

ARE THE OPPORTUNITIES IN ASTRONOMY AND THE WORKING CONDITIONS DIFFERENT FOR WOMEN AND MEN?

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1. Introduction

As the oldest speaker at this Joint Discussion, my lifetime in astronomy spans a larger number of decades than the lives of most of us here, and consequently I have seen great changes in the opportunities, working conditions, status, and rewards for their work that are now available to women, in comparison with the situation as it was 50 years ago. Nevertheless, one has to admit that the answers to two of the questions we have been asked to address have to be a qualified *yes*: there is still a problem, and there is need for improvement.

The advances that we have seen, especially in the last 20 years, have been recognized throughout the worldwide community as being of immense benefit to astronomy. It is also recognized by the general public that the situation for women in astronomy is much different now from what it was in my early years.

For example, when giving popular talks on astronomy, and particularly when talking with interviewers, I find that the notion that a competent astronomer would be banned from using *any* telescope because of her gender is met, first almost with disbelief, then with shocked surprise that such a state of affairs was ever possible.

I have documented some of this in an autobiographical article (Burbidge 1994). When I was invited to write that article, I was especially asked to

describe how observational work, i.e. work at the telescope, has changed in the past half-century. In the course of this, I described the changes that have occurred specifically for women in the U.S. It is amusing to remember the lame excuses that were given for prohibiting women from using the Mt. Wilson telescopes; these usually ended with the muttered comment that there were no toilet facilities for women on the mountain!

Regarding the working conditions of women and men in astronomy, it takes only a glance at the programs of the symposia and other scientific affairs at this 22nd General Assembly of the IAU for one to realize that there is no difference concerning access to telescopes of all kinds. But there is definitely a difference in the resources available, both the financial resources and the organizational impact that women can have. As we have heard, this varies from country to country. In the US, it is a pleasure to acknowledge the sterling efforts and achievements of the American Astronomical Society and the Astronomical Society of the Pacific; as a consequence of these and also because of a long historical background, astronomy does better for women than do others fields in the physical sciences. One must remember, however, the unconscionable time it took for such a giant in her field as Cecilia Payne-Gaposchkin to receive the highest AAS award, the Russell lectureship (cf. Payne-Gaposchkin 1984).

What still needs attention? One problem seems to me to be pre-eminent: that is in the organization of affairs of importance to international astronomy and to astronomers worldwide. This is apparent if one looks at the membership of scientific organizing committees. The discrepancy between men and women in this activity is due mainly to ourselves. It takes dedication and hard work, first to generate ideas for timely, important, and exciting topics, then to recruit colleagues to plan the program and the speakers, and above all to exert leadership in the work necessary to get the proposal accepted by the IAU or by other sponsors, and to help generate the financial support necessary. We cannot complain of not being prominent in running these scientific affairs if we do not step out of the shadows and display leadership. The downside of this exhortation is that I expect most women must have had the same experience as I have had on many occasions, e.g. in faculty, committee, or panel meetings: one makes what one thinks is a fairly important point -- there is no response, some other remark is discussed, then one's point is *re-introduced* by a man and there is then instant attention paid to it!

I will end on a positive note: I was on the panel for judging applications for this year's prestigious Hubble Fellowships for young astronomers, and, of 11 awarded, 5 went to women and 6 to men. No attempt was made to equalize the numbers between genders; the awards were based on a step-by-step voting process, and the final selection was based only on the perceived

talents of the applicants and the promise demonstrated in the applications for their future achievements.

I have one final semi-serious comment which I made in the panel discussions, concerning whether a woman should take her husband's name if they both have careers in astronomy. One should perhaps also ask whether the man should offer his name to his wife; throughout most of our careers, research work by Geoffrey and myself that has received recognition was carried out together, with co-authored publications, but awards for this joint work have come to me and not to him!

2. Acknowledgement

This research has been supported by NASA through Grant No. NAG5-1630.

References

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Payne-Gaposchkin, C. 1984 (ed. K. Haramundanis, Cambridge U. Press)