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### **Title IX Includes Maternal Discrimination**

By Mary Ann Mason

Barack Obama, in the month before his election, promised an audience of members of the Association for Women in Science and the Society of Women Engineers that he would do more to enforce Title IX, which prevents sexual discrimination in educational programs and activities receiving federal funds. He also vowed to significantly increase the number of women in science and technology.

On the 37th anniversary of Title IX, the Obama administration recommitted to women's advancement in the sciences when Secretary of Education Arne Duncan and Valerie Jarrett, a White House senior adviser, issued a statement that said the law was integral "to encourage women to pursue their aspirations in fields in which they have been historically underrepresented, such as science and technology."

President Obama should be aware that Title IX does not just cover blatant gender discrimination—such as a bias that women are not as competent as men in science or math. It also protects women against sex discrimination on the basis of marital, parental, or family status, and on the basis of pregnancy. Those provisions come into play over the issue of retaining female scientists in science, technology, engineering, and mathematics, the STEM fields.

Our research group at the University of California at Berkeley this month [published](#) a major [report](#), "Staying Competitive: Patching America's Leaky Pipeline in the Sciences." Our conclusions were based on four years of original research, including a study of work-life policies at all of the institutions in the Association of American Universities and at 13 federal grant agencies.

Where is the biggest leak? It's at the point at which women who have received their Ph.D.'s or are working as postdoctoral scholars are making the critical decision of whether to continue their careers in academic research. Too many of them are deciding not to, primarily because of their interest in starting a family.

Our study found that married female scientists with young children who have received their Ph.D.'s are 35 percent less likely to enter a tenure-track position than are married men with children. We found little difference between single childless women and married men with young children in terms of their likelihood to enter the tenure track. A similar pipeline leak

occurs at the point of granting tenure: Married women with young children are 27 percent less likely, on a yearly basis, to earn tenure than are married men with young children.

Job candidates in the sciences who are pregnant or have children may face very real gender discrimination. Some scientists may believe that women who have families cannot be serious scholars, because academic science demands exclusive attention to research.

Women in science and math learn that bias early on. When I was dean of the graduate division at Berkeley, my research team and I studied thousands of graduate students and faculty members to learn more about the effects of family formation on the careers of doctoral students. Our project, "Do Babies Matter?," traced the academic careers of men and women from their doctoral years to retirement. We found firm evidence that a lack of family-friendly policies and a lack of support for academic parents on the part of senior professors turn away both men and women—but far more often women—from careers in academic research.

It bears repeating: Unfriendly family policies—not lack of interest or commitment—are what turn many women away from academic science.

Title IX protects against unfriendly family policies. It makes clear that "a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, and recovery therefrom as a justification for a leave of absence without pay for a reasonable period of time, at the conclusion of which the employee shall be reinstated to the status which she held when the leave began or to a comparable position, without decrease in rate of compensation or loss of promotional opportunities, or any other right or privilege of employment."

But it's possible that those legal requirements are not being met at all universities. In our study of AAU institutions—the 62 pre-eminent research universities that receive the bulk of federal science money—we found that 43 percent provided either no leave policies for graduate-student mothers or very limited, ad hoc policies. Only 13 percent offered a baseline of at least six weeks of guaranteed paid leave. For postdoctoral fellows, 15 percent of universities offered no leave or had very limited policies, while a mere 23 percent provided at least six weeks of guaranteed paid leave. Few of those young scientists are eligible for the job-protected 12-week leave provided under the Family Medical Leave Act.

Faculty mothers fared much better, with 58 percent of institutions providing a baseline paid leave, but by this time many women have already decided against careers in scientific research.

Our inadequate benefits policies for doctoral students and postdocs make no economic sense. In the world of federal grants, people who drop out of science after years of training represent a huge economic loss and are a detriment to our nation's future excellence. Given the Obama administration's interest in maintaining America's competitive advantage, federal stimulus efforts and money should be focused on retaining our highly skilled female scientists.

Our report recommends that colleges and universities:

- Promote clear, well-communicated, family-responsive policies for all classes of researchers. Researchers in the United States do not receive nearly enough family-

friendly benefits, particularly junior researchers. Together, federal agencies and universities can make headway in solving this systemic problem.

- Federal agencies—particularly the National Institutes of Health and the National Science Foundation—along with the American Association for the Advancement of Science, which oversees federally supported research fellows for many agencies, can help by setting equitable, clearly communicated baseline policies for those fellows. At the same time, universities need to adopt supportive policies for all classes of researchers, not just faculty members. Graduate-student researchers and postdoctoral scholars receive the most limited benefits and are arguably the most important people affecting the future of U.S. science.
- Supplement benefits for academic parents with additional money provided by federal agencies or universities. Without those supplements, faculty members who are principal investigators—those with primary responsibility for the design, execution, and management of a research project—will continue to bear the brunt of supporting family-related absences using their own research dollars. That is unfair to the principal investigators and may create a situation in which they will find it to their advantage to avoid hiring young researchers who might eventually need family-friendly policies, an unintended form of discrimination against women. To avoid that structural difficulty, supplementary financing needs to be provided when researchers paid via grants take necessary leaves.
- Work collaboratively to build a family-friendly package of policies and resources. Sharing and wide-scale adoption of proven practices are necessary.
- Rid the academic career of its lock-step timing and rigid sequential deadlines. Time limits and barriers to entry—such as requiring a postdoctoral position to begin within a certain number of years following receipt of the Ph.D.—should be removed. Universities and federal agencies need to examine all of their policies and look for ways to encourage re-entry into the pipeline for academic researchers who take time off for giving birth or caring for children. Institutions must promote a more holistic concept of career patterns that honor individual needs.
- Collect and analyze the necessary data to make sure family-friendly policies and programs are effective. Decisions about family-responsive policies, programs, and benefits will continue to be made on intuition and anecdote if they are not tracked by systematic longitudinal data. Federal agencies and universities need to build and maintain the necessary data sets to assess whether their efforts are yielding positive results and whether Title IX requirements are being met. Title IX-compliance reviews should include questions on family-responsive policies.

Subtle maternal or caregiving discrimination is difficult to prove, but concrete measures at both the student and faculty levels would go far toward reducing the unnecessary loss of female Ph.D.'s in academic science. The changes our report suggests would help to stop the female brain drain and would satisfy both the letter and the spirit of Title IX.

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