

AAS and the Under-recognition of Women for Awards and Prizes

A.B. Popejoy (Association for Women in Science) & Phoebe S. Leboy (Univ of Pennsylvania)

The American Astronomical Society (AAS) is one of many scientific disciplinary societies that awards prizes to an elite group of its members for excellence in research, service, and teaching. The winners of these awards are considered to be the most accomplished or contributory to the discipline, and they become leaders for peers and potential future investigators in the field. The recipients of *scholarly* awards (those the society deems to have made the most significant advances in the field) impact both the retention of researchers and the recruitment of future talent. For this reason and many others, it is important that demographics of award winners reflect the diversity of accomplished researchers in a field. The governing board of the AAS recognizes the importance of this issue, and are partnering with the Association for Women in Science on the AWARDS Project¹ to examine awards given by AAS and to develop best practices for enhancing fairness and equity in the selection process for scholarly recognition.

Looking at the history of awards presented by AAS in the last twenty years, there is a striking imbalance between the number of women who have won awards for research and the proportion of women in astronomy. Based on data collected by the American Institute of Physics (AIP) in 2006, roughly 11% of full professors in astronomy were women, and women represented 24% and 28% of associate and assistant professors, respectively. The proportion of women among PhD recipients 20-40 years ago (10%) is similar to the proportion of female full professors, identifying the same cohort of scientists who are most eligible for senior research awards. One would expect (assuming that women and men are equally capable of making discoveries) that the proportion of women among mid- to late-career scholarly award winners would reflect the 10% estimate of female senior astronomers, but the actual proportion of women awardees is strikingly low,

hovering around 3% (Fig.1). For the purpose of this study, we excluded women-only awards and early-career research awards to ensure a comparable analysis between the pool of eligible candidates and award winners. Looking only at AAS's senior research awards, 2 women in the last twenty years received an award out of 63 total; they were each presented the Russell Prize, but in different decades. This year, another woman was awarded the Russell Prize so that number increased to 3 women out of 66 total senior scholarly awardees since 1991.

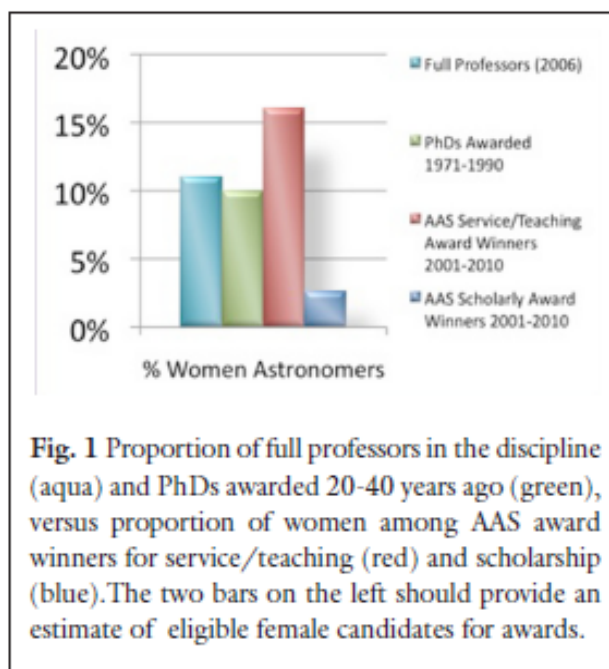


Fig. 1 Proportion of full professors in the discipline (aqua) and PhDs awarded 20-40 years ago (green), versus proportion of women among AAS award winners for service/teaching (red) and scholarship (blue). The two bars on the left should provide an estimate of eligible female candidates for awards.

In all societies examined, women were more likely to receive awards for teaching and service to the society than for scholarship, and in the major physical science societies, the proportion of men among scholarly award winners ranged from 94-98% (Fig.2). The discrepancy between proportions of women winning different types of awards, as well as the under-representation of women among senior scholarly award winners (based on the availability pool of eligible female researchers in the discipline) suggest the selection process for awards may be affected by

social stereotypes about men and women as scientists.

Psychology research suggests that implicit gender stereotypes held by both men and women lead us to associate men with careers and science, and women with nurturing and the humanities². This could lead society selection committees to unconsciously prefer male candidates for research and scholarly awards, while preferring women for service awards. We have explored this hypothesis by looking at the awards history of seven societies in math and science disciplines, and recently presented data on our findings to the governing board of

Percent Women Among Award Winners for Research and Service to Societies

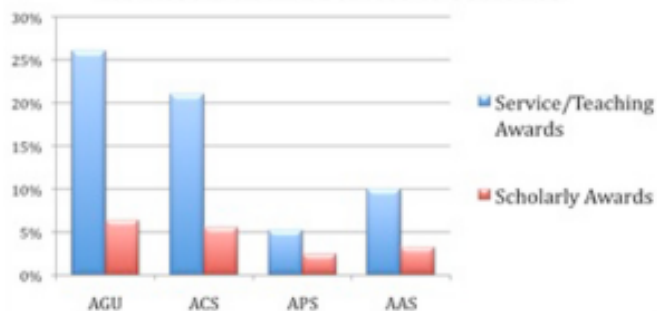


Fig. 2 Proportion of women among service/teaching and scholarly award winners in four disciplinary societies (from left to right: American Geophysical Union, American Chemical Society, American Physical Society, American Astronomical Society).

AAS. The trends in awards history are similar across the disciplines, and AAS has signed on as a newly participating society on the AWARDS Project.

As a result of this partnership, AWIS and the AWARDS Team will be presenting at the AAS national meeting in January, and is working with society leaders as well as the Committee on the Status of Women in Astronomy (CSWA) to develop strategies for maximizing objective decisions in the awards selection process. For more information, visit the AWIS website at <http://www.awis.org/displaycommon.cfm?an=1&subarticlenbr=397> or email popejoy@awis.org.

¹The Advancing Ways of Awarding Recognition in Disciplinary Societies (AWARDS) Project is a three-year grant to the Association for Women in Science (AWIS) from the National Science Foundation (NSF) to examine the status and recognition of women in scientific disciplinary societies.

²Carnes et al. (2005); Steinpreis, Anders & Ritzke (1999); Wenneras & Wold (1997); Greenwald & Benaji (1995)

Chambliss Student Achievement Award Winners

Through the generosity of AAS Member Carlson Chambliss, the AAS established the Astronomy Achievement Student Awards to recognize exemplary research by undergraduate and graduate students who present posters at the semi-annual AAS meetings. Awardees are honored with an engraved gold-plated bronze Chambliss medal and a certificate. Graduate and undergraduate posters are considered separately. Students with Honorable Mentions receive a certificate.

The AAS thanks all the students who participated in the 218th Meeting of the American Astronomical Society Chambliss Student Achievement Awards and who made the judges' job difficult indeed due to the high quality of the presentations. We also thank all the judges who volunteered their time and energy.

Graduate Student Medal Winners

Daniel Majaess
Kushal Mehta
William Dirienzo
Nicholas Stone

Undergraduate Student Medal Winners

James Hogg
Melissa Nickerson
Amanda Cordes
Sajjan Mehta
Thomas Rice

Graduate Honorable Mentions

Alfred Whitehead
James Davenport
Heather Bloemhard

Undergraduate Student Honorable Mentions

Kevin Hardegree-Ullman
Robert Marchwinski

High School Student Honorable Mentions

Adam Maxwell
Kyla Borders
Stella Kim