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National Academies Report on Sexual Harassment and the Role of Organizations

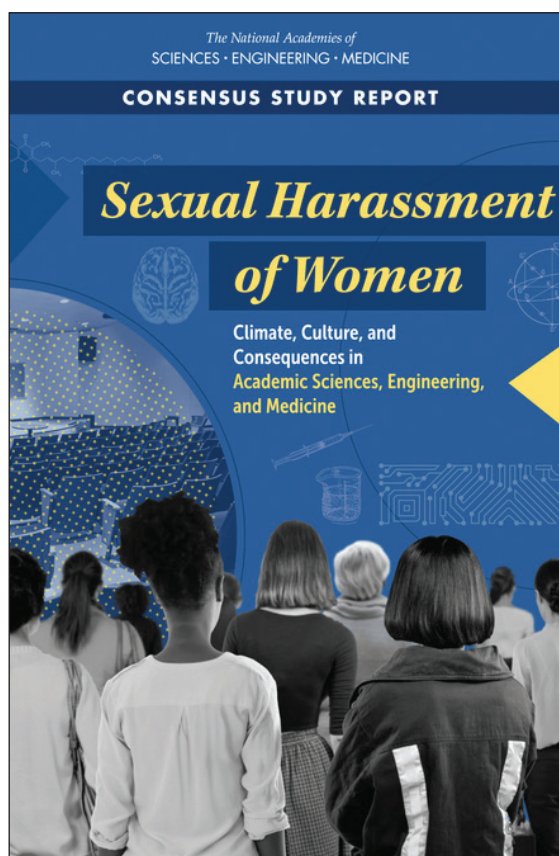
Roxanne Hughes, Ph.D., Director of the Center for Integrating Research and Learning at the National High Magnetic Field Laboratory

In July of 2018, the National Academies of Science, Engineering, and Medicine published an extensive report on sexual harassment in their respective disciplines.¹ They identified three types of harassment that include: sexual coercion, unwanted sexual attention, and gender harassment. Of these, gender harassment is the most prolific in all fields. The academic workplace has the second highest incident rate of gender harassment (58%), second only to the U.S. military at 69%. Although some might argue that gender harassment is not as serious as the other forms of harassment, the Report concludes that due to the high number of times women experience it, it can have just as disastrous of consequences for women and the SEM fields. The outcomes of sexual harassment include: decline in job satisfaction; withdrawal from the organization (not quitting but still distancing themselves from work or thinking about leaving); decline in organizational commitment (feeling angry at the organization); increase in job stress; decline in productivity of performance. For students the outcomes include: decline in motivation to attend classes; increased truancy; dropping classes; receiving lower grades; changing advisors; changing majors; transferring to another institution; and dropping out.

The Report concludes that current policies and programs aimed to stop sexual harassment are based on symbolic compliance and avoidance of litigation, not prevention, explaining: *The most potent predictor of sexual harassment is organizational climate – the degree to which those in the organization perceive that sexual harassment is or is not tolerated* (p. x). To change the culture and climate of SEM departments, the authors recommend:

1. Create environments that are diverse, inclusive, and respectful;

¹ National Academies of Sciences, Engineering, and Medicine. 2018. *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*. Washington, DC: The National Academies Press. doi: <https://doi.org/10.17226/24994>.



2. Diffuse the power structure and reduce isolation for women and other marginalized members;
3. Support targets of sexual harassment and give them options for addressing the sexual harassment;
4. Demonstrate that sexually harassing behavior is unacceptable;
5. Hold those who engage in sexually harassing behavior accountable.

The Report also calls for action from professional societies and funding agencies, and many of these have

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Going from Responding to Preventing

Patricia Rankin, Professor of Physics University of Colorado Boulder

The past few years have shown that gender harassment in the sciences and engineering is a pervasive problem. Slowly but surely, we are developing clearer policies, becoming more effective at responding to complaints, and shifting attitudes about what is acceptable. Over my career as a woman physicist, I have seen a lot of progress. I attended an all women high school, so when I saw how few women there were in my undergraduate physics classes I was very much surprised. At this point, physics was focused on promoting equity by increasing access and consideration of female applicants. As a post doc and assistant professor, the attention was on diversity and ways to change the demographics of the field. Many programs of this era tried to address perceived deficiencies in the women candidates by providing access to leadership development and negotiation workshops. Nowadays though, I am seeing an encouraging shift in attention towards how to promote inclusion. A significant part of this work is spreading the understanding that it is not the women or members of other underrepresented groups who need to change or to learn additional skills to get by in our field, it's the structure of the field that needs adjusting. It's everyone's job to make physics inclusive – and the Committee on the Status of Women (CSWP) recently updated our vision statement and operating guidelines to reflect this shift in perspective coming based on research into how best to encourage people to pursue careers in physics.

It is important to note that the sexual harassment stories that are making the news represent only the tip of the iceberg when it comes to the actions that drive people out of physics. We have a lot of work to do to open up the field so that anyone with the talent to succeed in physics feels welcomed into the field. We all need to become more aware of how our underlying assumptions can affect our assessments of individuals

and of how an individual's experiences can influence the reception of a comment. It has taken our field some time to get there – but I want to highlight a couple of efforts that are currently in process that promise to improve the rate of progress.

First, a subcommittee of the APS panel on Public Affairs has been working to develop a new and comprehensive APS statement that covers the expectations for professional behaviors under one umbrella. We as members of APS have a collective obligation to operate in ways consistent with all of our values and the standards of our field. Sometimes it appears that we want to separate the value of a physicist's work from how they behave in their personal life. The new statement clarifies that for example, it is as unethical to mistreat a subordinate, as it is to falsify data. It talks about the need to work against bias in hiring so that we select the best-qualified candidates. Sometimes I have discussions with people along the lines of how we should separate the value of a physicist's work from how they behave in their personal life. The problem is – how do we deal with the fact women students can be advised not to work with certain individuals because those individuals will not treat them with respect? In some cases, the individual is in a position to harass a student because of their scientific reputation. So, it is reasonable that how someone behaves towards women reflects on that person's professional standing in the field.

Secondly, The National Academies of Science, Engineering and Medicine have created a committee to look at effective institutional practices to promote the inclusion of women and physics will be one of the committee's focus disciplines. This committee aims to have a draft report by the end of 2019 and to make a series of research driven recommendations. Stay tuned! ■



The 2018 APS Committee on the Status of Women in Physics from left to right: Maria Rodriguez, Miriam Deutsch, Ted Hodapp, Arati Dasgupta, Laura McCullough, Jenna Walrath, Kristen Burston, Patricia Rankin, Roxanne Hughes

Student Evaluations of Teaching are Biased against Women and Underrepresented Minority professors: Why then are we still using them?

Miriam Deutsch, Incoming CSWP Chair, Professor of Physics at University of Oregon

“Hey mom, did you know you have chili peppers on RateMyProfessors.com?” This came seven years ago from my daughter, a college freshman at the time. I didn’t know; I was not in the habit of checking my ratings on the site. For those who might not know, Rate My Professors is a teacher-rating website where college students can enter evaluations for their instructors, rating attributes such as overall quality and level of difficulty. While the efficacy of the evaluation questions used by the site is debatable, there was never much disagreement over one particular metric – the “hotness” rating of an instructor, denoted by chili pepper emojis. Professors have long criticized the site for using this irrelevant rating metric, noting it is at minimum demeaning to female professors, if not outright harmful to their careers. To the site’s credit, RateMyProfessors.com has recently done away with the hotness rating and chili peppers, following a social media campaign launched by Assistant Professor of Neurology BethAnn McLaughlin, from Vanderbilt University.¹

Universities across the United States employ their own versions of student evaluations of teaching (SETs) as part of their assessment of professors’ teaching, most often for the purpose of promotion or tenure decisions. The typical SET consists of a list of questions that seek to evaluate the quality of the course taught and the instructor, rating both on a numerical scale, by asking only straightforward, relevant questions such as “What was the quality of the instructor’s teaching?” and “What was the instructor’s mastery of the subject?” However, as a growing number of studies indicate, SETs are consistently biased against female instructors, as well as instructors with speech accents or of perceived non-white races. A recent study examining gender-bias in SETs found that when rated on a scale of 1-5 as many SETs do, men receive ratings that are on average 0.4 points higher than women.² The study goes as far as to suggest that the use of SETs in decisions pertaining to tenure, promotion or compensation constitutes gender discrimina-

tion in the workplace.

We are now finally beginning to witness the impact of these published studies. Universities across the United States are becoming aware of the shortcomings of SETs in their current form, which fails to measure actual teaching effectiveness. This should come as no surprise, as students are not experts on teaching and pedagogy. When properly designed, student evaluations may be used to assess their perceptions of the learning experience – providing information that is valuable, yet markedly different from what a professional teaching evaluation should elicit. Many U.S. universities, including the University of Southern California,³ the University of Oregon and the University of Colorado Boulder are therefore examining and revising their approaches to evaluating teaching. In Canada, in what is likely a precedent-setting ruling, an arbitrator has recently directed Ryerson University to end its use of student evaluations of teaching as a measure of teaching effectiveness for tenure or promotion decisions.⁴

In the coming year, the APS Committee on the Status of Women in Physics (CSWP) will be reviewing the available data and studies of bias in SETs. Based on current knowledge and expert recommendations, we anticipate formulating a statement for the APS, to help steer the Physics community nationwide towards a more effective and unbiased evaluation of academic teaching. ■

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- ¹ www.insidehighered.com/news/2018/07/02/rate-my-professors-ditches-its-chili-pepper-hotness-quotient
- ² K.M.W. Mitchell and J. Martin, *Gender Bias in Student Evaluations*, PS: Political Science & Politics 51, 648 (2018)
- ³ www.insidehighered.com/news/2018/05/22/most-institutions-say-they-value-teaching-how-they-assess-it-tells-different-story
- ⁴ www.insidehighered.com/quicktakes/2018/08/31/arbitrating-use-student-evaluations-teaching



Miriam Deutsch

AAAS Revocation Policy

*Professor Laura H Greene, Chief Scientist, National High Magnetic Field Laboratory
Past-President, American Physical Society*



Laura H. Greene

On September 15, 2018, the Governing Council of the American Association for the Advancement of Science (AAAS), the world's largest, multidisciplinary scientific society, adopted a policy for revocation of AAAS Fellowship; which was previously a lifetime honor. This pivotal policy, adopted on October 15, is a significant step forward, providing specific guidance on how membership societies can aid in supporting, and enforcing, ethical behavior among its members.

The actual policy paper, elucidating FAQs, and the revocation request can be found at <https://www.aaas.org/programs/fellows/revocation-process>; and any questions can be directed to fellowinquiry@aaas.org.

To briefly summarize, the procedure begins with a formal request for revocation that must include a credible, previously adjudicated Investigative Report that includes detailed information about sources used. This request must be submitted within four years of the conclusion of the Investigative Report (the four year statute of limitations is waived for the first two years of enactment of this policy). In accordance with standard procedures for misconduct accusations, the AAAS Executive Office will first conduct a preliminary review to determine if there are grounds for further review; and if so, a report is given to the AAAS Committee on Council Affairs (CCA). The CCA may dismiss, or proceed by appointing a Revocation Panel of four current CCA or Council members to rule on the request. If the CCA decides to proceed, the Fellow and the Steering Group of the AAAS section that originally voted for the Fellow will be notified of the request, with details of the reports provided. The Fellow is given a timeline from the CCA, he/she may choose to resign their Fellowship status, or may respond in writing or orally to

the Panel. After the deadline, a vote for revocation of at least three of the four on the Revocation Panel is required for this motion to pass. Appeal is only possible after revocation if significant new evidence arises. All information is kept confidential during this entire process, until AAAS reaches a conclusion.

Traditional scientific misconduct (e.g. fabrication of data, misuse of public funds) is certainly grounds for initiating this procedure, but now harassment and sexual misconduct are included as serious scientific misconduct breaches. The American Geophysical Union (AGU) has played a leadership role in broadening its ethics policy to include these breaches. APS has done the same: a draft of our POPA Ethics Subcommittee Report has gone out for general membership comment and is being edited accordingly. Just recently, APS Council approved forming a Standing Ethics Committee (EC), which will include representatives from the CSWP, the Committee on Scientific Publications (CSP), the Committee on Minorities (COM), and the Committee on Education (COE). A responsibility of the EC is to develop procedures to deal with ethics violations by our members.

A great deal of thought, time, and expertise has gone into forming this new AAAS policy. Being on the AAAS Board, and hence Council, I was at the September 15 meeting that voted this policy into effect. It was quite a long meeting with much debate as we reviewed all questions raised by our membership, including whether the policy was strong enough. But by the end of the day, we all agreed that this policy defines key first steps in helping all membership societies take a proactive role in helping our scientific community reach the highest ethical standards. The vote was unanimous. ■



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already responded. The National Science Foundation has released a new policy that requires them to be notified of any findings or determinations of harassment by individuals serving as principal (and co-) investigators on NSF grants.² In this edition of the Gazette we have articles from representatives of other science organizations. First, Laura Greene, Past President of the APS describes the American Association for The Advancement of Science (AAAS) revocation policy which was approved in September of 2018 wherein individuals can bring evidence based reports of misconduct (including sexual harassment) and ethics to an AAAS committee.³ Professor Patricia Rankin, Chair of the APS Committee on the Status of Women in Physics describes the updated APS statement of professional behavior and expectations that includes sexual harassment as a violation of professional be-

² www.nsf.gov/od/odi/harassment.jsp

³ www.aaas.org/news/aaas-approves-policy-revoke-elected-fellows-misconduct-or-ethics-breach

havior.⁴ These changes highlight the commitment of many organizations to change the culture of SEM fields, including physics.

There is still more work to be done as two of our Gazette contributors highlight. Dr. Miriam Deutsch, 2019 Chair of the APS Committee on the Status of Women in Physics, summarizes the discrimination resulting from policies that rely on student evaluations of faculty for both women and underrepresented minorities. And Dr. Kerstin Nordstrom describes the discrimination faced by members of the LGBTQ+ population within physics and provides some effective practices for ending these forms of discrimination. The Committee on the Status of Women in Physics is committed to advocating for change in the culture of physics to support all of our members and make our science stronger. ■

⁴ www.aps.org/policy/statements/88_1.cfm

Harassment Experiences of LGBTQ+ Physicists (And What To Do About It)

Kerstin Nordstrom, Clare Booth Luce Assistant Professor of Physics, Mount Holyoke College

“Atoms have no gender,” is an argument that is sometimes made in physics. The implication is that physics is a pure discipline and a pure meritocracy. Everyone gets by on their own merits, and everyone is treated equally.

This is categorically untrue. Physicists are people, and thus the physics community mirrors issues prevalent in society at large. With regards to harassment experienced by LGBTQ+ physicists, the data and stories bear this out. As an example, since 2010, the LGBT CERN group has had its posters taken down or defaced, occasionally with slurs such as “schwein,” German for pig.¹

In 2015, the APS Ad-Hoc Committee on LGBT Issues issued a climate survey to determine the LGBTQ+ experience, the results were published in 2016 on the APS website.² The survey found that about 20% of LGBTQ+ physicists had experienced some form of harassment in the last year at school or work. The rates of harassment varied depending on subgroup, for instance gay women were harassed at a rate (31%) 3 times the rate of gay men (11%), suggesting those at the intersection of underrepresented groups are exceedingly vulnerable. Additionally, about half of trans individuals experienced harassment. This is unacceptable in any work environment, especially one in which we hold ourselves to such high professional standards.

The stereotype of harassment in academia typi-

cally involves a male professor and female student he holds power over. While this does occur, this is a subset of the variety of harassment people experience. Incidents may take the form of macroaggressions, such as stalking, violence, or sexual assault. Microaggressions are also prevalent, such as inappropriate comments or jokes. Some experiences fall in between these extremes. In physics, the data suggest that peer-to-peer harassment at the graduate level is a big component of the problem.³ Professors teaching these students in class and mentoring students in the lab have little to no direct daily supervision of these trainees, who have extended contact with each other. Additionally, supervising professors may prefer to ignore such issues, and may have little to no training on how to deal with these issues when they arise. People who experience microaggressions may be conditioned to explain away their experience of them. “In graduate school, I had a friend who joked multiple times, if he weren’t married and I weren’t a lesbian we’d be together. At the time, I laughed but at the same time felt uneasy, and blamed my own insecurities. It was only in retrospect I realized those comments really crossed a line, and he crossed it multiple times,” according to one physicist interviewed for this article.

Ethically, we cannot just wait for society to



Kerstin Nordstrom

evolve and dissolve these problems. These are real people with real problems now, often caused by other members of the physics community. The solution must involve multiple scales of action. As an individual, one must always strive to be an ally. Being an ally does not just mean being “on their side.” It means taking uncomfortable action, such as calling out jokes and comments as inappropriate. These corrections can hold special power if issued by people who are NOT members of the marginalized group. For instance, if a gay joke is called out by a gay man, the offender may dismiss the comments, using language such as “don’t take it personally.”

In leadership roles, strong and vocal statements of inclusive values go a long way, both as consistent messaging as well as in reaction to incidents. LGBTQ+ physicists are more likely to feel isolated at work, often due to varying stages of being out at work. Normalizing queer experiences (e.g. inviting plus ones/partners rather than husbands/wives to a holiday party) can help send the message of inclusion. Reducing isolation can come from the grassroots, too. Many schools and organizations now have specific LGBTQ+ groups or more general Diversity, Equity, and Inclusion groups,

and those in leadership should support those groups. Lastly, those in leadership should consider more formal options to reduce isolation, such as appointing one or multiple ombudspersons, clearly communicating incident reporting procedures, offering effective training to PIs, and making counseling services accessible or advertised. Ombudspersons do not need to exclusively be at the top level. For instance, PIs can appoint a lab ombudsperson, and just the act of doing so can send an effective message to the group that they care.

In conclusion, while the profession of physics is still fundamentally structured on the model of a man with a stay at home wife, or a single graduate student with no outside life, this is simply not the case for many practicing physicists today. Work and life are no longer completely separate domains, and issues from one impact the other. We as a community need to change with the times. ■

References

¹ http://lgbtqcern.com/wordpress/?page_id=207

² <https://www.aps.org/programs/lgbt/>

³ <https://journals.aps.org/prper/abstract/10.1103/PhysRevPhysEducRes.12.020119>.

Wikipedia Edit-a-thon

APS is hosting a Wikipedia Edit-a-thon, focusing on women and minorities in STEM, in conjunction with the APS March Meeting 2019 in Boston. Join us on Sunday, March 3 at 6 p.m. to create Wikipedia pages about inspiring women and minority physicists. The event will begin with a talk by Jess Wade, a post-doctoral researcher from Imperial College, who over the last year has created and written more than 270 Wikipedia pages about women scientists. Refreshments will be provided.

Wikipedia is the fifth most popular website in the world, with more than 32 million views a day. Despite that, fewer than 18% of its English-language biographies are about women. The stats for minorities are no better. During the event, we’ll work together to add more biographies about women and minority scientists to Wikipedia. Sound fun? Please indicate your interest in attending (so we know how many people to expect), and we’ll follow up with details on how to register later.

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The American Physical Society maintains online lists of women and minority physicists who are willing to give colloquium or seminar talks to various audiences. These lists are wonderful resources for colleges, universities, and general audiences. The lists are searchable by state, fields of physics, or speakers' last names.

www.aps.org/programs/women/speakers/

www.aps.org/programs/minorities/speakers/

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