2012.”¹⁴ In 2005 appropriations legislation, Congress explicitly directed NASA to conduct two Title IX compliance reviews per year, and provided the necessary funding.¹⁵ Thus, NASA has taken a leadership role in conducting these reviews.

The situation for the other funding agencies differs somewhat because they have not been told explicitly, nor funded, to engage in compliance reviews. The America Competes Act¹⁶ does contain language that suggests that Energy should address the findings of the GAO report and

conduct two Title IX reviews annually, but it neither mandates nor funds such reviews. And no other agency, institute or department received either direct or indirect orders to conduct Title IX reviews, nor the funding to enable the reviews. Nevertheless, all federal funding agencies are required by the plain language of the statute to do whatever is necessary to enforce the law.⁵

Reports Reviewed

This paper focuses on the results of Title IX reviews completed by the end of 2008. The author submitted Freedom of Information Act requests to NASA, Energy and NSF for copies of the relevant reports.

As of this writing in early 2009, NASA has completed six reviews. The report of the 2008 review of the University of Alabama Huntsville Department of Mechanical and Aerospace Engineering is forthcoming, but five other reports have been completed:

University of Maryland College Park Aerospace Engineering Department (April 2007);¹⁷

University of Michigan Aerospace Engineering Department (July 2007);¹⁸

Massachusetts Institute of Technology Physics Department (January 2008);¹⁹

The University of Arizona Physics Department (June 2008);²⁰ and

University of Hawaii Manoa Department of Physics and Astronomy, Hawaii Institute of Geophysics and Planetology, and Institute for Astronomy (December 2008).²¹

Energy has completed three reviews. The report of the 2008 review of the University of Washington-Seattle is forthcoming, but two other reports have been completed:

Columbia University Graduate Physics Program (September 2007);²² and

University of Wisconsin-Madison Graduate Physics Program (January 2009).²³

NSF denied author's the request for a copy of its report on Columbia University's Graduate Electrical and Mechanical Engineering Program, apparently because the report has not yet been finalized.

Basic Requirements

Although this paper reports on the STEM-focused Title IX reviews conducted by NASA and Energy, broader Title IX reviews conducted by Education provide some context for aspects of the NASA and Energy reviews. These reviews tend to focus on only the Title IX procedural requirements, and examine whether an educational institution has:

Identified a Title IX coordinator;

Established and disseminated an appropriate Title IX nondiscrimination policy; and

Established appropriate Title IX grievance procedures.^{24,25}

The results of these reviews make clear that simply meeting the letter of these requirements does not sufficiently comply with the law. Rather, these requirements must be satisfied in specific ways. A review conducted at the author's home institution resulted in a "Resolution Agreement"²⁶ that proves instructive in understanding what each of these elements actually means to government reviewers.

Conversations that the author has had with Education officials also revealed that Education has adopted the view that, if an institution follows notice requirements and grievance procedures that the Department's Office of Civil Rights has approved, Education will not question the outcomes of those processes. Any review will, instead, focus on whether the institution has followed the approved procedures rather than achieved a particular result. So it is important that individual complainants understand the procedures and follow them when raising issues of concern.

Federal funding recipients must identify a Title IX coordinator.²⁴ However, the coordinator must have the skills and abilities necessary to fully discharge Title IX coordinator responsibilities within the institution's organizational structure. The institution must notify students and employees (including faculty) of the coordinator's name or title, address and telephone number. This information must be published in electronic and print versions of documents that spell out the rights and responsibilities of students, staff and faculty, such as bulletins of information, student handbooks, human resources procedures and the like.²⁴ Although Education reviews stop at this point, the NASA and Energy reviews went beyond this requirement and questioned students and employees about whether they knew the identity of the institution's Title IX coordinator. Not surprisingly, in most cases, students and faculty did not know, but offered that they could find the information if they felt the need for it – a finding consistent with findings published in the GAO report.¹² In several reviews, NASA also commented that the particular institutional role of the individual identified could make that individual less effective. While some institutions have established equity offices or equal opportunity offices, others have simply designated someone in the general counsel's office or human resources office as the identified Title IX coordinator. For a student with a complaint, human resources might not be the first office that comes to mind, and the general counsel might be seen as someone who would work to protect the university's interest rather than meet the needs of its employees, faculty or students. Thus, the NASA reviews examined whether the Title IX coordinator, although identified and made known in accordance with the regulations, could actually be effective.

The institution's nondiscrimination policy must state, at a minimum, that the institution does not discriminate on the basis of sex, and must also indicate clearly and unambiguously who at the institution has the authority to handle all inquiries and carry out all responsibilities under Title IX.²⁵ The notice must be prominently displayed in electronic and print publications made available to applicants for admission and employment, students and parents, employees, sources of referral of applicants for admission and employment, and unions or professional organizations that have collective bargaining agreements with the institution. The policy may, however, be combined

with other similar policies prohibiting discrimination on other bases. Thus, it is not enough to have a policy. The policy must be disseminated in specific ways.²⁵ NASA's reviews listed some promising practices for disseminating this policy, including discussing it specifically in orientation classes for students and orientation meetings for new faculty and staff, periodically distributing it electronically to faculty and staff and prominently displaying posters highlighting the policy. And again, both NASA and Energy interviewed individuals to see if they were aware of the policy. Consistent with the findings in the GAO report,¹² most individuals were not, but expressed confidence that they could secure the information if and when they needed it.

Education thoroughly reviews Title IX grievance procedures for completeness and clarity. These reviews point out that a proper grievance procedure must include: notice of the procedures, including where, internally and externally, complaints can be filed; the assignment of an impartial investigator and the opportunity for parties to present witnesses and other evidence; time frames for completing major stages of the complaint process; notice to the parties of the outcome; and some sort of an assurance that the institution will take steps to prevent the recurrence of harassment and correct its discriminatory effects as appropriate.²⁶ Institutions may craft separate grievance procedures to deal with the specific discrimination that results from sexual harassment, but must have policies in place to deal with inequities that result from broader forms of discrimination apart from sexual harassment. The Education reviews also highlight that one danger in having a collection of separate policies is that some aspects of gender-based discrimination might be missed. The author's home institution, for example, had established separate, but equivalent, sexual harassment grievance procedures for students, faculty and staff. But non-sexual harassment grievance procedures were nonexistent for students, limited to adverse renewal, promotion and tenure decisions for faculty, and subsumed into a more general complaint procedure for staff. Education found this collection of policies inadequate and directed the institution to fill in the gaps with appropriate new policies.²⁶

NASA's reports consistently indicate that the agency engaged in very thorough reviews of the procedural aspects of Title IX in a manner that comports with Education reviews. For most of the institutions reviewed, NASA confirmed compliance with the law but did indicate some areas for improvement, such as the manner in which the institutions disseminate information about Title IX and the conduct of grievance processes.¹³ For one institution that was discharging its obligations particularly well, however, NASA reported the details of the institution's procedures and the coordinator's role as promising practices.²¹

Energy's report of its first Title IX review, however, appears less thorough. The report discussed grievance procedures only generally, without regard for the status (student, faculty or staff) of the complainant and without regard for the type of complaint (sexual harassment or not). Rather than dissect the notice requirements as Education and NASA do, Energy's report focused on "who knows what." In all, the reported analysis looks less precise than those conducted by Education and NASA. But Energy did go beyond the requirements specified by Education by briefly considering whether the procedures had been effectively disseminated to students, faculty and staff.²² In its second report, issued after the first round of NASA reports, Energy did analyze these requirements more thoroughly and noted an instance in which the institution had a reasonable procedure in place, but lacked specific timelines for completing certain aspects of the

process. In that case, one filed complaint remained unresolved by the time the student-complainant had left the institution. The institution's procedures did not define the parameters for a timely resolution of the complaint, and neither side followed up so that it dragged on until it became moot.²³

Beyond the Basics

STEM-focused reviews must go beyond the basic institutional requirements, however, and into the internal workings of specific programs or departments. From the reports reviewed, it appears that Energy and NASA discharged this task differently. Energy limited its review to the experiences of graduate students within the particular program,^{22,23} while NASA conducted broader reviews that encompassed the complete spectrum of activities that could impact students, from initial recruitment efforts all the way through the program, and included in its stated objectives not only assessing Title IX compliance, but also reporting on promising practices, including the extent to which such practices actually helped to increase the number of women in the institution's programs.^{13,17,18,19,20,21}

The Energy Reviews

Energy established as its goal the determination of whether students in the graduate program reviewed, regardless of their sex, had equal access to facilities, laboratories, research equipment, research opportunities, and programs and benefits offered by the University. Energy's first report contained a great deal of anecdotal information, and the results of conversations with individuals, but little data other than the gender composition of the cohort of graduate students and faculty. The department's second report did contain more actual data, but still skewed toward reliance on anecdotal reporting. Thus, although Energy found the institutions in compliance with the law, the lack of data and the overall content of the reports makes it difficult to determine the bases for these findings of compliance. It appears that Energy based its findings largely on the feelings, beliefs, perceptions and senses of individuals, rather than on any results of a comprehensive study of data that could validate a gender-equitable environment.

For example, one report indicates that department chair "stated that both the faculty and students have equal access to research equipment and facilities. He said also that student aid is equitably awarded among all students, and that there is no difference in compensation between male and female students." Yet, nowhere in the report does Energy state that it reviewed the graduate student compensation packages to verify the department chair's statement. Rather, the report appears to rely on the observation of the chair to support Energy's finding of Title IX compliance. On the other hand, NASA explicitly stated that it reviewed compensation packages to verify compliance.

In response to a specific issue raised during interviews at one institution, Energy did look at qualifying exam pass rate differences between male and female graduate students. But although the data showed that, for a five-year period, 10 of 74 men and 10 of 39 women failed the exam, Energy's report simply says that "[t]he data reviewed does [sic] not indicate a disparity in the pass rate between male and female students." It is difficult to understand this conclusion on the basis

of the data presented, and implies that Energy perhaps relied on statements such as those offered by the department chair to the effect that he “believes that the current examination process is both equitable and impartial,” and “maintains that there is no gender bias in the questions.” Yet, the chair had no idea “as to whether and why male students perform better than [female students] on the examination.”²² In contrast, when NASA heard complaints from women that they routinely received less telescope time than male students, NASA reviewed the requests for time and the log book that recorded actual usage and used that data to evaluate whether women and men had equitable access to the resource.²¹

The NASA Reviews

NASA’s web site indicates that, in the absence of a complaint, the agency selects institutions to review on the basis of “neutral selection criteria.”¹³ Conversations with staff members in NASA’s Office of Diversity and Equal Opportunity indicated that NASA has selected programs for review on the basis of the level of funding the program received from the agency. Thus, NASA’s reviews have so far focused on aerospace engineering and physics programs at large state universities. Not only did NASA’s reviews evaluate the programs for Title IX compliance, but also reported on promising practices for promoting gender equity.^{17,18,19,20,21}

NASA established as its goal a review of everything that could impact the student experience in a program. The agency reviewed a broad range of administrative functions and operational activities within the programs, including those specifically spelled out in the Title IX implementing regulations, as well as identifying promising practices to promote gender equity:²⁷ admissions, recruitment, outreach and retention; faculty advising and career counseling; research participation and classroom experiences; treatment of students and faculty on the basis of parental/marital status; safety policies; and sexual harassment policies.^{17,18,19,20,21} NASA’s reports make clear that the agency examined admissions statistics, retention statistics, data relevant to the utility of particular policies such as family leave, and more. Where NASA identified potential problems, such as the chilly or toxic climate in one physics department, it did take into account the opinions of individuals involved, but also directed the institution to address the issue in a manner that would allow for verification of compliance at some later date.

NASA has employed consistent methodology throughout all of its reviews, and has produced reports consistent in format. The methodology involved requests for statistical data and relevant policies and procedures, and on-site visits that included conversations with institution officials, students, faculty and staff, and a review of additional data as necessary. Prior to site visits, NASA conducted relevant literature reviews, which differed between the aerospace engineering field and the physics field. NASA’s reports then step through the results of each area of inquiry, and indicate the program’s compliance status, any recommendations or requirements for improvement, and any promising practices in that area.^{17,18,19,20,21}

Two common themes emerged from the set of NASA reviews. First, the self-assessments that institutions conducted in order to provide NASA with the requested data yielded a wealth of information. Although Title IX does not require such self-assessments, NASA recommended that the institutions periodically repeat the self-assessments and act on the information that the

assessments reveal. In particular, due to the small number of women in some programs, NASA found it difficult to determine whether a drop in enrollment one year mattered, or whether it was simply a statistical anomaly that resulted from a small change in a numerator over a small denominator, and indicated that longer-term trend data could help to smooth out potential data anomalies. Moreover, NASA pointed out that when an institution could not explain such changes, the institution needed to conduct a follow-up analysis. Second, NASA indicated a rather universal need for institutions to follow up on certain policies, procedures and practices to determine their effectiveness. For example, while several institutions had very generous family leave policies or good on-site daycare, the institutions could not confirm whether those policies had any effect on the recruitment or retention of women.

In the area of admissions, recruitment, outreach and retention, NASA looked at efforts directed toward recruiting undergraduate and graduate students. The agency praised aggressive recruitment outreach programs, but also encouraged these institutions to examine their effectiveness – in particular, surveying students who did not choose to come to the institution to find out why. For example, one program with a history of declining female student enrollment apparently recruited most of its participants from a conference that few women ever attend. Although using a conference as a recruiting opportunity could be a facially neutral practice, when that conference is known to have a disproportionately low number of women participating, that practice may have a discriminatory effect on enrollment. Thus, NASA recommended that the program broaden its recruitment efforts beyond that conference. In other instances, NASA noted that web sites and other promotional material did not appear to promote diversity because, for example, web sites contained photographs of only male students and/or faculty. The agency also examined admissions and financial aid for gender bias, and also looked for facially neutral policies and practices that could unintentionally contribute to an under-representation of women. In looking at retention, NASA praised “women in engineering” or “women in science and engineering” activities, and efforts supported by NSF ADVANCE grants, but again suggested surveying students who left the program to find out why and to evaluate the effectiveness of its women-focused efforts. And at one institution, NASA pointed out that the informal processes that led to some graduate students being selected as (less prestigious) teaching assistants versus (more prestigious) research assistants could be problematic, and suggested formalizing the process to provide transparency and clarity – and equal opportunity – to all students. And the agency praised one institution for tying some funding allocations to individual departments’ successes in recruiting and retaining a diverse population of students.^{17,18,19,20,21}

In the area of faculty advising and career counseling, NASA praised institutions for their openness in the advising and counseling processes. The agency noted particular strengths at institutions that allowed students to change advisers at the students’ request.^{17,18,19,20,21}

In the area of research participation and classroom experiences, NASA examined whether students were treated differently or otherwise limited in program participation on the basis of gender, and assessed the overall learning environment. The agency praised practices that allowed students to select their own project teams, along with practices that paid attention to whether women were isolated on teams or respected in leadership roles. Reviewers heard concerns about classroom examples or research equipment more geared toward men, such as heavy equipment

that many women couldn't move without assistance, and made recommendations to be more inclusive in designing research and classroom experiences. They made note of toxic personalities that contributed to chilly climates within certain programs or in certain subsets of those programs. They also heard at least one serious example of gender-based discrimination toward a professor that severely impacted the opportunities for female students in the department and, consequently, required the institution involved to investigate thoroughly and take necessary corrective action.^{17,18,19,20,21}

NASA grouped together its analyses of family-friendly policies, sexual harassment and safety, thus analyzing in a broad way the ancillary, but no less important, factors that can impact the success of women within the educational environment. While praising generous and available family-leave policies and on-site daycare, NASA also noted that most of the institutions that provide such policies and services have done no follow-up to assess the success of those efforts in attracting and retaining female students. It is interesting to note that NASA's discussions of sexual harassment often involved students describing incidents of misconduct of varying degrees and then self-assessing those incidents as "no big deal." And while NASA commended institutions that had an openness that allowed students to bring concerns about harassing behavior to faculty or administrators, nowhere did the agency comment on the need for some central repository of such incidents so that the institution could monitor for patterns of discriminatory behavior. Finally, NASA's assessment of campus security actually provided some interesting insights into practices that could help female students feel safer working in remote labs at odd hours: not only the typical "safe walk" or "safe ride" procedures, keyless entry systems and security cameras, but also other new ideas such as allowing graduate students to park closer to buildings late at night.^{17,18,19,20,21}

In all, NASA clearly took its compliance review responsibilities quite seriously, and conducted appropriate, thorough reviews. The agency examined the programs broadly, understanding – in a way that the Energy reviews seem not to demonstrate – that the student experience is influenced by more than just what occurs when the students are in the classroom or lab. Rather, student experiences are influenced at the recruitment stage and throughout the time the student spends at the institution. Their experiences are also influenced by what happens in the classroom or lab, and by the overall climate of the institution as evidenced by how students and faculty treat one another and by how the institution cares for the needs of its students and faculty. Reading the reviews chronologically, it also becomes clear that experiences in the first couple of reviews informed the conduct of subsequent reviews.

The "promising practices" that NASA highlights throughout its reviews, taken together, read like a catalog of the best practices implemented by NSF ADVANCE institutions and many programs that focus on women in science and engineering. Each institution implemented different types of activities, but the institutions that received the best reviews from NASA – defined here as those with the fewest and mildest recommendations for change – implemented some significant complement of activities directed toward recruiting and retaining women and clearly took seriously the responsibility to include women students and faculty in the program. NASA support for these efforts should bolster support for such efforts nationwide, especially in light of state legislation and referenda that may cast doubt on the ability of educational institutions to focus any

efforts on women alone.

Throughout these reports, however, NASA pointed out how institutions tend not to self-assess the success of positive efforts or self-examine the causes for negative trends. Thus, the agency consistently recommended that the programs gather the relevant data and use that information to make necessary changes. NASA also consistently recommended that institutions engage in an ongoing effort to collect and analyze the data gathered in support of the compliance reviews, to help to identify trends that targeted additional efforts might address, primarily in regard to the retention of female students and the overall experience of female students in the program.

Finally, NASA has consistently recommended that the reviewed programs broadly disseminate information about their reviews. Internal constituencies like the faculty, staff and students of the reviewed program – and also other science and engineering programs at the same institution – could gain a greater understanding and awareness of promising practices and areas for improvement.

Conclusion

Uninformed commentators insist that “Title IX compliance reviews haven’t had much visible impact on campuses beyond inspiring a few complaints from faculty members.”³ Others “fear that the process could lead to a quota system that could seriously hurt scientific research and do more harm than good for women.”³ Some liken Title IX enforcement to a form of punishment.² Still others have complained that Title IX investigators need to “talk directly to graduate students and postdocs in the sciences, mathematics, and engineering to find out what discrimination looks like.”⁴ A careful reading of the relevant reviews, however, should address these complaints and proves the ultimate utility of these reviews.

Each of the NASA Title IX compliance reviews presents a comprehensive picture of the efforts individual institutions have made to improve the participation – measured both quantitatively and qualitatively – of women in their programs. The reviews assess compliance with the law against the suite of relevant regulations, provide recommendations for change where appropriate, and present promising practices where they exist. Although NASA found all five programs in compliance with Title IX, it cited one program as “a model” for other programs, praised innovations in specific areas on one campus, made note of some minor concerns in two programs, and had some serious issues with the fifth program. The information captured in the reports should prove instructive to the institutions involved – and to others engaged in the same or similar efforts.

Both of the Energy Title IX compliance reviews also found the institutions in compliance with Title IX, and neither identified any critical areas of concern. However, those reviews were much more constrained in scope than the NASA reviews, which limited the potential areas of concern. Moreover, Energy’s reliance on anecdotal observations rather than objective evidence makes these reviews look weaker than the NASA reviews and, consequently, possibly of less utility to other institutions.

Did Title IX reviewers talk to graduate students and postdocs “to find out what discrimination looks like?”⁴ Yes. The reports make clear that a number of individuals participated in interviews. Yet the reports also make clear that the individuals interviewed view discrimination in a variety of ways. While individuals at many of the institutions involved noted that some level of discriminatory conduct occurred, some felt that it was “no big deal.” Others described the ways in which they managed the problem, which included confronting people directly, enlisting friends or faculty members to help deal with the problem, and filing complaints where necessary. And although some indicated that they did not know what to do if they felt they needed to file a complaint, many were confident they could find out if they felt the need. Thus, the reports do indicate that the Title IX reviewers know what discrimination looks like. The reports also acknowledge a number of legitimate ways to deal with discrimination when it occurs, depending on the type and severity of the misconduct. If anything, the reports do indicate a need on the part of the institution to make sure that faculty and students know what discrimination looks like and arm them with the information they need to address issues that lead to inequitable treatment of women.

Will the Title IX reviews “lead to a quota system that could seriously hurt scientific research and do more harm than good for women?”³ No. None of the reports mentioned quotas at all. To the extent that the reports noted the gender split in the student body and among the faculty, the reports primarily looked for trends that could indicate either the success of efforts institutions to attract more women or the need for more attention in the areas of recruitment, retention and equitable participation in programs and activities. The reviewers expressed concern that the institutions needed to know and understand what was occurring in terms of enrolling and hiring women. But nowhere did the reviewers raise any issue of whether an institution was meeting particular goals or targets or quotas. Thankfully, then, they will not “do for science and engineering what they have done for athletics,”¹ and will not create systems that will force institutions to enroll fewer men to achieve an artificial gender balance if they cannot enroll more women.

Is a “punitive measure”² to review a program that receives federal – that is, taxpayer – funds to ensure that the institution is satisfying the agreement it entered into with the government when it accepted the funds? No. These reviews actually operate like the data-gathering exercises done in preparation for accreditation visits – not like some medieval inquisition. Certainly, these reviews are not easy. They require effort on the part of the institution. Data must be gathered and people must expend time that they might otherwise spend teaching, learning and researching. But at least one dean has commented that the review, although a challenge in some respects, ratified the utility of the good things the program did for its students while also pointing out some areas in which he agreed that the institution could do better.

But it is true that “Title IX compliance reviews haven’t had much visible impact on campuses.”³ This does not mean, however, that the reviews haven’t had impact. NASA has recently summarized its findings on its web site.¹³ But other than that, neither of the federal agencies nor any of the institutions involved has disseminated the results, so the effects of these reviews likely will be limited to changes within the institution or even just the specific program itself, and the goals of the reviews may be misunderstood. Thus, if the institutions involved have seriously

embraced the results of these reviews and have made progress toward remedying any identified problems, they should present those results to their peers and raise the level of awareness throughout the STEM community of just what it takes to comply with this important law and create academic climates that foster success for women.

The set of Title IX reviews completed thus far can prove instructive in improving the climate for women in STEM programs. The reviews take the law and implementing regulations and demonstrate what they mean in the practice of the academy. The NASA reviews, in particular, dissect the various aspects of program operation and evaluate them against not only the language of the regulations, but also against the broader theme of gender equity embodied in the statute. The reports prove instructive to institutions looking to self-assess and identify strengths and weaknesses regarding the experiences of women in their programs. But until those involved speak openly about the process and the outcomes, these reviews will have only limited impact and continue to generate controversy.

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22. U.S. Department of Energy, Office of Civil Rights and Diversity, *Compliance Report: Columbia University - Graduate Physics Program* (September 2007).

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24. Code of Federal Regulations, volume 34, § 106.8.

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26. U.S. Department of Education, Office of Civil Rights, Letter and Resolution Agreement, OCR Ref. No. 07056003 (March 2006).

27. Code of Federal Regulations, volume 34, §§ 106.21-34, 106.36-40, 106.510-57.

What that really means: "Good morning, I'm going to need everybody to sit down and get to work. I swear if you come in like you did yesterday I'm going to lose my mind. Don't talk to me before I've had this coffee and no I don't want to hear about the cops getting called last night" wait, yes I do. 2. Repeat after me "The Federal Arbitration Act governs the interpretation and enforcement of this Arbitration Agreement. Prohibition of Class and Representative Actions and Non-Individualized Relief. You and bored teachers agree that each of us may bring claims against the other only on an individual basis and not as a plaintiff or class member in any purported class or representative action or proceeding. Both federal and local government struggled to enforce Prohibition over the course of the 1920s. Enforcement was initially assigned to the Internal Revenue Service (IRS), and was later transferred to the Justice Department and the Bureau of Prohibition, or Prohibition Bureau. In general, Prohibition was enforced much more strongly in areas where the population was sympathetic to the legislation "mainly rural areas and small towns" and much more loosely in urban areas.

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