

CSWP GAZETTE

A Newsletter of the Committee on the Status of Women
in Physics of the American Physical Society

April 1987

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This issue of the *Gazette* is edited by Frank McDonald.

***My Daughter Beatrice*—A CSWP BOOK PROJECT**

Beatrice Hill Tinsley (1941–1981) was a brilliant astrophysicist and professor of astronomy at Yale University. In her tragically brief career Prof. Tinsley revolutionized the study of the evolution of galaxies. She was famous among astronomers for her prodigious creativity, and also as a gracious friend and dedicated teacher, mentor, and colleague.

The publication of *My Daughter Beatrice* is a special project of the American Physical Society (APS) Committee on the Status of Women in Physics (CSWP), which works for the education and full participation of women in physics.

The book is a memoir of astronomer Beatrice Tinsley that began as a personal initiative of Mr. Edward Hill, Dr. Tinsley's father. Mr. Hill circulated photocopies of his typescript to a few of Dr. Tinsley's friends in astronomy and astrophysics in 1984. They in turn passed copies to their friends. Soon it was widely appreciated among astronomers, their families, and friends as an extraordinary record of a loving young woman's growth into an outstanding scientist, mentor, and teacher. The CSWP recommended that APS publish the book as part of their program to encourage young people, particularly women, to choose careers in physics and to help their families and teachers understand the preparation, struggles, and enormous satisfaction involved in such a choice.

The book was produced by the skilled staff of the APS and Publishing II Branch at the American Institute of Physics publication facility in Woodbury, New York. Special thanks are due to Darlene Carlin, Jim Donohue, Susan Foley, Georgina Guagenti, and Peggy Judd.

COMMENTS ON *My Daughter Beatrice* FROM TWO ASTROPHYSICISTS

In the sixth grade we started to learn what women were not supposed to do. Our Math and Science teacher, Mr. Woods, was one of only two male teachers in the entire elementary school. In junior high school and in high school, and certainly in college and in graduate school, the message became increasingly clear: mathematics, and the sciences were the province of men. Back in the sixth grade, girls were generally ahead of the boys, and so did not think to be discouraged, but subliminal messages delivered over a period of years have an impact and an authority that cannot be denied.

Beatrice Tinsley was one of the first women astronomers I ever heard of. Even the male physics majors were in awe of her, reports of her rapid progress through graduate school having impressed them. Although I knew very little about her, she was an icon, a contradiction to all the negative reinforcement. Thus it was with great interest that I picked up *My Daughter Beatrice* when it arrived in the mail a few weeks ago.

I began reading that morning and did not stop until I finished it that evening—it was fascinating. This woman was so talented, so productive, so unassuming and yet so completely awe-inspiring. I did not know whether to be encouraged by her example or daunted by the prospect of trying to emulate it. In the end, I was just glad for the privilege of seeing her through her father's eyes.

There are three ways in which Mr. Hill's memoir will be highly significant to young astrophysicists, especially women. One is simple and yet crucial: the illustration by example that women can excel in science. While everyone has doubts about their chosen path in life, women seem more plagued by doubt than men, partly because of the scarcity of role models. The second point is more subtle. Inevitably each of us must decide the relative importance of our professional and private lives, and must learn to accept the concomitant compromises. *My Daughter Beatrice* makes us think seriously, sometimes pessimistically, but always usefully, about this problem. Finally, it was sheer fun to see the human side of a great scientist, to glimpse, behind the formidable energy and intelligence, the little girl that Beatrice Tinsley's father knew. I hope Mr. Hill realizes how much pleasure he gives us all by telling the story of *My Daughter Beatrice*.

C. M. Urry
Center for Space Research
MIT

You probably did not know, when you sent me the wonderful book written by Beatrice Tinsley's father, how much she has meant to me all these years. I have devoured the book, and felt for a few days as if I had met her again.

I first met Beatrice when she came to spend a few months at Caltech in 1972. I was then a postdoctoral fellow at Caltech, and felt isolated and awkward, because women scientist were so rare in that campus. When Beatrice arrived, I was of course very interested, and took every chance I could to talk to her. That was not easy: our subjects were so different that we could not get involved in deep

scientific discussions; and she was much too busy to spend time chatting. She was always running between office, children, and computer. But she did take the time to tell me the essentials about her background, her work, her family, and there was always much friendliness in her manner, however hurried.

She introduced herself to me, with great modesty, as someone who had dropped out of research for some time, and was attempting a come back. While it was obvious that she was clever and serious, I did not at the time suspect her real value. Until, just before the end of her stay, she gave a seminar at Kellogg Laboratory on models of stellar populations in galaxies.

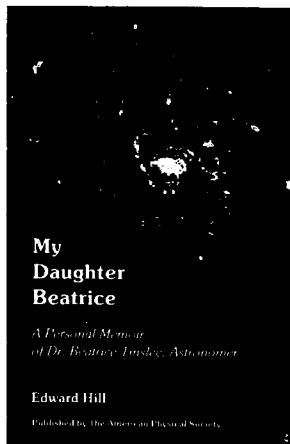
I remember this seminar vividly. I realized then, all at once, the breadth and depth of her work, the new ground she was breaking, the sheer brilliancy—the courage! I was surprised, happy, exhilarated—and for some stupid reason, after that, I felt much more confident around Caltech.

Another vivid memory: I was then pregnant of my first baby. I don't know whether she noticed or was told, but one day I found a beaming Beatrice waiting for me at the front of the stairs of the Robinson building. She told me—I still hear her voice—"so, you are expecting!" (nobody yet had mentioned it to me on campus). She was so happy, so full of enthusiasm . . . really sharing the enormous joy I was feeling at the time.

Through the years, I met her several times at scientific meetings or during her visits to Paris, at the house of our common friend Jean Audouze. Our last meeting was at an IAU Symposium in Maryland, in June 1978. There, she talked to me about her separation from her children, and about her illness. She was feeling well at the time, but knew that it could come back, and she was bracing herself to live with that threat.

At this Maryland Symposium, there were many presentations or discussions made by women astronomers, including an important invited paper on Galaxy formation by herself and R. Larson. The last day, she stopped me in the hall to tell me her impression that the overall contribution of women astronomers at the meeting had been superb. She was deeply satisfied. She insisted: "It's true: It happened!"

Catherine Cesarsky
 Chef du Service d'Astrophysique
 CEN—Saclay, 91191
 Gif-sur-Yvette Cedex, France



A note from the publisher: *My Daughter Beatrice* was announced in *Physics Today*, Vol. 39, November 1986, page 113. It was reviewed in *Science*, February 20 by Gillian Knapp, the AWIS newsletter, and the AAS newsletter. An article by Virginia Trimble about Tinsley, with excerpts from the book will appear in the next issue of *J. College Science Teaching*. We welcome comments from *Gazette* readers. Please use coupon below to order the book.

NEWS FROM THE COMMITTEE

Current and Proposed CSWP Projects for 1987

1. We cosponsored a symposium entitled "Women in Physics: Role Models, Networks and the Crucial Teacher" with the AAPT Committee on Women in Physics. The symposium, which featured talks about Beatrice Tinsley, was held on January 31 at the joint APS/AAPT meeting in San Francisco. We also sponsored a symposium entitled "Women in Physics: An International Perspective" at the March Meeting in New York. Women physicists from China, Japan, Chile, Spain, and USA participated. There also was an informal "tea" at the March Meeting.

2. The Panel on Faculty Positions has been restructured to improve its effectiveness. The purpose of the Panel is to increase the probability of women being seriously considered for tenured faculty positions in PhD-granting physics departments of U.S. institutions in order to increase the proportion of senior women on these faculties. The approach is to provide personal advocacy for female candidates through a panel of prestigious members of the physics community who have volunteered their time to assist in these efforts. A subcommittee of the APS Committee on the Status of Women in Physics (CSWP) will provide the background information on candidates and positions, and thus leave the panel itself to focus on networking and advocacy aspects.

The CSWP subcommittee for 1987 consists of Janice Button-Shafer

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as chair, Irene Engle to gather information on possible candidates, and Miriam Forman to assemble information on academic positions. Note that the person in charge of candidate information need not be a current CSWP member (Irene Engle, for example, has retired as of 12/86), and anyone with interest in serving in this role in future years is encouraged to volunteer.

3. The Roster of Women in Physics, which CSWP maintains, is being moved from a computer system at Argonne National Labs (where we needed a consultant to handle it) to our own system at APS headquarters. In its new location it can be updated more effectively, and we will be able to handle searches and demographic studies ourselves. Individual entries in this data base will remain confidential, as before.

4. We are considering a symposium for 1988 on problems of reentry and retraining. Anyone with ideas on this topic or on possible speakers should contact Barbara Wilson (201/582-3973). Active participation in planning and organizing this symposium would be welcome.

5. Last year's symposium on hiring and retaining members of dual career couples just scratched the surface of this issue. We are considering further articles in the *Gazette* and elsewhere, and possibly further demographic studies.

6. In the area of publications, we are planning a rewrite of the booklet "Women in Physics," which contains obviously outdated material. Anyone interested in being involved in this project should contact the CSWP subcommittee: Barbara Wilson, Shirley Jackson, or Marie Machacek. At our suggestion, APS published a memoir of Beatrice Tinsley written by her father. This wonderful book, full of insights into her excitement and enthusiasm for science and her difficulties with an unsupportive science community, is now available. See the feature earlier in this issue.

7. APS is assembling a portfolio of pictures of women scientists "in action" in their labs or offices, to have on hand whenever such pictures are needed for PR. We encourage all past CSWP members to submit a picture of themselves for this photo bank. Please send it to CSWP at APS headquarters, 335 East 45th Street, New York, NY 10017.

8. Editing of the *Gazette* is now being handled on a rotating basis. Any assistance in identifying important points of focus, in assembling or editing material, and/or in contributing original pieces is welcome.

9. CSWP will continue with its efforts to see that women are nominated for APS Fellowship, prizes, and committees. Any suggestions for these areas or for the Colloquium Speakers List should be forwarded to Joan Kowalski. The Colloquium Speakers List will be issued in the spring starting next year, so that it will be available when departments are planning their programs for the next academic year.

10. At the invitation of the Australian Institute of Physics, Barbara Wilson represented CSWP this summer at a symposium on Physics Education and the Underrepresentation of Women in Physics, held in Adelaide. She presented the keynote address entitled "Women in Physics: the U.S. Experience." She also toured Australia, sharing ideas on this topic with Australian physicists and educators in 7 cities. A summary of this trip appears later in this issue.

11. The Committee is considering a study comparing the fraction of women receiving PhDs from the top 50 departments with that among recent hires into faculty positions in the same departments. In other words we would like to determine whether they are hiring female graduates from peer institutions in appropriate numbers.

12. The CSWP is going to write to physics department chairs to request names of full-time women faculty members who would be willing to talk to prospective incoming freshmen. This list could then be sent to women high school students who achieve high SAT and ACT scores, etc., to encourage young women to consider majoring in physics. In addition, it provides recognition for departments that have women on their faculty, and help for them in recruiting students from the largest untapped pool—women.

The Colloquium Speakers List will be published in the Spring starting this year. Please send suggestions IMMEDIATELY to: Barbara Wilson, 6F-207, AT&T Bell Labs, 600 Mountain Ave., Murray Hill, NJ 07974.

NEW APS FEMALE FELLOWS

Marilyn Elizabeth Jacox, NBS. For original and important contributions to matrix isolation spectroscopy and ultraviolet photochemistry of molecular radicals and ions

Sandra Charlene Greer, Univ. of Maryland. For seminal contributions to experimental thermodynamics leading to new understanding of phase transitions

Margaret L. A. MacVicar, MIT. For research on transition-metal superconductivity, and for innovation in education at the university level

Shirley Ann Jackson, AT&T Bell Labs. For contributions to the theory of charge density wave instabilities, the channeling of heavy ions in solids, and the behavior of 2-D electrons on helium films

Darleane Hoffman, Univ. of Calif., Berkeley. For a long and distinguished career of pioneering studies in the understanding of



LOOKING FOR MORE THAN A FEW GOOD WOMEN


► Are you concerned that women and men are sharply segregated by field of study despite significant progress in equal access to higher education?

► Are you aware that, in traditionally male fields, men and women students' academic and social experiences—while ostensibly the same—can in fact be very different and lead many women to lose self-confidence and academic ambition and even to transfer fields or drop out altogether?

► Do you want to learn about the kinds of innovative programs other institutions are developing to attract and retain more women students in fields such as business, mathematics, science, computer, law, and engineering programs?

Looking For More Than A Few Good Women focuses on women's experiences in traditionally male programs at the college and university level and examines the academic and social "climate" in which they learn, develop, and make decisions about their futures.

Looking For More Than A Few Good Women demonstrates the critical role that colleges and universities can play in helping women students learn about all the courses of study and careers available to them by developing innovative recruitment and retention programs at the postsecondary level, as well as strategies to encourage younger girls in elementary and secondary schools. The report offers an extensive list of adaptable recommendations, an institutional self-evaluation questionnaire, and a list of resource publications and organizations.






Looking For More Than A Few Good Women In Traditionally Male Fields can help you. This new report examines some of the reasons why more women are not studying and completing degrees in these fields, and what postsecondary education institutions can do to help remedy this situation. Published by the Project on the Status and Education of Women of the Association of American Colleges.

To obtain a copy of *Looking For More Than A Few Good Women In Traditionally Male Fields*, fill out the order form below and return it with your check for \$5.00 to: Project on the Status and Education of Women, Association of American Colleges, 1818 R St., NW, Washington, DC 20009.

I would like _____ copy(ies) of *Looking For More Than A Few Good Women* at \$5.00 each, prepaid. Checks should be made payable to AAC/PSEW. Bulk rates are available: 15 to 99 copies are \$3.50 each (30 percent discount); 100+ copies are \$2.50 each (50 percent discount).

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CAN A WOMAN BE ONE OF THE BOYS?

- ▶ Do you wonder why women on your campus don't seem to be advancing so fast or so far?
- ▶ Are you on a tenure committee and want to ensure that women are judged fairly?
- ▶ Are you a university administrator who is concerned that you have few female colleagues?
- ▶ Are you interested in changing the professional climate for women?

The *Campus Climate Revisited: Chilly for Women Faculty, Administrators, and Graduate Students* can help you. This new paper examines the problems and concerns that women faculty, administrators, and graduate students are facing today, and it offers specific suggestions for improving the campus climate for women.



The *Campus Climate Revisited* answers the question, "Can a woman be one of the boys?" and discusses other topics such as attractiveness and sexuality, humor ("Why can't a woman take a joke like a man?"), communication styles, devaluation, and the confusion of professional and social roles.

Published by the Project on the Status and Education of Women of the Association of American Colleges, *The Campus Climate Revisited* includes examples from the lives of women working and studying on campus and offers ways of dealing with the issues raised: nearly 100 practical recommendations, plans for a model workshop, and a checklist of do's and don'ts for institutions.

The Campus Climate Revisited: Chilly for Women Faculty, Administrators, and Graduate Students is available for \$5.00 from the Project on the Status and Education of Women, Association of American Colleges, 1818 R St., NW, Washington, DC 20009. Checks should be made payable to AAC/PSEW.

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low-energy and spontaneous fission and the production of heavy-element isotopes.

Gail G. Hanson, SLAC. For numerous and important contributions to the discovery and study of new particles, and to the establishment of quarks as hadronic constituents

ATTRACTING WOMEN TO PRINCETON

A recent *New York Times* article entitled "At Princeton, a Bid to Draw More Women" (5 November 1986), describes efforts at Princeton University to overcome a continuing image as a "white, male, elitist institution," in order to attract more female students. Princeton has the lowest percentage of women undergraduates among the Ivy League schools. The administration blames this shortage mainly on misconceptions about its academic strengths, namely that Princeton is "exclusively or primarily strong academically in subjects that traditionally draw men in disproportionate numbers—physics, mathematics, astrophysics, engineering." Thus their main approach to solving their numbers problem is to beef up the marketing of their humanities programs, and to emphasize the presence of women in leadership roles on campus. While I applaud their motives, the focus of their efforts is misguided.

While it is certainly true that a smaller fraction of women than men enroll in science and engineering curricula, a shift in marketing strategy to emphasize their humanities programs to potential female applicants tends to reinforce the expectations that women will not succeed in science or engineering, and consequently helps to perpetuate their scarcity in these fields. In any case, according to Dean Cummings, one of their strongest competitors for the best fe-

male students is MIT, an institution whose reputation has also been established primarily through its excellence in the physical sciences. Perhaps it would be more useful to examine why female students with interests in disciplines for which Princeton already has a well-established reputation may be choosing to attend other schools.

A clue to this puzzle is contained in the same article. Princeton's overall strategy in attracting more women to their campus places a clear emphasis on changing the external image, rather than on working to change the internal reality of a campus climate which continues to be somewhat less than ideal for female students. As an example of these internal problems, some first year women continue to report to their campus advisors that they are dropping out of physics not because of inadequate performance, but because they do not feel encouraged or even welcome in the physics department. At a recent physics department meeting the faculty unanimously agreed that no gender bias exists within their ranks. On the other hand, only a few minutes later one faculty member used the term "weak sister" to refer to those students (of either gender) whose performance falls below acceptable standards, and only a female visitor recognized and remarked on the obvious bias in attitude such usage represents. She was also the only woman in the room at the time, as there are no women on the physics faculty at Princeton. In fact, with the exception of Astronomy and Geology, none of the physical sciences or engineering departments list any women among their tenured faculty. The departments with no tenured women include Plasma Physics, Chemistry, Mathematics, Physics, Statistics, Chemical Engineering, Civil Engineering, Computer Science, Electrical Engineering, and Mechanical Engineering. Is it not likely that the presence of more women on the faculty would serve to attract more women students? And also have the positive effect of ameliorating the alienation still experienced by some female students in currently all-male departments? Why is Princeton's administration not expending equal effort to increase the number of women on its physical sciences faculty as it is in improving the marketing of its humanities program?

It appears from the article that Princeton's efforts place the emphasis on improving their external image, while carefully avoiding any examination of their internal problems which may be contributing to their problematic image as a male-dominated institution. Would it not be appropriate to focus at least as much attention on the substance as on packaging?

Barbara A. Wilson
 APS Committee on the Status of Women in Physics

1986 ASSOCIATION FOR WOMEN IN SCIENCE EDUCATIONAL FOUNDATION AWARDS

NEW YORK—The Association for Women in Science Educational Foundation has named six graduate students as recipients of the 1986 Educational Foundation Awards, with five others as Honorable Mention.

The Foundation, which works to improve the status and education of women scientists, offers \$500 awards annually to outstanding female researchers in life, physical, and social sciences working toward their doctoral degrees.

The 1986 Awardees are:

General Awards

Anne W. Goldizen—University of Michigan, Division of Biological Sciences. Ms. Goldizen is studying the social organization and mating system of a wild population of saddle-backed tamarin monkeys.

Molly Kyle—Cornell University, Department of Plant Breeding. Ms. Kyle holds degrees from Swarthmore and MIT. Her interest in genetics and virology has led to her present research on resistance to plant viruses.

S. Laurie Sanderson—Harvard University, Department of Biology. Ms. Sanderson is pursuing research related to the functional morphology and ecology of prey capture in trophically specialized fishes.

The Laura Eisenstein Award

Patricia J. Conway—University of California, San Diego, Department of Applied Mechanics and Engineering Sciences. Ms. Conway's research is related to enzyme electrode design with an emphasis on the development of an implantable glucose sensor.

The Judith Pool Memorial Award

Tina Rogers—Medical University of South Carolina, Molecular and Cell Biology Program. Ms. Rogers's research centers on arachidonic acid metabolism induced by endotoxin tolerance.

The Luise Meyer-Schutzmeister Award

Nai-Chang Yeh—Massachusetts Institute of Technology, Solid State Physics. Ms. Yeh is conducting research on graphite intercalation compounds. Her work includes developing a model to explain the electronic and lattice mode properties and electron-phonon interactions of donor type GIC's.

Honorable Mentions, each receiving \$100, include: **Tamara Bray** of SUNY—Binghamton, **Vicki Grassian** and **Karen Singmaster** of the University of California at Berkeley, **Kristina Obom** of CUNY—Mt. Sinai School of Medicine, and **Maria Seibes** of the University of Southern California, Los Angeles.

Information on the 1988 awards competition is currently available from the Association for Women in Science, 2401 Virginia Ave. NW, Suite 303, Washington, DC 20037, (202) 833-1998. The annual deadline is January 15th. These awards are funded from private contributions to the Educational Foundation.

HIGHLIGHTS OF AUSTRALIAN TOUR

Barbara Wilson, 1986 CSWP Chair
AT&T Bell Laboratories, Murray Hill, NJ

At the invitation of the Australian Institute of Physics, I traveled to Australia this summer to present the keynote address in the Physics Education session of the Seventh National Congress held in Adelaide, August 25–29, 1986. Within the main themes of "The Public Image of Physics" and "Physics as a Discipline for Women," I presented a talk entitled "Women in Physics: the U.S. Experience" and participated in a related workshop in which many different perspectives were presented by representatives of state educational groups, professional organizations, and government research facilities. The program, and my visit, were coordinated by Prof. John Prescott and Dr. Gillian Robertson of The University of Adelaide, and Ms. Jan Powe, Education Convenor of the Australian Institute of Physics and Science Head at a competitive high school in Sydney. Both the Congress program and subsequent discussions with representatives across Australia provided a unique opportunity to share ideas and strategies on these issues, to the benefit of both countries.

The representation of women in physics in Australia is fairly similar to that in the United States, which is not surprising given the similarities in the two cultures. The absolute numbers, of course, are much smaller, reflecting the smaller population of Australia.

For example, there are about 60 physics PhDs total granted each year by 18 Australian physics departments, compared to about 1,000 degrees granted by ~175 U.S. departments. Statistics assembled by the Australian government laboratory facilities, C.S.I.R.O., indicate that in 1979 and 1980 women earned 10% of the physics PhDs (11/107), slightly higher than for the same period in the U.S. where the fraction was 6% (127/1,983). On the other hand, the Bachelor's level figures quoted for 1978–1980 were surprisingly low in Australia, only 9% (58/669), while the comparable U.S. figures were 12% (1,202/10,065). It is, in fact, this reversal of the previously positive trend in the number of women entering physics that has stimulated the current level of concern in Australia, and which led to the symposium in which I participated.

Overall, I spent almost 3 weeks in Australia, from August 21 to September 9. During this time I visited 7 major cities, 10 of the 18 PhD-granting universities ("unis" in Australian vernacular), and a number of other colleges and government labs. I delivered 11 formal presentations, 7 on issues related to women in science and 4 on research topics, and participated in numerous informal discussions. Given the high level of general interest in Australia at this time, there were also many requests for television, radio, and newspaper interviews, which I was more than happy to accommodate. The TV interviews included a long segment for a "Quantum" series program on women in science. The producers promised me a copy of the final tape, which might be used to stimulate a similar "Nova" series program in the U.S.

My presentations on women in science focused on gender differences in educational patterns in the U.S., and on recent research into the underlying mechanisms leading to these differences and to the resulting imbalance in the numbers of men and women working in the field. Much of the material has been summarized in an article published in Volume 5, Issue 2 of the *CSWP Gazette* (July/August 1985). Other sources of information include recent studies by Ware and Lee of Radcliffe College and by Kahle of Purdue University. These studies continue to find that young women tend to feel that science is not an appropriate field for them as females, and that those who do pursue these subjects continue to experience social conflicts. I also used quotes from a publication of the Association of American Colleges entitled "The Classroom Climate: A Chilly One for Women," embellished with a set of examples drawn from my own academic and professional experiences.

The particular subset of material chosen for individual talks was altered to match the specific audience expected, which varied from secondary school educators, to college and "uni" staff, to representatives of professional organizations. Without exception the audiences were sizable, anywhere from 45 to a few hundred, and extremely attentive. The results of research in the U.S., as well as my personal experiences, were clearly familiar patterns to the female scientists in the audience, and I used their obvious personal identification with the examples to bridge the gap from the U.S. data I was presenting to the similar situation in Australia. By and large, I would say that my presentations elicited fewer immediate defensive reactions and attempts to justify the status quo than they might have in the States. On the other hand, I quickly discovered that "Affirmative Action" and "single-sex education" were two topics that triggered immediate strong emotional reactions among Australians.

In general the Australian physics community appears less aware of the subtle social patterns inhibiting full participation of women in science. I found a surprisingly large number of people who had "no idea" why women are underrepresented in physics. On the other hand, they seem more likely to make effective efforts to remedy problems, once they are acknowledged. For example, there has been a much more concerted effort to identify and eradicate (or at least compensate for) gender bias in elementary and secondary

Women Students Chilled Out On Campus



- Teachers may interrupt women more frequently than men, or allow them to be interrupted by others in class.
- Many faculty are not as likely to call directly on women as on men during class discussion.
- Professors may often ask a question followed by eye-contact with men students only—as if only men were expected to respond.
- Financial aid officers may favor married men over married women on the presumption that a woman needs less help because her husband will support her.
- Career counselors sometimes advise students in accord with stereotypical ideas of “male” and “female” majors and careers.

These are only some of the barriers women students may face on campus—both in and out of the classroom—according to groundbreaking reports by the Project on the Status and Education of Women. To find out more about the climate for women students in higher education, send for **The Climate Issues Packet**, which contains the following papers:

- **The Classroom Climate: A Chilly One for Women?**—identifies many faculty behaviors that may discourage women in the classroom. It gives over 100 adaptable recommendations for change. (1982, 22 pp.)
- **Selected Activities Using “The Classroom Climate: A Chilly One for Women?”**—describes some of the many ways that campuses across the country have used the report. It includes programs and workshops, in-class use, research, reports, and surveys. (1984, 4 pp.)
- **Out of the Classroom: A Chilly Campus Climate for Women?**—describes how women are treated differently from men in a wide range of campus settings, from meetings with academic advisers to purely informal exchanges with peers. (1984, 20 pp.)

To obtain a copy of **The Climate Issues Packet** fill out the order form below and return it with your check for \$7.00 to: Project on the Status of Education of Women, Association of American Colleges, 1818 R St., NW, Washington, DC 20009.

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school textbooks. The issues of reentry and part-time employment also appear to be receiving relatively greater attention in Australia than in the States, although to date there does not appear to be much progress in improving the situation. In part the emphasis may reflect stronger social pressures within Australia for mothers with young children to stay home. In Australia 27% of women with preschool children are working outside the home, the U.S. figure is over 60%.

Finally, I also came across a number of stimulating new ideas concerning the approaches used in presenting basic physics which may be particularly to blame for turning off potential female physicists. Studies in England have found evidence that there are important differences in the profiles of the “typical” male and female science student. Boys who elect science courses in high school tend to be socially immature compared with their peers, and “convergent” thinkers, i.e., people who are better at answering questions that have a single correct answer. The girls taking science, on the other hand, are often more mature than their peers, and tend to be “divergent” thinkers, better at responding to questions that ask for many alternate answers. Girls are also considerably less satisfied with courses that stress the manipulation of mathematical equa-

tions over comprehension of the underlying concepts, and with presentations that isolate the material from its social context. In my opinion, CSWP and the science community in general would do well to consider these ideas in the context of the U.S. educational system.

In summary I believe the trip provided an excellent opportunity for the two countries to pool their resources in approaching the common problem of the underrepresentation of women in physics. Although both physics communities are trying to find solutions, the focus and strategies have been somewhat different, and thus the sharing of ideas has been beneficial to both. After my talks many women thanked me for presenting a clear picture of the same types of social difficulties they themselves had experienced as female scientists in Australia, but had been unable to get across to their male peers. It became clear to me that the men in the audience were affording me credibility that was denied their own female peers solely because of my “official” status as the invited speaker and chair of a committee of the APS. This realization reaffirmed for me the value of officially-sanctioned committees such as CSWP, and in my later talks I specifically included encouragement for the formation of similar committees in Australia.

DON'T JUST SIT THERE, DO SOMETHING!



It's one thing to talk about equity for women in academe; it's another thing to do something about it. In **TOWARD EQUITY: AN ACTION MANUAL FOR WOMEN IN ACADEME**, developed under a grant from Carnegie Corporation of New York, Karen Bogart describes over 100 different programs operating on campuses today that are doing something constructive about equity for women in academe. Each program entry features:

- a description of program components,
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TOWARD EQUITY opens with a series of essays describing some of the "ABC's of Change," and then describes selected programs that promote sex equity

- for students,
- for faculty, administrators, professional and support staff,
- in the social-educational climate, and
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The program entries are brief, to the point and usable as models for other institutions. In her forward to the book, Martha Church, President of Hood College, calls **TOWARD EQUITY** a basic reference tool for presidents, vice presidents for academic affairs, deans of students, trustees and other concerned members of the administration, faculty and staff.

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IN CASE OF SEXUAL HARASSMENT A Guide for Women Students



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Sponsored by the General Electric Foundation

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Supporting information should include at least one letter of nomination and a current curriculum vitae of the nominee. Additional supporting letters are helpful. Send names of proposed candidates and supporting information before 15 September 1987 to: Margaret Kivelson, Chairperson, Selection Committee, Space Science Center, University of California, Los Angeles, CA 90024.