# Committee on the Status of Women in the Economics Profession 

## Report of the Committee on the Status of Women in the Economics Profession 2003

The Committee on the Status of Women in the Economics Profession (CSWEP) was established by the American Economic Association (AEA) in 1971 to monitor the status of women in the profession and formulate activities to improve their status. This report begins by summarizing trends in the representation of women in the economics profession over the approximately thirty years since CSWEP was established. It then takes a more detailed look at newly collected data for the current year and summarizes the Committee's activities over the past year.

## Data on Women Economists

Since its inception, CSWEP has been concerned with collecting and analyzing data on the representation of women in the economics profession. The first CSWEP-administered survey of economics departments was conducted in the fall of 1972. Since that time each CSWEP Annual Report has presented data on the status of women in the economics profession based either on CSWEP's own survey of economics departments or the AEA's Universal Academic Questionnaire.

## The 2003 CSWEP Survey

For the CSWEP 2003 survey, the number of economics departments surveyed was expanded slightly to 139 , from 136 in 2002, based on information on institutions granting Ph.D.'s in economics from the Department of Education's Integrated Postsecondary Education Data System. Responses were received from 106 departments; 11 indicated that they do not currently have a Ph.D. program in economics and were excluded from the sample. This yielded a sample for analysis of 95 departments, representing a very high response rate of 74.2 percent of the 128 (139-11)

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Caren Grown (left), Robin L. Bartlett (center), and Francine D. Blau (right) at the awards ceremony held on January 3, 2004 in San Diego, CA.

## Dr. Robin L. Bartlett Receives 2003 Carolyn Shaw Bell Award

Dr. Bartlett is the Denison BankOne Chair of Economics and has been at Denison University since 1974. She chaired CSWEP from 1996-2000, was a founding member of the International Association for Feminist Economics, and is a longstanding member of the Committee on Economics Education. She earned her bachelor's degree in economics and mathematics from the former Western College for Women (1969), now part of Miami University in Oxford, and both her master's (1972) and doctoral (1974) degrees at Michigan State University.


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## What is CSWEP?

CSWEP (the Committee on the Status of Women in the Economics Profession) is a standing committee of the AEA (American Economics Association). It was founded in 1971 to monitor the position of women in the economics profession and to undertake activities to improve that position. Our thrice yearly newsletters are one of those activities. See our website at www.cswep.org for more information on what we are doing.

## CSWEP NEWSLETTER STAFF

Francine Blau, Editor
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Liane 0'Brien, Assistant Editor
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## From the Chair

I
 mentoring program, has been launched. Under this initiative, funded by the National Science Foundation, we will implement and evaluate a series of mentoring workshops at the national and regional level for junior economists. The first national workshop was held at the 2004 ASSA meetings in San Diego and by all accounts was a great success. I am very gratefully to the AEA for their indispensable administrative support for this initiative. I would also like to warmly thank Rachel Croson who organized the program and the following individuals who generously volunteered their time to stay after the meetings to participate in the program as mentors: Beth Allen (University of Minnesota); Caroline Betts (University of Southern California); Rachel Croson (University of Pennsylvania); Julianne Cullen (University of Michigan); Catherine Eckel (Virginia Polytechnic); Susan Ettner (University of California Los Angeles); Donna Ginther (University of Kansas); Deborah Haas-Wilson (Smith College); Shulamit Kahn (Boston University); Kala Krishna (Pennsylvania State University); Francine LaFontaine (University of Michigan); Bridgette Madrian (University of Pennsylvania); Marjorie McElroy (Duke University); Laura Razzolini (University of Mississippi); Carmen Reinhart (University of Maryland); Yana Rodgers (College of William and Mary); Ann Stevens (University of California, Davis); and Susan Vroman (Georgetown University). We are also indebted to the members of our Research Advisory Committee who, under the leadership of Janet Currie, are assisting us in evaluating the program. The Committee, which met in San Diego, includes current and former CSWEP Board Members Lisa Barrow (Federal Reserve Bank of Chicago), Andrea Beller (University of Illinois-Urbana), Francine Blau (Cornell University), Rachel Croson (University of Pennsylvania), Claudia Goldin (Harvard University), Daniel Hamermesh (University of Texas), Karine Moe (Macalester College), KimMarie McGoldrick (University of Richmond) and non-board members: Katherine Abraham (University of Maryland), Rebecca Blank (University of Michigan), Ronald Ehrenberg (Cornell University), Henry Farber (Princeton University), Donna Ginther (University of Kansas), Shulamit Kahn (Boston University), and Shelly Lundberg (University of Washington). The next set of workshops will occur at the Eastern Economic Association meetings in February under the leadership of KimMarie McGoldrick. Future workshops will be announced on the CSWEP web site http://www.cswep.org/ and in this newsletter.

Other CSWEP activities at the ASSA meetings in January included three CSWEP-sponsored sessions on gender-related issues, and three on experimental economics. Four of the gender-related session papers and four of the experimental economics papers were selected for publication in the AER Papers and Proceedings issue that is forthcoming in May. At the CSWEP Business Meeting, Robin Bartlett received the Carolyn Shaw Bell Award. Warmest congratulations to her for this highly merited honor. The CSWEP hospitality suite had record attendance, with many availing themselves of our complimentary continental breakfast and finding it a good place to meet with colleagues throughout the day.

Please watch for the Call for Papers for the 2006 ASSA Meetings that will be posted on our website and will also appear in the $J E P$ this summer. We will hold two sets of sessions: gender-related sessions and sessions on topics related to industrial organization. We especially encourage submissions by more junior women economists.

The regional meetings are also full of activities sponsored by CSWEP. The Eastern meetings are scheduled for February, the Midwest in March, the Westerns in late June and the Southerns in November. Please contact your regional representative if you wish to participate in any of these activities.

We would like to thank the following board members who recently ended their terms: Andrea Beller, Janet Currie and Claudia Goldin, and Rachel Croson who has agreed to serve a second term on the CSWEP board to work on the mentoring initiative. We also welcome new members Lori Kletzer, from University of California Santa Cruz, Sharon Oster from Yale University and Ann Owen from Hamilton College.

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Ph.D. granting departments surveyed. The CSWEP liberal arts survey was greatly expanded to 149 schools (from 93 in 2002) based on the listing of "Baccalaureate Colleges-Liberal Arts" from the Carnegie Classifications of Institutions of Higher Education (2000 Edition). ${ }^{1}$ The number of schools responding was 62 , yielding a response rate of 41.6 percent, comparable to the 43.0 percent response rate obtained for a smaller number of surveyed schools last year.

## Change Over Three Decades

Table 1 presents data from the 2003 CSWEP survey and selected earlier surveys to provide a picture of how women's representation among faculty in Ph.D.-granting institutions has changed over the past thirty years. The 1972 results for Ph.D.-granting departments are based on only 43 economics departments, however, these universities, at the time referred to as "the chairman's group," granted about two-thirds of all Ph.D.'s in economics (1973 Annual Report p. 509). For the remaining years figures are based on substantially more departments. ${ }^{2}$ Data on bachelor and Ph.D. degrees awarded in economics from the National Center for Educational Statistics (NCES) have also been included in the table; this data source was selected as providing the most complete information on degrees awarded over this period. (The most recent available year for these data is the 2000-2001 academic year.) Overall, the increased representation of women among students and faculty has indeed been substantial.

Looking first at women's representation among students, we see that the female share of bachelor's degrees awarded in economics more than tripled between 1972 and 2001, from 11.7 to 34.1 percent, as did women's share of new economics Ph.D.'s, which increased from 7.6 percent in 1972 to 29.0 percent in 2001. Similarly, women dramatically increased their representation among faculty. In 1972 women were only 8.8 percent of assistant professors, 3.7 percent of associate profes-

## Table 1: Percentage Representation of Women in Major Ph.D. Granting Departments, 1972-2003, Selected Years

|  | 1972 | 1982 | 1993 | 2003* |
| :--- | :---: | :---: | :---: | :---: |
| Students |  |  |  |  |
| Bachelor's Degrees | $11.7 \%$ | $32.5 \%$ | $29.8 \%$ | $34.1 \%$ |
| Ph.D.s Granted | $7.6 \%$ | $14.2 \%$ | $23.3 \%$ | $29.0 \%$ |
| Faculty, by Rank |  |  |  |  |
| Assistant Professor | $8.8 \%$ | $13.3 \%$ | $25.0 \%$ | $26.5 \%$ |
| Associate Professor | $3.7 \%$ | $6.4 \%$ | $14.1 \%$ | $20.1 \%$ |
| Full Professor | $2.4 \%$ | $2.7 \%$ | $6.8 \%$ | $9.5 \%$ |
| All tenured/tenure track** | $4.6 \%$ | $6.5 \%$ | $12.6 \%$ | $15.5 \%$ |
| N departments | $\mathbf{4 3}$ | na | 81 | 95 |

*Data on bachelor's and Ph.D. degrees are for the 2000-2001 academic year.
**Includes the above indicated ranks only.
Notes: Tabulations of faculty by rank combine tenured and untenured faculty members in the indicated rank. Data on Bachelor and Ph.D.'s granted are from U.S. Department of Education National Center for Education Statistics, Chartbook of Degrees Conferred, 1969-70 to 1993-94 and the 2002 Digest of Education Statistics; remaining data are from CSWEP Annual Reports, 1972, 1983 (see, http: //www.cswep.org/pub.htm), and CSWEP Survey data files. Data for 1982 are from the column headed "Other Ph.D." in Table 1 of the 1983 Annual Report because in the 1984 Annual Report it states that this column actually refers to "all Ph.D. departments" (p.449).
sors and 2.4 percent of full professors-comprising, overall, less than five percent of faculty members in these ranks. By 2003, their representation among assistant professors had tripled to 26.5 percent; gains at the higher ranks were proportionately even larger as women's share of associate professors increased to 20.1 percent and of full professors to 9.5 percent - with women comprising 15.5 percent of all faculty in these ranks. (The tabulations of faculty in Table 1 include both tenured and untenured faculty at each rank.)

While these gains are impressive, the data in Table 1 reveal areas of continuing concern as well. First and most obviously, although women are much better represented in the economics profession than in the past, they remain a minority. Moreover, in each year, the representation of women decreases as we move up the academic hierarchy. To some extent this underrepresentation at the higher levels reflects the more recent entry of women into the field and the length of time it takes to move up the ranks, the so-called "pipeline effect." Even within a single year, women's representation at the assistant professor rank is roughly comparable to their share of new Ph.D.'s granted. The representation of women at the associate and full professor levels tends to track their representation at the lower levels a decade earlier.

However, the pipeline tends to be a "leaky" one in that female representation at the higher ranks tends to fall short of their earlier representation at the lower ranks - this is especially notable since the data are spaced roughly a decade apart, which is more than ample time for promotions to occur. Focusing on the most recent period, for example, we see that women were 24.0 percent of assistant professors in 1993 compared to 20.1 percent of associate professors in 2003; and 14.5 percent of associate professors in 1993 compared to 9.5 percent of full professors in 2003. ${ }^{3}$ It must be acknowledged that this type of comparison is imperfect since the number of departments included in the sample varies across years, with unknown effect on the results. Further, the sex composition of the stocks of associate and more especially full professors will change more slowly than the respective flows into these categories. Nonetheless, these data are highly suggestive of a leaky pipeline, an issue that has been highlighted in earlier CSWEP Annual Reports. Further evidence in support of this interpretation of the data is provided in recent research on the progress of women faculty in economics (Donna Ginther 2002; Shulamit Kahn 2002).

Though the data are suggestive of a leaky pipeline, detailed information on women's representation across faculty ranks for the 1993-2003 period (see Table 5) suggests that significant progress has occurred at the higher ranks within the past couple of years. Prior to the 2002 survey, progress in the representation of women at the higher ranks over the preceding decade looked exceedingly slow to nonexistent. Averaging the percentages for 1993 and 1994 to reduce variability due to the changing samples across years, women were 14.1 percent of tenured associate professors. This percentage had increased only slightly to 15.8 percent by 1999-2000 (again averaging the two years of data); and there was virtually no change for tenured full professors where women comprised 6.5 percent of the total in 1993-1994 and 6.6 percent in 1999-2000. In contrast by 2002-2003 there were clear gains with female representation increasing to 18.5 percent of tenured associate professors and 9.2 percent of tenured full professors.

[^1]The data in Table 1 also suggest some concern at the other end of the pipeline. Specifically, the growth of women at the entry level seems to be tapering off. While women's share of assistant professor positions increased by 11.7 percentage points between 1982 and 1993, the increase was only 1.5 percentage points between 1993 and 2003. The detailed data for the 1990's shown in Table 5 indicate that the female share of (untenured) assistant professors peaked in 1999 at 27.8 percent and then dropped sharply to 21.4 percent in 2000 . It has been increasing steadily since then and is at about its 1998 level. So very recent trends are in an encouraging direction.

Of course the ultimate source of most entries into the economics profession are bachelor's and Ph.D.'s in economics. Here we see conflicting trends. NCES data shown in Figure 1 indicate that the female share of new Ph.D.'s in economics has increased fairly steadily over this thirty-year period. However, the female share of bachelor's degrees in economics peaked in 1984-85, decreased through 1993-94, and has only recently attained its mid-1980 level. According to National Science Foundation data, economics majors have comprised 57 to 60 percent of new Ph.D.'s in economics since the mid-1980s; and John Siegfried and Wendy Stock (2004) estimate that figure to be as high as 76 percent in recent years (including double majors). The continued increase in the female share of new Ph.D.'s in economics that has occurred since the mid-1980s in the face of the long-term stability in the representation of women in undergraduate economics programs likely reflects an increase in the relative propensity of female economics majors in the U.S. to go on to graduate school in economics. Likely working in the opposite direction has been the steady decline in the share of U.S. citizens among new economics Ph.D.'s, from 55.7 percent in 1986-87 to 36.7 percent in 2001-02. ${ }^{4}$ The female share of Ph.D.'s going to non-U.S. citizens is lower than for U.S. citizens and has increased more slowly in recent years. ${ }^{5}$ Currently, the female share of undergraduate degrees in economics in the U.S. is approximately the same as the female share of $1^{\text {st }}$ year students in economics Ph.D. programs, about 34 percent (see Tables 1 and 2). Thus, in the future, attracting more female undergraduates into economics may become increasingly important to the continued growth in female representation in economics Ph.D. programs. In this regard, the rising trend since the early 1990s in the proportion of bachelor's degrees in economics going to women is a positive sign.

The CSWEP data suggest that at least for the near-term further increases in the percentage female of new Ph.D.'s may be expected. The data on the representation of women at various stages of the Ph.D. program over the 1990s in Table 5 gives us the opportunity to look at the progress of women through graduate programs in economics. Siegfried

[^2]and Stock report a median time to degree of 5.4 years for 2001-2002 Ph.D.'s. So, for example, we may compare female representation among Ph.D.'s granted in 2002-2003 (29.8 percent) to their representation among $1^{\text {st }}$ year graduate students six years earlier in 1996-97 (30.5 percent) or to an average of five and six years earlier (30.9 percent). This comparison suggests a somewhat higher attrition rate for female than male graduate students but the difference is very small, especially given that the comparison is quite crude. Thus, given that women currently comprise 34.0 percent of $1^{\text {st }}$ year students, it is likely that five to six years hence, the female share of new Ph.D.'s will increase to about one third. ${ }^{6}$

Figure 1: Percentage Female Among Bachelor's and Ph.D. Degrees Awarded in Economics, 1969-70 to 2000-2001


Source: Blau (2004). Based on published data from the National Center for Educational Statistics.

## Detailed Results from the 2003 CSWEP Survey

Tables 2 and 3 present the results from the 2003 CSWEP survey for Ph.D.-granting departments in greater detail, first for all departments and then for the top 10 and top 20 ranked departments separately. ${ }^{7}$ As noted in past Annual Reports, we find for 2003 that women are less well represented in the top tier departments at all levels than in all Ph.D.-granting departments. This includes their representation among students ( $1^{\text {st }}$ year students, ABD's and new Ph.D.'s) and faculty at all ranks. For example, female representation among untenured assistant professors was 4.2 percentage points lower at the top ten departments than for all departments, with a smaller disparity of 1.0 percentage point for the top 20 . At the tenured associate and full professor levels, female representation at the top 10 departments lagged by 2.3 to 2.4 percentage points. The situation was fairly comparable in the larger group of top 20 schools, with a disparity of 1.0 (associate professors) to 3.1 (full professors) percentage points at the senior ranks.

Just as female faculty are better represented among all Ph.D.-granting institutions than in the top-ranked departments, as noted in many prior CSWEP Annual Reports, they are also better represented at liberal arts

[^3]Table 2: Percentage Female for Ph.D. Granting Economics Departments (2003)

|  | Women | Men | Percentage <br> Female |
| :--- | :---: | :---: | :---: |
| A. Faculty Composition (2003-2004 Acadmic Year) |  |  |  |
| Assistant Professor | 151 | 419 | $26.5 \%$ |
| Untenured | 146 | 413 | $26.1 \%$ |
| Tenured | 5 | 6 | $45.5 \%$ |
|  |  |  |  |
| Associate Professor | 87 | 346 | $20.1 \%$ |
| $\quad$ Untenured | 6 | 19 | $24.0 \%$ |
| Tenured | 81 | 327 | $19.9 \%$ |
|  |  |  |  |
| Full Professor | 131 | 1,249 | $9.5 \%$ |
| Untenured | 1 | 1 | $50.0 \%$ |
| Tenured | 130 | 1,248 | $9.4 \%$ |
| All tenured/tenure track | 369 | 2,014 | $15.5 \%$ |
| Other (non-tenure track) | 96 | 198 | $32.7 \%$ |
|  |  |  |  |
| All Faculty | 465 | 2,212 | $17.4 \%$ |

## B. Students and Job Market

Students (2003-2004 Acadmic Year)

| First-year Ph.D. students | 518 | 1,005 | $34.0 \%$ |
| :--- | :---: | :---: | :---: |
| ABD students | 931 | 1,917 | $32.7 \%$ |
| Ph.D. granted (2002-2003 Acadmic Year) | 236 | 555 | $29.8 \%$ |

Job Market (2002-2003 Acadmic Year)

| U.S.-based job | 170 | 351 | $32.6 \%$ |
| :--- | :---: | :---: | :---: |
| Academic, Ph.D. granting department | 75 | 149 | $33.5 \%$ |
| Academic, Other | 49 | 74 | $39.8 \%$ |
| Public sector | 25 | 64 | $28.1 \%$ |
| Private sector | 21 | 64 | $24.7 \%$ |
| Foreign Job obtained | 30 | 131 | $18.6 \%$ |
| Academic | 16 | 85 | $15.8 \%$ |
| Nonacademic | 14 | 46 | $23.3 \%$ |
| No job found | 20 | 50 | $28.6 \%$ |

institutions than at Ph.D.-granting institutions (Table 4). So, at liberal arts institutions, women were 36.9 percent of untenured assistant professors, 38.5 percent of tenured associate professors, and 16.7 percent of tenured full professors; comprising fully 28.1 percent of faculty at these ranks - considerably exceeding comparable figures for the Ph.D.granting institutions.

Turning to Ph.D. students, we see that, as in the case of faculty, the representation of women among new Ph.D.'s in the top-ranked Ph.D.granting departments also tends to be lower than for all Ph.D.-granting departments, lagging by 3.5 to 5 percentage points. These disparities are roughly in line with, or larger than, the average for the preceding years since 1993 shown in Table 5. The data in Table 3 show a particularly large disparity for first year Ph.D. students; women's representation in this group was much lower -7.9 to 12.8 percentage points lower-for the top 10 and top 20 schools than for all Ph.D.-granting institutions. This represents a considerable increase in the difference between the top-ranked departments and all Ph.D-granting departments
compared to previous years, as well as a substantial decline in female representation among first year students at the top-ranked departments. While it is understandable that the representation of women in the first year class may fluctuate from year-to-year based on the quality of applicants and yield rates, this situation is of great concern for the future and it is to be hoped that it will be reversed over the next few years.

Finally, Tables 2 and 3 give us the opportunity to take a look at how women fare in the job market for new Ph.D.'s. First, it may be noted that the majority of both male and female economics Ph.D.'s for whom data are available take jobs in the United States, and further that women are more likely to take a U.S.-based job than their male counterparts ( 77.3 vs. 66.0 percent), likely reflecting their lower representation among foreign Ph.D. recipients noted above. Thus, while women constituted 29.8 percent of new Ph.D.'s in economics in 2002-2003, they comprised 32.6 percent of those obtaining U.S.-based jobs. In terms of their sector of employment, the data in Table 2 indicate some significant breaks with the past. Traditionally, women have been underrepresented in academic positions in Ph.D.granting institutions and overrepresented in academic jobs in non-Ph.D.-granting institutions and in publicsector nonacademic jobs. This year, however, women's share of jobs in Ph.D.-granting departments was approximately equal to their representation in the U.S. job market. And, while women job seekers were overrepresented in non-Ph.D.-granting institutions, as they have been in the past, they were not overrepresented in the public sector. In fact, women's share of all academic jobs, 35.7 percent, was above their availability in the domestic labor market. Women graduating from top 10 and top 20 economic departments were even more successful in landing positions in Ph.D.-granting departments. These developments bode well for substantial increases in the representation of women on the faculty of Ph.D.-granting institutions in the future.

## The Committee's Recent Activities

## CSWEP Mentoring Initiative

This past year, CSWEP launched a major new initiative to help women surmount some of the barriers impeding their progress in academia that contribute to the type of leaky pipeline issues that have been documented in this and earlier CSWEP Annual Reports. CSWEP received funding from the National Science Foundation's ADVANCE and Economics Panels to implement and evaluate a series of mentoring workshops for junior (nontenured) economists, focusing especially on issues relevant to women economists at the beginning of their careers. The program is modeled after the successful NSF-funded CCOFFE mentoring workshops organized by CSWEP in 1998 under the leadership of former CSWEP Chair, Robin Bartlett. The four-year CSWEP program includes two rounds of mentoring workshops at the national meetings and one workshop program at each of the four regional association meetings. The first national workshops will be held at the 2004 ASSA meetings in San Diego and a second set will follow in January 2006. The first regional workshops will occur in February 2004 at the Eastern Economic Association meetings, with workshops to follow at each of the three other regional associations.

Table 3: Percentage Female for Top 10 and Top 20 Ph.D. Granting Economics Departments (2003)

|  |  |  |  | Top 10 |  |
| :--- | :---: | :---: | :---: | :---: | :---: |

The Chair would like to take this opportunity to thank the Committee for its hard work on this mentoring initiative and particularly Rachel Croson (Chair of the Committee on the National Workshops), Janet Currie (Chair of the Research Committee) and KimMarie McGoldrick (Chair of the Committee on the Regional Workshops), who, along with John Siegfried, Secretary-Treasurer of the AEA and Francine Blau, CSWEP Chair, comprise the PI's on the NSF grant. We are especially indebted to Rachel Croson for spearheading our effort to secure NSF support for this initiative and also appreciate her willingness to remain on the Committee for a second term both to shepherd the national programs through and to contribute generally to this initiative throughout the grant period. The Chair additionally thanks Janet Currie
who, although she is leaving the Committee, has generously agreed to continue chairing the research committee. CSWEP is also deeply grateful to John Siegfried and his staff for support and assistance and for allowing us to house the NSF grant at AEA headquarters in Nashville. The Committee would like to express special thanks to AEA staff members Edda Leithner, Patricia Fisher, Diane Fawkes, Gwyn Loftis, Marlene Hight, and Norma Ayres, for their hard work on grant-related activities and for their continued support and commitment to CSWEP.

## On-going Activities

One of CSWEP's major activities is the production of our thrice-yearly newsletter. The Winter Newsletter, co-edited with Rachel Croson, focused on academic advice for junior faculty as well as a summary
of the research presented at the ASSA meetings in CSWEP-sponsored sessions. Claudia Goldin co-edited the Spring Newsletter that included articles on professional development and information on the CeMent Grant. The Fall Newsletter, co-edited by Janet Currie, provided articles on discrimination in the academy and an interview with Margaret Garritsen de Vries, 2002 recipient of the Carolyn Shaw Bell Award (see below). These newsletters also provided information on upcoming regional and national association meetings, calls for papers and news of interest to women economists. The Chair would like to thank KimMarie McGoldrick for her hard work and dedication in overseeing the newsletters along with Karine Moe, who now takes over this responsibility.

As part of its ongoing efforts to increase the participation of women on the AEA program, CSWEP members organized six sessions for the January 2003 ASSA meetings. Caren Grown and Jean Kimmel organized three sessions on gender-related issues and Barbara Fraumeni, along with Kim Sosin, organized three sessions on Macroeconomics. CSWEP held its usual business meeting in which reports were made to its associates and other interested AEA members concerning its activities and suggestions were heard from those present for future activities.

During the 2003 business meeting the Carolyn Shaw Bell Award was presented to Margaret Garritsen de Vries, retired International Monetary Fund (IMF) economist. Dr. de Vries received her Ph.D. from MIT in 1946 and spent almost all of her career at the IMF. She was one of the first staff members of the IMF and in the $2^{\text {nd }}$ entering doctoral class at MIT. She headed country missions to Islamic countries, showing that gender was not an issue for IMF personnel. She became the first woman Division Chief in 1957; it is believed that no other woman achieved that status until the 1970s. Dr. de Vries mentored women and encouraged them throughout her career. Eventually, Dr. de Vries became the Fund's historian, a position she held until her retirement.

Dr. de Vries is an excellent representative of this award, which is given annually to a woman who has furthered the status of women in the economics profession, through her example, through her achievements, through increasing our understanding of how women can advance through the economics profession, or through her mentoring of other women. Along with public recognition accorded her accomplishments, Dr. de Vries also received a 2'x 3' plaque with her name and that of previous winners on it to display prominently at her place of work.

Also during the business meeting, Esther Duflo, the Castle Krob Associate Professor in the Department of Economics at MIT, was awarded the 2002 Elaine Bennett Research Prize. The Elaine Bennett Research Prize was established in 1999 to recognize and honor outstanding research in any field of economics by a woman at the beginning of her career. The prize is given every other year in memory of Elaine Bennett, who mentored many women economists at the start of their careers and made significant contributions to economic theory and experimental economics during her short professional career. Esther Duflo, who received her Ph.D. in Economics from MIT in 1999, specializes in development economics, focusing her studies on the broad range of issues that affect economic and social structures in developing countries. Her outstanding research contributions have focused on such issues as household behavior, educational choice and returns to education, and policy evaluation. She continues to explore the many ways that women impact the economics of the countries in which they live, in roles ranging from caretaker to political leader.

The Chair thanks Barbara Fraumeni, Andrea Beller, and Barbara Casey for their service on the Carolyn Shaw Bell Awards Committee; and Judith Chevalier, Rachel Croson and Susan Athey for their work on the Elaine Bennett Awards Committee.

## CSWEP's Regional Activities

CSWEP's regional representatives also organized sessions at each of the regional association meetings - including the Eastern, Southern, Midwest, and Western Economic Association. The work of our regional representatives has been substantial this year. Our thanks go to Lisa Barrow (Midwest), Rachel Croson (Eastern), Catherine Mann (Southern) and Janet Currie (Western), for their excellent programs and efforts to help women economists in their region maintain and increase their professional networks. Abstracts of the papers presented at these association meetings are presented in the newsletters each year.

## Additional Words of Thanks

In January 2003, Joan Haworth, stepped down as interim Chair. The Committee is deeply indebted to her for the leadership she provided over the previous two years, and also for her long prior service to CSWEP as membership Chair. We are happy to report that she has agreed to continue to serve in that capacity. Joan Haworth and her staff, including Lee Fordham and Donya Samara, are essential to the success of our outreach mission and we are very grateful to them for their efforts on our behalf. They maintain the

CSWEP roster of women economists that includes over 4000 women with whom we currently have contact. The terms of three of our Committee members ended in December - Andrea Beller, Janet Currie, and Claudia Goldin. They all made outstanding contributions and we are enormously grateful to them for their willingness to serve. This year we welcomed new Committee members Lisa Barrow, Daniel Hamermesh, Catherine Mann, and Karine Moe. We are pleased to have them aboard and thank them for the very significant contributions they have already made. The Chair also thanks the other members of the Committee for their exceptional efforts in the past year to advance the goals of CSWEP.

Finally the Chair warmly thanks Liane O'Brien who has provided excellent and indispensable administrative support for the Committee and served as Assistant Editor of the Newsletter over the past year. The

Chair is also extremely grateful to Cornell University and the staff of the School of Industrial and Labor Relations for their administrative support of CSWEP's activities and for providing CSWEP with office space and other resources.

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Table 5: The Percentage of Economists in the Pipeline Who Are Female

|  | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| All Ph.D. Granting Departments |  |  |  |  |  |  |  |  |  |  |  |
| 1st yr students | 30.5\% | 29.0\% | 30.5\% | 30.5\% | 31.3\% | 32.2\% | 35.6\% | 38.8\% | 31.9\% | 33.9\% | 34.0\% |
| ABD | 27.2\% | 25.7\% | 27.8\% | 28.3\% | 26.8\% | 28.2\% | 33.0\% | 32.3\% | 30.2\% | 30.6\% | 32.7\% |
| New PhD | 24.2\% | 26.8\% | 23.2\% | 24.1\% | 25.0\% | 29.9\% | 34.2\% | 28.0\% | 29.4\% | 27.2\% | 29.8\% |
| Asst Prof (U) | 24.0\% | 22.9\% | 24.2\% | 23.8\% | 26.0\% | 25.9\% | 27.8\% | 21.4\% | 22.5\% | 23.2\% | 26.1\% |
| Assoc Prof (U) | 7.4\% | 6.4\% | 14.1\% | 9.1\% | 11.1\% | 15.9\% | 27.3\% | 17.2\% | 10.0\% | 17.2\% | 24.0\% |
| Assoc Prof (T) | 14.5\% | 13.6\% | 12.9\% | 15.4\% | 13.4\% | 14.0\% | 15.1\% | 16.2\% | 15.3\% | 17.0\% | 19.9\% |
| Full Prof (T) | 6.7\% | 6.3\% | 7.5\% | 8.4\% | 6.5\% | 6.1\% | 6.5\% | 7.4\% | 5.8\% | 8.9\% | 9.4\% |
| N departments | 81 | 111 | 95 | 98 | 95 | 92 | 77 | 76 | 69 | 83 | 95 |


| Top 10 Ph.D. Granting Departments |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1st yr students | $19.5 \%$ | $23.8 \%$ | $24.5 \%$ | $26.5 \%$ | $20.3 \%$ | $27.2 \%$ | $29.6 \%$ | $29.5 \%$ | $26.9 \%$ | $28.5 \%$ | $21.2 \%$ |
| ABD | $20.0 \%$ | $20.2 \%$ | $24.1 \%$ | $23.9 \%$ | $25.0 \%$ | $22.0 \%$ | $25.2 \%$ | $25.2 \%$ | $26.6 \%$ | $27.0 \%$ | $26.1 \%$ |
| New PhD | $22.8 \%$ | $27.9 \%$ | $19.6 \%$ | $18.6 \%$ | $16.5 \%$ | $25.9 \%$ | $24.3 \%$ | $23.0 \%$ | $30.5 \%$ | $25.7 \%$ | $26.3 \%$ |
| Asst Prof (U) | $22.5 \%$ | $18.8 \%$ | $14.1 \%$ | $21.1 \%$ | $20.0 \%$ | $17.7 \%$ | $14.7 \%$ | $18.2 \%$ | $18.8 \%$ | $15.8 \%$ | $21.9 \%$ |
| Assoc Prof(U) | $6.7 \%$ | $6.7 \%$ | $6.7 \%$ | $0.0 \%$ | $12.5 \%$ | $36.4 \%$ | $45.5 \%$ | $30.8 \%$ | $13.3 \%$ | $7.7 \%$ | $11.1 \%$ |
| Assoc Prof(T) | $20.0 \%$ | $18.6 \%$ | $12.0 \%$ | $20.0 \%$ | $12.5 \%$ | $7.7 \%$ | $28.6 \%$ | $36.4 \%$ | $23.5 \%$ | $28.6 \%$ | $17.6 \%$ |
| Full Prof (T) | $3.5 \%$ | $2.9 \%$ | $4.7 \%$ | $5.3 \%$ | $5.0 \%$ | $3.7 \%$ | $3.9 \%$ | $7.1 \%$ | $6.3 \%$ | $5.6 \%$ | $7.0 \%$ |
| N departments | $\mathbf{8}$ | $\mathbf{1 0}$ | $\mathbf{9}$ | $\mathbf{9}$ | $\mathbf{8}$ | $\mathbf{7}$ | $\mathbf{7}$ | $\mathbf{7}$ | $\mathbf{1 0}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |


| Top 20 Ph.D. Granting Departments |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1st yr students | $21.9 \%$ | $27.8 \%$ | $26.1 \%$ | $30.2 \%$ | $21.5 \%$ | $28.8 \%$ | $31.1 \%$ | $32.8 \%$ | $30.5 \%$ | $31.9 \%$ | $26.1 \%$ |
| ABD | $23.4 \%$ | $22.6 \%$ | $26.8 \%$ | $26.4 \%$ | $28.6 \%$ | $24.1 \%$ | $25.4 \%$ | $26.2 \%$ | $27.2 \%$ | $27.2 \%$ | $28.4 \%$ |
| New PhD | $25.4 \%$ | $28.4 \%$ | $21.8 \%$ | $22.7 \%$ | $24.9 \%$ | $27.1 \%$ | $28.1 \%$ | $24.6 \%$ | $26.8 \%$ | $24.7 \%$ | $24.8 \%$ |
| Asst Prof (U) | $20.4 \%$ | $18.9 \%$ | $17.5 \%$ | $18.2 \%$ | $17.8 \%$ | $16.4 \%$ | $21.6 \%$ | $17.7 \%$ | $18.8 \%$ | $21.5 \%$ | $25.1 \%$ |
| Assoc Prof (U) | $5.0 \%$ | $5.0 \%$ | $5.9 \%$ | $0.0 \%$ | $7.7 \%$ | $36.4 \%$ | $46.2 \%$ | $26.7 \%$ | $13.3 \%$ | $13.3 \%$ | $23.1 \%$ |
| Assoc Prof (T) | $9.0 \%$ | $10.7 \%$ | $12.1 \%$ | $16.7 \%$ | $16.0 \%$ | $8.3 \%$ | $16.3 \%$ | $12.8 \%$ | $19.6 \%$ | $22.9 \%$ | $18.9 \%$ |
| Full Prof (T) | $3.8 \%$ | $4.2 \%$ | $5.4 \%$ | $5.5 \%$ | $5.9 \%$ | $4.7 \%$ | $4.8 \%$ | $7.4 \%$ | $7.0 \%$ | $9.0 \%$ | $6.3 \%$ |
| N departments | $\mathbf{1 8}$ | $\mathbf{2 0}$ | $\mathbf{1 9}$ | $\mathbf{1 9}$ | $\mathbf{1 7}$ | $\mathbf{1 6}$ | $\mathbf{1 5}$ | $\mathbf{1 5}$ | $\mathbf{1 8}$ | $\mathbf{1 8}$ | $\mathbf{1 8}$ |

[^4]
## Women

## Academics


his issue focuses on women and academics: lessons from outside
economics. Diane Quinn, a social psychologist at the University of Connecticut details research on how "stereotype threat" can impact women's performance in the classroom. She provides suggestions for teachers who want to minimize the role of stereotype threat in their classrooms. Laura Perna, a professor of education at the University of Maryland details her research on the progress of men and women through the academic hierarchy across many disciplines. Ron Ehrenberg, an economist at Cornell University, explains his role as the head of the American Association for University Professors salary survey, and tells us what we can and cannot learn from that survey.

Women, Math, and Stereotype Threat<br>by Diane M. Quinn, Assistant Professor, University of Connecticut



For many years, social scientists have tried to explain the gender gap on standardized mathematical tests. Explanations have ranged from biologically based to developmentally socialized. For example, researchers have examined differences in brain formation and exposure to neonatal hormones, as well whether girls are less likely to be encouraged to experiment with math and science outside of the classroom. I am not wholly disputing these or other related possibilities, however, I would like to suggest that when examining why the best and brightest of women under perform on math tests or drop out of math related fields, the subtle effects of cultural stereotypes have been largely overlooked.

Few would argue that the American culture abounds with stereotypes. When I ask students in my undergraduate psychology classes to name stereotypes, they can spout ten to twenty stereotypes with ease. One stereotype that all know is that boys/men are better at math and science domains, whereas girls/women are better at English and reading domains. These stereotypical beliefs are transmitted throughout the culture via mass media, books, parents, peers, and teachers.

How might these negative stereotypes account for a gap between men and women on tests of mathematical ability? My colleagues Steve Spencer, Claude Steele, and I believe the answer lies in the interaction between cultural stereotypes and the test taking situation, what we call a "stereotype threat" situation. Stereotype threat occurs when a person is in a situation in which a negative stereotype about that person (or that person's group) could be applied to the person and used to judge the person's behavior. In the case of gender and math, imagine a boy and girl sitting down to take the SAT for the first time. They have equivalent math experience. Taking the SAT is a tense, sometimes frustrating experience for both of them. However, as the girl is taking the test she has an extra worry to contend with that the boy does not: A stereotype that she, as a girl, has inferior math skills. As she experiences frustration and difficulty with the problems, she has the burden of knowing that her difficulty could be judged as proof
of the veracity of the stereotype. The boy has none of these doubts or thoughts to interrupt his performance. It is important to note that in this situation neither the girl nor the boy have to believe that the stereotype is true. Stereotype threat is not an explanation based on internalized inferiorization. Just the knowledge of the stereotype itself is enough to affect performance in the situation. How do we know this occurs?

My colleagues and I have tested the stereotype threat hypothesis in a series of studies (Quinn \& Spencer, 2001; Spencer, Steele, \& Quinn, 1999). In all of our experiments we bring university men and women matched for equivalent math backgrounds and interest in to the laboratory. In the first of these studies we simply gave participants an easy or difficult math test. We found that women only performed worse than men on the difficult math test. To demonstrate that it was the threat of the stereotype that caused this underperformance, we gave a second group of men and women the same difficult math test. In order to make stereotypes about math explicit, half of the participants were told that the test had shown gender differences in the past. In order to eliminate a stereotype based interpretation of the situation, the other half of the participants were told that the test had been shown to be gender fair-that men and women performed equally on this test. In line with our predictions, when the stereotype was not applicable to the situation, when men and women were simply told that they were taking a gender fair test, men and women performed equally on the test. When told that the exact same test had shown gender differences in the past, women scored lower on the test than men. Just a simple change in the situation-a different line in the instructions--changed an outcome that many believed intractable. Notably, and perhaps more ominously, we have also conducted studies where we have a condition in which we do not mention gender at allwe simply describe the math test as a standardized test. In this situation, women also score lower on the test than men, suggesting that standardized mathematical testing situations are implicitly stereotype threat situations. Follow-up research in our own and other laboratories has replicated these findings and explicated some of the boundaries of stereotype threat. Stereotype threat occurs most strongly for women who

# "If girls and women encounter fewer situations in which they experience stereotype threat, their increasing performance may one day break the ugly cycle of the stereotype leading to poor performance and the poor performance in turn feeding the stereotype." 

are highly identified with math and are taking a test that is pushing the limit of their skills. When a test is easy or the women no longer care about how they perform on the test, changing the stereotype relevance of the situation is unlikely to affect performance.

We have found some provocative clues to how stereotype threat works to undermine women's performance. Stereotype threat situations lead to both increased feelings of anxiety and more cognitive activation of female stereotypes. Both anxiety and stereotype activation have been linked to worse performance. When we look at what women and men are actually doing when working on the difficult test, we found that women and men primarily used the same strategies to solve the problems, however, women in stereotype threat situations were less likely to think of any way to solve a problem. That is, women were more likely to "blank out" or "choke" on a problem when they were in a stereotype threat condition. Thus research results so far point to the following scenario: When women with a strong interest and identification with math are in a situation in which their math skills could be negatively judged, their performance is undermined by the cognitive activation of gender stereotypes combined with some feelings of stress or anxiety.

Although more research is needed to fully delineate the stereotype threat process, we do know that women are not alone in being affected by negative stereotypes. Research on stereotype threat has demonstrated its effect on AfricanAmericans and Latinos in intellectual situations, on the elderly in memory testing situation, and even on White men in sports situations. (For review, see Steele, Spencer, \& Aronson, 2003).

What can be done about a cultural stereotype? Some might argue that if the stereotype is "out there" in the culture, there is nothing that can be done to stop its effects. However, we are not so pessimistic. In our studies we make very simple changes-adding a line in the instructions communicating that a test is gender-fair or non-diagnostic-that have a dramatic effect. If girls and women encounter fewer situations in which they experience stereotype threat, their increasing performance may one day break the ugly cycle of
the stereotype leading to poor performance and the poor performance in turn feeding the stereotype.

While we are waiting for the cultural stereotype to dissipate, here are a couple of suggestions for minimizing the impact of stereotypes in economics and other math based classes:

- Minimize stereotypic portrayals of women in classroom materials and examples. Research has shown that even seeing commercials where women were portrayed as stereotypic housewives or clueless "airheads" led to women performing worse on tests and not being as interested in mathematics based careers (Davies et al. 2002).
- Try not to turn women students into tokens (e.g. the sole woman in a work group). Many studies have now shown that when people feel like tokens, they under perform.
- Stress the gender equity and fairness of your tests. Also, point out to students after exams are returned that ALL students struggle with difficult concepts. Women and minorities sometimes wonder if they are the only ones struggling.
- Establish trust with your students. The more students trust their instructor, the less concerned they are with being stereotyped.


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# The Relationship between Family Responsibilities and Career Outcomes for Women and Men Faculty <br> by Laura W. Perna, Assistant Professor, University of Maryland 



Aquestion that women faculty are often asked by doctoral students is, "How do you simultaneously manage work and family responsibilities?" The following headlines from recent articles in the Chronicle of Higher Education suggest at least some of the perceived challenges:
"Baby, baby, baby: Pregnancies test a department's ability to cope" (Wilson, 2003)
"Papers and pampers: The challenges of attending a scholarly meeting, children in tow" (Wilson, 2002)
"Family time: Why some women quit their coveted tenuretrack jobs" (Fogg, 2003)

While women in general are underrepresented among the nation's college and university faculty, women with spouses or partners and/or children are particularly underrepresented. Data from the National Center for Education Statistics (2003) show that, although women received the majority of bachelor's degrees (57 percent) and master's degrees (59 percent) and nearly one-half of doctoral degrees (45 percent) in 2001, women comprised only 36 percent of all full-time faculty at degree-granting institutions nationwide in fall 1998. Table 1 shows that the representation of women varies by both institutional type and academic field, with women most severely underrepresented among full-time faculty at public and private research universities and in engineering, physical sciences, philosophy, and economics.

Women who are also wives and mothers are particularly underrepresented among the nation's college and university faculty, as substantially smaller shares of women than men faculty are married and/or have at least one child. In recent work (Perna, 2003), I measure differences between male and female full-time faculty at four-year colleges and universities in the fall of 1998. Only 66 percent of the women faculty were married compared with 84 percent of men. Being both married and a faculty member appears to be more problematic for women than for men as twice the proportion of women as men were separated, divorced, or widowed (15 percent versus

7 percent) or single, never been married (18 percent versus 9 percent). Perhaps reflecting research showing that childcare and other household responsibilities are a greater source of stress for women than for men faculty and that women perceive more conflict between work and family demands than men (Dey, 1994; Sorcinelli \& Near, 1989; Tack \& Patitu, 1992), I find that smaller shares of women than men faculty assume parental roles. Only 49 percent of the women faculty in my study had at least one dependent, compared with 70 percent of men faculty. About one-fourth of men faculty, but only 10 percent of women faculty, had three or more dependents.

The nature of work-family stress appears to vary by the type of institution in which faculty work. Women assistant professors with young children who work at liberal arts colleges have been found to experience greater tension between service and family demands than women at other types of institutions, while women assistant professors at community colleges perceived work and family responsibilities to be compatible (Ward \& Wolf-Wendel, 2003). Nonetheless, regardless of institutional type, women assistant professors with young children are uniformly concerned about the optimal timing of childbearing relative to the tenure process and the challenges that are associated with managing both household and career responsibilities (Ward \& Wolf-Wendel, 2003).

In terms of both tenure and rank, the attainment of women faculty lags behind that of men faculty. Data from the NCES (2003) show that women represent a smaller share of faculty with the highest rank of full professor (21 percent) than of faculty with the lowest ranks of assistant professor ( 45 percent), instructor (51 percent), and lecturer (54 percent). Women are also relatively concentrated in part-time faculty positions, as a higher share of women than men faculty held part-time rather than full-time positions in fall 1999 (48 percent versus 38 percent). Furthermore, Bradburn and Sikora (2002) show that about 24 percent of women, but only 15 percent of men, full-time faculty held non-tenure track positions in fall 1998. Moreover, the gender gap in tenured positions has not been
closing. About 40 percent of women full-time faculty, but 60 percent of men full-time faculty, held tenured positions in both 1992 and 1998 (Parsad \& Glover, 2002).

My research has focused on examining the extent to which marital and parental status contribute to the lower rank and tenure status of women faculty after controlling for other explanations (Perna, 2001, 2003). This research suggests that men benefit in terms of rank and tenure from being married and having children, but women do not. Using data from the 1993 National Study of Postsecondary Faculty (NSOPF:93) and controlling for measures of human capital and structural characteristics, Perna (2001) found that men with at least one child were less likely to hold a (lower-status) full-time, non-tenure track position than they were to hold a (higher-status) full-time, tenure track position. In contrast, women who were married were more likely to hold a (lower-status) parttime, non-tenure track position than a (higher-status) full-time tenure track position after controlling for other variables (Perna, 2001). Using data from the NSOPF:99, Perna (2003) found neither parental nor marital status were related to tenure status or academic rank among women faculty at four-year institutions in fall 1998 net of differences in human capital and structural characteristics. In contrast, men with children were more likely to hold tenured positions and less likely to hold the ranks of instructor and lecturer. Men with a spouse or partner who was not employed in higher education (and perhaps not employed at all) were more likely than other men to hold the rank of full professor. Other research shows that married men faculty benefit from having wives or partners in terms of their productivity and salaries (Bellas, 1992; Toutkoushian, 1998). Together, these findings suggest that men with children and men who are married benefit from having a spouse

Table 1: Representation of women among full-time faculty in degree-granting institutions by institutional type and selected academic program areas: Fall 1998

## Percent

Program area Women
Total 36.3\%

| Institutional Type |  |
| ---: | ---: |
| Public research | $29.5 \%$ |
| Private research | $26.2 \%$ |
| Public doctoral | $33.3 \%$ |
| Private doctoral | $36.4 \%$ |
| Public comprehensive | $38.3 \%$ |
| Private comprehensive | $36.7 \%$ |
| Private liberal arts | $37.9 \%$ |
| Public 2-year | $49.9 \%$ |
| Other | $32.1 \%$ |


| Academic Program Area |  |
| ---: | ---: |
| Agriculture \& home economics | $19.5 \%$ |
| Business | $35.1 \%$ |
| Communications | $32.2 \%$ |
| Education | $57.5 \%$ |
| Engineering | $9.2 \%$ |
| Fine arts | $31.5 \%$ |
| First-professional health | $28.9 \%$ |
| Nursing | $96.2 \%$ |
| English \& literature | $52.9 \%$ |
| Foreign language | $53.3 \%$ |
| History | $32.5 \%$ |
| Philosophy | $16.5 \%$ |
| Law | $35.1 \%$ |
| Biological sciences | $29.2 \%$ |
| Physical sciences | $14.1 \%$ |
| Mathematics | $24.6 \%$ |
| Computer science | $31.8 \%$ |
| Economics | $17.6 \%$ |
| Political science | $22.3 \%$ |
| Psychology | $37.9 \%$ |
| Sociology | $38.1 \%$ |

Source: NCES (2003), pp. 279, 280.
or partner who handles a greater share of household and childrearing responsibilities.

Existing research on the relationship between family responsibilities and such outcomes as employment status, academic rank, and tenure likely understates the magnitude of the relationships. For example, my studies (Perna 2001, Perna 2003) use a cross-sectional national database (NSOPF:93 and NSOPF:99) to examine longitudinal tenure and promotion processes. The research underestimates the relationships between family responsibilities and career outcomes if women with family responsibilities are more likely to leave the academy before attaining a tenured or full professor position or if women who want to be married and/or have children decide not to pursue faculty careers.

The perceived conflict between family and faculty roles may be deterring some individuals from pursuing faculty careers. A 1999 survey of doctoral students in 11 arts and sciences disciplines at 27 universities suggests an equivocal relationship between the perceived "ability to raise a family and lead a balanced life" and a students' interest in pursuing an academic career (Golde \& Dore, 2001). Approximately equal shares of respondents thought that the "ability to raise a family and lead a balanced life" was a reason to pursue a faculty career, a reason not to pursue a faculty career, and a reason unrelated to pursuing a faculty career (Golde \& Dore, 2001).

Greater institutional and departmental support is required to assist women faculty with the challenges that are associated with managing work and family demands. One study suggests that colleges and universities generally recognize that such policies as on-campus childcare, employment assistances for spouses and partners, and flexible schedules and
leaves contribute to faculty recruitment and retention goals (Wolf-Wendel, Twombly, \& Rice, 2000). But, while most (85 percent) of the 360 institutional respondents indicated that they would "do something" to assist dual-career couples, only 24 percent reported having formal policies (Wolf-Wendel et al., 2000). Similarly, a 1991 survey of 191 colleges and universities showed that, although most institutions had a policy regarding unpaid or paid leave for mothers at childbirth, fewer than one-half had policies covering job assistance for the spouse, accommodative scheduling, unpaid leave for fathers at childbirth, or on-campus childcare centers (Raabe, 1997).

Institutions must not only adopt formal policies but also eliminate barriers to utilization of such policies (Raabe, 1997). One survey showed that the majority (70 percent) of tenured and tenure track faculty at one university believed that taking leave after the birth of a child would be detrimental to their careers (Finkel, Olswang \& She, 1994).

Effectively implementing family-related policies will likely improve both the recruitment and retention of women faculty in general, and of women faculty who are married and/or have (or want) children in particular (Wolf-Wendel et al., 2000). A single institution study shows that job and life satisfaction are more highly correlated among college and university faculty than among the general population, and that both men and women who are married and have children are concerned about dual careers, commuter marriages, and childrearing (Sorcinelli \& Near, 1989). By adopting and encouraging the use of policies, practices, and initiatives that recognize that many faculty are, or want to be, spouses and parents, colleges and universities, and academic departments within these institutions, will create an environment that fosters faculty success.

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A Brief Guide to the AAUP Salary Data<br>by Ronald G. Ehrenberg, Irving M. Ives Professor of Industrial and Labor Relations and Economics at Cornell University, Director of the Cornell Higher Education Research Institute, Chair of the American Association of University Professor Committee on the Economic Status of the Profession and former CSWEP Board Member



The American Association of University Professors (AAUP) has been collecting average faculty salary data by rank and gender for over 30 years. These institutional level data are published each year, usually in the March/April issue of Academe: Bulletin of the American Association of University Professors, along with an article analyzing faculty compensation issues written by the chair of the AAUP committee that supervises the data collection. Last year's report that I wrote highlighted, among other things, the decline in the salaries of faculty at public higher education institutions relative to the salaries of faculty in private higher education institutions and the growing dispersion of average salaries across higher education institutions, both within and between the public and private sectors. ${ }^{1}$ A long string of talented economists, including William Baumol (then at Princeton), Peter Steiner (Michigan), Robert Dorfman (Harvard), W. Lee Hansen (Wisconsin), Hirschel Kasper (Oberlin), Daniel Hamermesh (Texas) and Linda Bell (Haverford) have served as chair of the committee.

The AAUP data not only document faculty salary levels, but may also play a role in determining future levels. They represent average data for all full-time faculty members at the university, excluding faculty in medical colleges and health sciences. Thus, they can not be used to compare salaries within a discipline across institutions. They have long been used, however, by faculty on budget or finance committees to inform discussions with central administrators regarding the parameters of the next year's budget (e.g. tuition increases, faculty salary increases, and endowment payout rates). Often, the faculty and administration will agree on a set of institutions that they consider their competitors for faculty and discuss where they want to rank vis a vis their competitors with respect to faculty salaries. If an institution's relative salary position declines over time, faculty try to use this to pressure the administration to raise salaries at a more rapid rate. Conversely, if the institution's relative salary position improves beyond where the institution wanted to be, the administration can use this information to suggest a moderation of faculty salary increases in the following year. Because both faculty and administrators around the nation understand the usefulness of these data, response rates to the survey have historically been very high, save for two-year colleges.

In addition to collecting average salary data by rank, the AAUP collects and publishes information on the costs to academic institutions of the legally mandated and voluntarily
provided or bargained benefits that the institutions provide to faculty (social security, health insurance, retirement contributions, housing benefits, children's tuition benefits and the like). This permits faculty and administrators to also analyze the institution's average compensation by rank and to discuss if the institution's faculty compensation packages reflects a mix of salary and benefits that is optimal from both the institutional and faculty perspective. In recent years, increases in employer health insurance costs have often caused average faculty compensation to increase by more rapid rates than average faculty salaries, to the consternation of both faculty (who see no improvements in their health benefits only cost increases) and to the institution (that has to bear a large share of the increasing costs).

The AAUP also collects information on the number of male and female faculty at each rank, the average salary by rank and gender and the proportion of faculty members with tenure by rank and gender. These data can be used in studies of how gender differences in average salaries and faculty numbers vary across institutions and ranks at a point in time and at a given institution or nationally over time. These data are insufficient for studies of gender discrimination in salaries because information is not collected on the distributions of male and female faculty members across fields of study, their seniority distributions, or their "productivity". Similarly, they can not be used for the type of cohort analyses that one is able to do with the data collected by CSWEP; for example tracing an entering cohort of new assistant professors to see how the probabilities of ultimately receiving tenure vary between male and female faculty members. However, the AAUP data do suggest a number of patterns that should be familiar to CSWEP members - small annual progress in female representation at each rank, female representation being higher at the assistant professor level than at the associate professor level and higher at the associate professor level than at the full professor level. The 2002-2003 data indicated that women earned an average of 88.8 percent of what men earned at the full professor level, 93.1 percent of what males earned at the associate professor level and 92.4 percent of what males earned at the assistant professor level. These differentials in average male and female salaries have not substantially narrowed during the last 5 to 10 years.

The AAUP also asks institutions to report the number of its faculty members at each rank who are continuing faculty members. Continuing faculty members are defined as faculty members who are present at the institution in the current year
who were also present at the institution in the previous year. So for example, an assistant professor in year $\mathrm{t}-1$ that is promoted to associate professor in year $t$ would be considered a continuing assistant professor. Institutions are then asked to report their total payroll by rank in the current year and in the previous year for these continuing faculty members. These data permit the AAUP to compute for each institution the average percentage increase in a year for its continuing faculty members at each rank.

The AAUP publishes information for each institution on the average percentage increase in continuing faculty member salaries at each rank, along with information on the average percentage increase in the salary of faculty members at each rank. The former shows how faculty members who have stayed at the institution over the two-year period have fared. Usually, the average percentage increase in salaries for continuing faculty members is higher than the increase in the average salary at each rank because some high paid people in a rank retire or voluntarily or involuntarily leave to go to other academic or nonacademic employers, and these departures are typically replaced by lower paid younger people.

The AAUP does not publish data on the number of continuing faculty members at each institution but these data are available in the institutional submissions. By dividing the number of continuing faculty members in a rank one year, by the number of faculty members in the rank the previous year, one obtains an estimate of the continuation rate, the share of faculty members in a rank that are at the institution for two consecutive years. At the assistant professor level, the continuation rate will be influenced by both voluntary and involuntary turnover. At the full professor level, it will be influenced by faculty retirements, which depend upon the age distribution of the institution's full professors. At the associate professor level, in institutions in which associate professors are a tenured rank, it will reflect primarily voluntary turnover. Research using these data has shown that an institution's associate professor continuation rate is positively related, ceteris paribus, to its associate professor salary level, a result that should not surprise economists. ${ }^{2}$ Similarly, research has indicated that associate professor continuation rates are higher at private than at public institutions, a result that is consistent with faculty members at public higher education institutions receiving lower average salaries than faculty members at private higher education institutions.

If one is interested in how economists' salaries compare to salaries of faculty members in other disciplines, one must
turn to other salary surveys. Every few years the AAUP salary report issue contains information on salaries by discipline obtained from an annual survey of doctoral-granting institutions conducted by the Office of Institutional Research and Management at Oklahoma State University (OSU). ${ }^{3}$ Begun in 1974 by choosing among members of the National Association of State Universities and Land Grant Colleges, the participating institutions are generally among the "flagship" public doctoralgranting universities in their respective states. Several private land grant universities (Cornell and MIT) are also often survey respondents.

The average salary advantage of faculty employed in economics departments at these institutions relative to the average salary of humanists employed at these institutions grew during the last 15 years of the $20^{\text {th }}$ century. For example, at the new assistant professor level the earnings advantage of economists relative to English faculty members grew from about 33 percent to 49 percent during the period. ${ }^{4}$ National averages may give a very misleading impression, however, of how different higher economists' salaries are as compared to another discipline's faculty salaries at any specific institution. For example, if we order institutions in the 2001-2002 OSU survey by the magnitude of the salary advantage that new assistant professors in economics have over new assistant professors in English, the advantage at the $25^{\text {th }}$ percentile institution was 34 percent and the advantage at the $75^{\text {th }}$ percentile institution was 65 percent, a spread of 31 percentage points. ${ }^{5}$ Thus, the salary advantage that economists earn relative to English professors varies widely across institutions.

## Endnotes

${ }^{1}$ Ronald G. Ehrenberg, "Unequal Progress: The Annual Report on the Economic Status of the Profession, 2002-2003", Academe 89 (March/April 2003): 22-
33, available at http://www.aaup.org/surveys/zrep.htm . See also, Ronald G. Ehrenberg, "Studying Ourselves: The Academic Labor Market", Journal of Labor Economics 21 (April 2003): 267-287
${ }^{2}$ Ronald G. Ehrenberg, Hirschel Kasper and Daniel I. Rees, "Faculty Turnover in American Colleges and Universities", Economics of Education Review 10 (1991): 99-110

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# CSWEP Gender Sessions Summary: January 2004 ASSA 

Child Support Enforcement and Welfare Reform<br>Chair: Andrea H. Beller, (University of Illinois at UrbanaChampaign)

> Discussants: John W. Graham (Rutgers University, Newark), Andrea H. Beller (University of Illinois at Urbana-Champaign), Laura Argys (University of Colorado, Denver) and Lucie Schmidt (Williams College)

William Rodgers III (Rutgers University) presented a paper "Economic Rationales for Updating Child Support Schedules", co-authored with Yana van der Meulen Rodgers (College of William and Mary). Their paper discusses results of a study of costs of raising children estimated using 2000 Consumer Expenditure Survey data in order to update the child support guidelines schedule in the state of Virginia.

Elaine Sorensen (Urban Institute) presented a paper "Understanding How Child Support Arrears Reached $\$ 18$ Billion in CA". This paper presented estimates on whether the child support arrears in the state of California appeared to be collectible or not. Finding that the majority was uncollectible, the author made several policy recommendations for changing the state laws that lead to the accumulation of the massive arrears.

Yunhee Chang (University of Mississippi) presented a paper "Parenting Across State Lines: Effect of the Uniform Interstate Family Support Act". This paper estimated the effects of distance, living in another state and of the Uniform Interstate Family Support Act (UIFSA) on paternity establishment and child support awards using administrative data from the state of Illinois. Holding constant the effect of distance, crossing state lines still worsened child support outcomes, but UIFSA did not appear to improve these outcomes.

Lisa Gennetian (MDRC) presented "Staying Single: The Effects of Employment-Based Welfare Policies on Marriage and Cohabitation", a joint paper with Virginia Knox (MDRC). The paper uses meta-analysis to assess whether recent changes in the welfare system produced any unintended effects on marriage. They conclude that these programs did not have any meaningful effect on marriage and cohabitation for single parents.

## Session Summary: Economics of Marriage

Chair: Shoshana Grossbard-Shechtman, (San Diego State University and Columbia University)

## Discussants: Linda Edwards (The Graduate Center, City University of New York), Shoshana Grossbard-Shechtman (San Diego State University and Columbia University), Donna Ginther (University of Kansas) and Julie Hotchkiss (Georgia State University)

Catherine Sofer (Universite de Paris I-Sorbonne) presented a paper "Household Production in a Collective Model: some New Results", co-authored with Benoit Rapaport (Universite de Paris I - Sorbonne) and Anne Solaz (Institut National d'Etudes Demographiques). Their paper presents a collective model of decision-making in marriage based on the work by Pierre-Andre Chiappori. In contrast to the Chiappori model, they include household production in their model. The authors gave an illustration of how this model works by using data from a French study of time use. The discussant, Linda Edwards from the Graduate Center, City University of New York, liked the paper and made helpful suggestions regarding the
econometric aspects of the paper.
Tansel Yilmazer (Purdue University) presented "How Does Marriage Affect the Allocation of Assets in Women's Defined Contribution Plans?", co-authored with Angela Lyons (University of Illinois at Urbana-Champaign). This is a mostly empirical study of the investment choices of married men and women. Data were analyzed using the Survey of Consumer Finances. The authors use bargaining models, including collective models, to interpret their results. In discussing the paper, Shoshana Grossbard-Shechtman found the results very interesting and suggested that an autonomous market model of marriage can possibly explain most of the reported gender differences.

Terra McKinnish (University of Colorado, Boulder) presented a paper "Occupational Sex-Integration and Divorce", where she investigates the degree to which divorce responds to the fraction of male and female workers in an occupation or an industry. She predicts that individuals are more likely to divorce if they work in an occupation with a higher representation of members of the other sex. Her results support her prediction for both women and men. Donna Ginther (University of Kansas) gave the paper a strong endorsement and made helpful suggestions.

Finally, Kate Antonovics (University of California, San Diego) presented "Are All the Good Men Married? Uncovering the Sources of the Marital Wage Premium", a joint paper with Robert Town (University of Minnesota). The paper uses a twin study from Minnesota to ascertain causality in marital wage premium estimates. The authors find that even among monozygotic twins, those who marry earn higher wages, from which they conclude that marriage makes men more productive. They also estimate the influence of women's labor force participation on the marital wage premium for men. The discussant, Julie Hotchkiss, was positively impressed by the paper but pointed out that the fact that women's labor force participation does not seem to play a role in explaining the marital wage premium for men does not prove that the specialization hypothesis in household economics can be dismissed as irrelevant.

In conclusion, this was an excellent session consisting of four outstanding papers. The discussants' comments were generally appreciated as well. The session concluded with questions from the audience and answers by the authors.

## Session Summary: Education and Gender

Chair: Francine D. Blau (Cornell University)
Discussants: Caroline Hoxby (Harvard University), Lawrence Kahn (Cornell University) and Karine Moe (Macalester College)

Uri Gneezy (University of Chicago) presented a paper with Aldo Rustichini (University of Minnesota) on "Gender and Competition at a Young Age". The paper tests the hypothesis that when the competitiveness of the environment increases, the performance of men increases relative to that of women. The authors conducted a field study with 9 -year old children, running on a track. They first run alone and then in pairs over a short distance with different gender composition of the pairs. The results support the hypothesis that performance in competition varies according to gender. When children ran alone, there was no difference in performance. In competition boys, but not girls, improved their performance.

Deborah Anderson (University of Arizona) presented a paper co-authored with John Cheslock (University of Arizona) on "Institutional Strategies to Achieve Gender Equity in Intercollegiate Athletics: Does Title IX Harm Male Athletes?" The paper estimated the impact of Title IX pressures on changes in intercollegiate athletic offerings for men and women. Holding institutional
characteristics constant, their results indicated that institutions were more likely to add female teams or participants than to cut male teams or participants in order to move closer to compliance between 1995/96 and 2001/02.

Shirley Johnson-Lans (Vassar College) presented "Staying Single: The Effects of Employment-Based Welfare Policies on Marriage and Cohabitation". The paper is a regression analysis of a micro-data set of three cohorts of Vassar College women graduates, alumnae classes 1956, 1966, and 1976. Having a post-graduate degree was not found to have any significant effect on the probability of having bi-annual physical examinations, bi-annual mammograms, or bi-annual Pap smears, a regular program of exercise, daily consumption of vitamin pills, or smoking. However, for some of the groups, graduate education seems to be positively associated with having annual flu shots and with attention to healthy diets. Working full time is negatively related to exercise and having mammograms (both of which have time costs) but is also negatively associated with smoking. The most important finding, from a policy perspective, is that extent of health insurance coverage is positively associated with investment in screening and preventive health care and, for the cohort of women in their '40s, probability of having a mammogram is also positively related to family income.

Mary Arends-Kuenning (University of Illinois-Urbana-Champaign) was unable to attend the session due to a flight cancellation. Her paper, entitled "Does the Impact of the Food for Education Program in Bangladesh Differ by Gender?" co-authored with Akhter Ahmed looks at the spillover impact of a program that increased school enrollment on the achievement test scores of fourth-grade boys and girls who did not participate in the program. Achievement test scores decreased as the proportion of children in the classroom who received benefits increased, but the effect was offset somewhat by a positive impact of attending a school that participated in the program. The impacts of most of the explanatory variables did not differ significantly by gender, with the exceptions of attending a school with electricity, which increased girls' scores and had no effect on boys' scores, and parental participation, which had no impact on girls' scores and a positive impact on boys' scores.

# CSWEP Non-Gender Sessions Summary: January 2004 ASSA 

## Psychological Influences on Economic Decisions

Chair: Rachel Croson (University of Pennsylvania)

## Discussants: Paul Zak (Claremont Graduate University), Ananish Chaudhuri (University of Auckland), Rachel Croson (University of Pennsylvania), and Wendy Morrison (Indiana University-Purdue University-Indianapolis)

Monica Capra (Washington and Lee University) presented her paper "Mood Driven Behavior in Strategic and Non-Strategic Situation" in which she tested the effect of induced good and bad moods on choices in one-shot Dictator, Ultimatum and Trust games. The data suggest that good mood people are more helpful/altruistic than bad mood people as revealed by their choices in the dictator game. In addition, the author observed a larger deviation from the benchmark when good mood was induced. In both the ultimatum and the trust games, good mood subjects tended to be more strategic than bad mood subjects.

Lisa Anderson (College of William and Mary), Jennifer Mellor (College of William and Mary) and Jeffrey Milyo (University of Chicago) presented their paper "An Experimental Study of the Effects of Inequality and Relative Deprivation on Public Goods Contribution and Social Capital" which examined the effects of inequality on the propensity of subjects to contribute in a canonical public goods game. This paper was motivated by recent claims that inequality reduces group cohesiveness and expenditures on public goods, which conflict with some theoretical and empirical evidence on the relationship between inequality and public spending. Their experimental design introduced inequality by manipulating the level and distribution of a fixed payment (show-up fee) given to subjects immediately before they participated in a public goods experiment. In half of the experimental sessions, each subject's placement in the distribution of fixed payments was revealed publicly. In the other half of the sessions, fixed payments were assigned privately. The main finding of their study is that when inequality was made salient through public information about each individual's standing in the group, the unequal distribution of payments resulted in reduced contributions to the public good for all group members, regardless of their relative position. The authors interpreted these results as novel support for recent claims that inequality impacts group cohesiveness, a finding that has important implications for cooperation in collective action problems.

Iris Bohnet (Harvard University) and Steffen Huck (University College-London) presented the paper "Repetition and Reputation: Implications For Trust And Trustworthiness". The paper experimentally examines the effects of direct and indirect reputation systems in the short and in the long run. In the first phase, subjects (1) play a binary-choice trust game with the same trustee repeatedly, (2) are matched with a different trustee in each round but receive information on the trustee's past behavior or (3) play a standard one-shot game (control). In the second phase, all subjects are confronted with a standard one-shot game and a new partner (without information provided). In the first phase, both, trustors and trustees, strongly respond to the direct reputation-building opportunities in a repeated game, while, trustees respond more strongly to indirect reputa-tion-building than trustors. Direct reputation systems have spillover effects into the second phase. After repeat interactions in the first phase, trustees are more trustworthy than their counterparts in the reputation and the control treatments. The authors conclude that interactions in closely-knit small groups may have long-lasting beneficial effects.

Susan Laury and Laura Taylor (Georgia State University) paper "Altruism Spillovers: Does Laboratory Behavior Predict Altruism in the Field?" addresses a common criticism of experiments used to test economic hypotheses: that the laboratory environment is so sterile as to lose its relevancy for more complex "naturally occurring" markets and behaviors. The paper tests the external validity of experiments using the voluntary contribution games to investigate the nature of altruistic behavior. First, they present a context-free laboratory public goods experiment that is used to estimate the level of altruism exhibited by each subject. A follow-up experiment is immediately conducted in which subjects are given the opportunity to contribute to a naturally-occurring local public good using the money earned from the first experiment. Consistent with expectations, subjects with a negative altruism parameter are the least likely to contribute to a naturally-occurring public good. However, contrary to expectations, subjects with positive altruism parameters are significantly less likely to contribute to a naturally-occurring public good than subjects who decisions were consistent with pure Nash, own-income maximizing behavior (nonsignificant altruism parameters).

## Experiments in Public Policy

Chair: Christine Jolls (Harvard University)

## Discussants: Sarah Stafford (College of William and Mary), Alessandra Cassar (University of California, Santa Cruz), Christine Jolls (Harvard University), and Raymonda Burgman (DePauw University)

Laurie Tipton Johnson (University of Denver), Elisabet Rutstrom, (University of South Carolina) and J. Gregory George (Macon State College) presented their paper "Property Rights Violations and Willingness to Pay" which created an experiment in which they elicit individual preferences over alternative distributions of scarcity rents in a context where such rents are generated from restricting negative externalities. An economic history is first generated by playing a negative externality game, after which participants are presented with two regulatory solutions. One is a traditional grandfathering scheme, in which pollution permits are allocated based on historical pollution levels, and the other is a trust fund scheme, where the rents are distributed equally. The results show that individuals prefer the trust fund scheme, giving rise to an expressed willingness to pay (WTP) to impose the trust allocation rather than the grandfathering allocation. The results further show that these preferences are not fixed, but depend on the economic history of the negative externality game. In particular, they depend on the intensity and dispersion of past attempts to cooperate in avoiding pollution and maximizing group earnings.

The paper by Linda Babcock (Carnegie Mellon University), Claudia Landeo, and Maxim Nikitin, (University of Alberta) "Split-Award Tort Reform, Firm's Level of Care and Litigation Outcomes: An Experimental Study" studies the impact of the split-award statute, where the state takes a share of the plaintiff's punitive damage award, on settlement outcomes. The authors construct a strategic model of litigation under asymmetric information and provide experimental evidence of the effects of this reform. Results indicate that settlement rates are significantly higher when bargaining is performed under the split-award institution. Defendant's litigation expenses and plaintiff's net compensation are significantly lower under the split-award statute.

David Dickinson and Lynn Hunnicutt, (Utah State University) presented their paper "Effects of Non-Binding Suggestions on Bargaining Outcomes" which explores the possibility that nonbinding suggestions might lower dispute rates. Specifically, they consider the case where a suggestion is given prior to a mandated settlement, and we consider both a naïve and sophisticated arbitrator. The sophisticated arbitrator takes the disputants' final offers into consideration in implementing the binding settlement, whereas the naïve arbitrator does not. In both cases, a nonbinding suggestion is given at some point prior to arbitration. The results of the experiments show that for both naïve and sophisticated arbitrators, nonbinding suggestions lower dispute rates, indicating the dominance of a focal point effect. These results have implications for the design of dispute resolution procedures, such as the use of nonbinding mediation prior to binding procedures.

The paper by Bernard Fortin, Guy Lacroix, (Laval University), JeanLouis Rulliere, and Marie-Clare Villeval (University Lumiere Lyon) "Tax Evasion and Social Interaction" first develops a theoretical framework for analyzing the impact of social inter-actions on tax evasion behavior. Using Manski's (1993) nomenclature, the approach takes into account social conformity effects (expressing endogenous interactions) and fairness effects (ex-pressing exogenous interactions). The latter reflect the taxpayer's perception of how he is treated by the tax system relative to others. The model also allows for individual unobservable attributes common across reference group members (expressing correlated effects). To test the model, the authors perform a tax evasion experiment involving 12 sessions of 15 par-
ticipants. In each round of a session, participants are told the tax rate and the audit probability they face and those faced by the other participants (their reference group). In the second part of each session, the participants are given additional information about the number of evaders and the mean reported income by the other participants in the previous period. To estimate the model, we develop a two-limit simultaneous tobit with fixed group effects. Nonlinearities introduced by this approach allow the authors to identify the model without any exclusion restrictions on exogenous interactions variables. Results indicate the presence of fairness effects but reject the presence of social conformity and correlated effects.

## Information and Observability

## Chair: Sara Solnick (University of Vermont)

Discussants: Orly Sade (Hebrew University), Sara Solnick (University of Vermont), Eliane Catilina (American University), and David Levine (UCLA)

Regina Anctil (University of Minnesota) presented "Information Transparency and Coordination Failure," which she wrote with John Dickhaut, Chandra Kanodia and Brian Shapiro. They varied the quality of a signal and compared subjects' decisions to stay in or drop out of a risky project. They found that when information transparency was increased, potential welfare improvements were not captured but potential welfare losses were not realized either. The choice between possible equilibria was better explained by risk dominance than efficiency. In their next experiment, risk dominance and information lead to different outcomes. The discussant pointed out that information can be given to all, as in the experiment, or only to the well-informed or only to the relatively uninformed. She proposed investigating differences in the recipient as well as the quality of information.

The second paper, Ragan Petrie's (Georgia State University) "Trusting Appearances and Reciprocating Looks: Experimental Evidence on Gender and Race Preferences," was presented in this session, while her originally scheduled paper on "Beauty, Gender and Stereotypes," joint with James Andreoni, was presented later in the day in a session on beauty. Ragan's subjects played a trust game in which their photo might or might not be displayed to the other player and they might or might not see a photo of the other player. She discovered that people were more trusting and trustworthy when their photographs were shown and there were gender and race effects. For example, women were trusted more, although they were not more trustworthy than men, but only when both players were seen.

Gary Charness (UC Santa Barbara) presented "They Are Watching You: Social Facilitation and Coordination," his paper with Luca Rigotti (Duke University) and Aldo Rustichini (University of Minnesota). Social facilitation means that behavior is affected by the presence of related parties. Although social facilitation has been found in cockroaches, Gary and his coauthors used human subjects to play a "battle of the sexes" game with and without immediate feedback and with and without an audience of stakeholders. They found that the presence of other players affected play. Subjects were no more likely to coordinate in front of an audience, but the coordination was much more likely to benefit the "home team."

The session concluded with Roberto Weber's "Learning with No Feedback: An Experimental Test Across Games." Roberto investigated whether people can learn purely by repetition and he attempted to distinguish "consensus" learning, in which people make the best response to their own previous choice, from "aha" learning, meaning people gain an understanding of how best to play, such as eliminating dominated strategies. The results of his experiment were more consistent with "aha" learning, although, as the discussant pointed out, the effects were modest.

# Southern Economic Association Meeting 

CSWEP sponsored and organized two sessions at the Southern Economic Association meetings in San Antonio, TX in November 2003.

## Issues in Labor Markets

Chair: Saranna Thornton
Donna K. Ginther presented "Does Science Discriminate Against Women: Evidence from Academia, 1973-1997?" Using data from the Survey of Doctorate Recipients, she evaluates differences in employment outcomes for academic scientists by gender. A decomposition of estimated salary differences shows that over time, gender salary differences can partly be explained by differences in observable characteristics for faculty at the assistant and associate ranks. Substantial gender salary differences for full professors are not explained by observable characteristics. Probit and duration model estimates indicate gender differences in the probability of promotion, making it less likely for women to be promoted to tenure. Between 1973 and 1997, very little has changed in terms of gender salary and promotion differences for academics in science. After evaluating potential explanations, she concludes that gender discrimination accounts for unexplained gender disparities.

In "Gender Inequalities in Higher Education Outcomes," Lois Joy investigates why the full-time salaries of recent male college graduates rise faster than the salaries of recent female college graduates. Data from the National Center for Education Statistics, Baccalaureate and Beyond 1993/ 94/97 surveys show that one year after graduating, full-time employed females earn 86 percent of what full-time employed males earn. Four years after graduation, this salary ratio falls to 78 percent. Gender differences in early salary growth come from education, job, employment history, and family formation effects. Key factors also are gender differences in the incidence and returns to college major, occupation, sector, and industry. However, 55-70 percent of the gender gap in salary growth remains unexplained by gender differences in the family formation, education, or labor market variables.

Sharon H. Mastracci considers who might gain from new jobs in information technology with implications for educators and career counselors. "Who's Information Age? Employment Prospects for Non-College Women and Men in the New Economy" examines the probability of holding an IT job based on educational attainment and the probability of holding one of these jobs over time. The results are mixed: While statistically-significant effects support the hypothesis that one needs a college degree to get an IT job, the differences may not, in practice, be significant. Thus, a bias toward "college-for-all" may fail to reflect labor market realities, even among skilled technology occupations. Employment opportunities in skilled IT services jobs may exist for non-college women and men.

Heather L. Bednark presented joint work with Cathy J. Bradley, David Neumark, and Maryjean Schenk which investigates, "Short-term Effects of Breast Cancer on Labor Market Attachment: Results from a Longitudinal Study". The paper examines the consequences of breast cancer on women's labor market attachment for the 6-month period following diagnosis. Women with breast cancer, with the exception of those having 'in situ' cancer, were less likely to work 6 months following diagnosis relative to a control sample of women drawn from the Current Population Survey. Women with advanced cancers (i.e., not 'in situ') who remained working worked fewer hours than women in the control group. The study highlights the importance of using a control group when estimating the impact of illness on labor supply.

## Issues in International Technology and Productivity

Chair: Catherine L. Mann
Christine McDaniel presented joint work with Deepak Somaya. In "Determinants of Litigation Forum Choice in Patent Enforcement: The ITC versus the District Courts," they first create a new dataset that combines patent suit filings from the U.S. district courts with section 337 case filings from the International Trade Commission. The findings shed light on the effect of rules governing patent litigation. First, they show that use of the ITC forum increasingly has become tied into the enforcement of patents. Further, same-patent litigation involves domestic non-patentees in nearly 85 percent of the suits, suggesting that ITC cases entail rather valuable patents that are likely to be enforced in the district courts against other domestic defendants as well. Preliminary econometric results suggest that a higher number of patent claims as well as the age of the patent increase the probability of filing at the ITC.

In "Trade, Human Capital And Technology Spillovers: An Industry Level Analysis" Yang Ling Wang uses "effective" instead of "available" trade-related R\&D in the South by incorporating human capital as a measure of absorptive capacity, and then develops a method to measure the indirect trade-related R\&D among the South and its effects on technology spillovers. Iteration and bootstrap methods are used to estimate parameters and their standard errors with data from 16 manufacturing industries in 25 developing countries over the period 1976-1998. Estimation results show that: (i) North-South direct R\&D spillovers through trade are substantial, but South-South indirect R\&D spillovers are very small; (ii) the absorptive capacity in the South is rather low on average, but it has a great potential to increase given one unit increase in their human capital.

Amy Jocelyn Glass presented her work with Xiodong Wu, "Intellectual Property Rights and Quality Improvement." The paper explains why theories about the effects of intellectual property rights (IPR) protection on foreign direct investment (FDI) and innovation have reach mixed conclusions. In their model, Northern firms innovate to improve the quality of existing products and may later shift production to the South through FDI where Southern firms may imitate those products. This imitation increases FDI and innovation, the opposite of existing models in which innovators develop new varieties. Hence, stronger IPR protection may shift the composition of innovation away from improvements in existing products toward development of new products.

## Southern Economic Association Call for Papers 2004

CSWEP will sponsor up to three sessions at the annual meeting of the Southern Economic Association to be held in New Orleans, LA November 21-23, 2004. Deadline for submitting information is May 1, 2004.

One session is available for anyone submitting an entire session ( 3 or 4 papers) or a complete panel on a specific topic in any area in economics. The organizer should prepare a proposal for a panel (including chair and participants) or session (including chair, abstracts, and discussants) and submit by e-mail by May 1, 2004.

Two additional sessions will be organized. Abstracts for papers in the topic areas of gender, health economics, consumption and savings behavior, international economics, monetary policy, or business reorganization are particularly solicited, but abstracts in other areas will be accepted by e-mail by May 1, 2004. Abstracts should be 1-2 pages and include paper title, names of authors, affiliation and rank, and e-mail contact information as well as mailing address. All information should be e-mailed
by May 1, 2004 to:
Dr. Catherine L. Mann, CSWEP Southern Representative
Senior Fellow, Institute for International Economics
e-mail: CLMann@cox.net
phone: 202-328-9000
fax: 703-759-514
Deadlines have passed for the other meetings, but watch for calls for 2005 in upcoming CSWEP newsletters.

## Eastern Economic Association Meetings, Washington, DC February 2004

CSWEP is sponsoring four sessions at the Eastern Economic Association Meetings this year. Two are symposia, and two are paper sessions. The first symposium celebrates Women Economists and Thirty Years of the Eastern Economic Association and will be held Friday, February $20^{\text {th }}$ at 4 pm . It features leading female economists who have been active in the EEA over its 30 -year history, and was organized by Simone Wegge of CUNY. The second symposium focuses on Issues in Economic Education, and is related to CSWEP's mentoring workshop (CeMENT) which will be held directly after the EEA meetings. That symposium is scheduled Sunday, February $22^{\text {nd }}$ at 9am and was organized by KimMarie McGoldrick of the University of Richmond, who is also the organizer of the mentoring workshop. The paper sessions were organized by CSWEP's Eastern Representative (Rachel Croson) and include Experimental and Behavioral Economics (scheduled for Saturday, February $21^{\text {st }}$ at 11 am ) and Labor Markets: Gender and Nationality (scheduled for Saturday, February $21^{\text {st }}$ at 2 pm).

The announcements for the paper sessions follow.

## Session 2: Experimental and Behavioral Economics

Saturday, February 21st at 11 am
Chair and Organizer: Rachel Croson, (The Wharton School, University of Pennsylvania)

Discussants: Daniel Schunk (University of Mannheim), Sarah Stafford (College of William and Mary), Mana Komai (Washington and Lee University), and Tomomi Tanaka (University of Hawaii)

- Lisa R. Anderson and Sarah L. Stafford (College of William and Mary): "An Experimental Analysis of Intertemporal DecisionMaking Under Uncertainty."
- Daniel Schunk and Joachim Winter (University of Mannheim): "The Relationship between Risk Attitudes and Heuristics Used in Search Tasks: A Laboratory Experiment."
- Charles Plott (California Institute of Technology), Tomomi Tanaka (University of Hawaii) and Matthew Jones (California Institute of Technology: "Quality Adjustment, the Assignment f-Core and the Non-Existence of the General Competitive Equilibrium: Non-Price Competition in Response to Price Ceilings and Floors."
- Mana Komai and Mark Stegeman (Virginia Polytechnic University): "A Theory of Leadership Based on Assignment of Information"


## Session 3: Labor Markets: Gender and Nationality <br> Saturday, February 21 ${ }^{\text {st }}$ at 2 pm <br> Chair and Organizer: Rachel Croson, (The Wharton School, University of Pennsylvania)

Discussants: Amelie Constant (University of Pennsylvania and IZA), Kalena Cortes (Princeton University), Kruti Dholakia (University of Texas), and Jose Andres Fernandez Cornejo (Universidad Complutense de Madrid).

- Kalena Cortes (Princeton University): "Do Immigrants Benefit from an Increase in the Minimum Wage Rate? An Analysis by Immigrant Industry Concentration"
- Spyros Konstantopoulos (Northwestern University) and Amelie Constant (University of Pennsylvania and IZA): "Gender Differences in Central Tendency, Variability and Tails of the Earnings Distribution"
- Jose Andres Fernandez Cornejo, Rocio Albert, and Lorenzo Escot (Universidad Complutense de Madrid): "Gender Discrimination in Promotion: The Case of the Spanish Labor Market"
- Kruti Dholakia (University of Dallas, Texas): "Human Development Index and the Status of Women"


## Session 4: Issues in Economic Education

Sunday, February 22, 9 am

## Chair: Andrea Ziegert (Denison University)

## Discussants: Karine S. Moe (Macalester College), Andrea L. Ziegert (Denison University) and Ann Owen (Hamilton College)

- Steve DeLoach (Elon University) and Steve Greenlaw (Mary Washington College): "Effectively Moderating Electronic Discussions"
- Peter Schuhmann and Robert Burrus (University of North CarolinaWilmington): "Student Quantitative Literacy: Importance, Measurement, and Correlation with Economic Literacy"
- Gail Hoyt (University of Kentucky) and KimMarie McGoldrick (University of Richmond): "Gender Differences in Media Exposure, Economic Knowledge, and Attitudes about Economics"


## CSWEP Annual Reception

In addition to these four sessions, CSWEP will have its annual reception on Saturday evening, 5:30-6:30pm in the Capitol Room (Ballroom Level). The reception is open to all friends of CSWEP, current members and potential and future members. Feel free to bring a friend or arrange to meet a friend at the reception. In addition, it is an opportunity for participants and mentors attending the mentoring workshop (CeMENT), held directly after the conference, to meet in a social environment. There will be complimentary hors d'oeuvres and non-alcoholic drinks.

## Announcements

## CAROLYN SHAW BELL AWARD

The Carolyn Shaw Bell Award was created in January 1998 as part of the $25^{\text {th }}$ Anniversary celebration of the founding of CSWEP. Carolyn Shaw Bell, the Katharine Coman Chair Professor Emerita of Wellesley College, was the first Chair of CSWEP. The Carolyn Shaw Bell Award ("Bell Award") is given annually to an individual who has furthered the status of women in the economics profession, through example, achievements, increasing our understanding of how women can advance in the economics profession, or mentoring others. The next award will be presented in January 2005.

Professor Bell wrote in the $25^{\text {th }}$ Anniversary Newsletter, in the Fall of 1997, the following:
"We need every day to herald some woman's achievements, to tout a woman's book or painting or scholarly article, to brag about a promotion or prize and to show admiration for the efforts and influence of women, in their professional and technical and social and human endeavors of all kinds."

In the spirit of these words, the award requires that the traveling plaque be displayed prominently in a public place in the winner's local area so that others can see the achievements of the winner. Inquiries, nominations and donations may be sent to:

## Francine D. Blau, CSWEP Chair

Cornell University
School of Industrial and Labor Relations
265 Ives Hall
Ithaca, NY 14853-3901
607-255-2438
cswep@cornell.edu
The Nomination Deadline is September 15, 2004

## ELAINE BENNETT RESEARCH PRIZE

The Elaine Bennett Research Prize is awarded every other year to recognize, support, and encourage outstanding con-

## BRAG BOX

"We need every day to herald some woman's achievements... go ahead and boast!" -Carolyn Shaw Bell

Rachel Connelly and Jean Kimmel were awarded the GeorgescuRoegen Prize for the best paper published in the Southern Economic Journal during 2002-2003. Their paper, "The Effect of Child Care Costs on the Employment and Welfare Recipiency of Single Mothers," appeared in the January 2003 issue (volume 69, no. 3, pp. 498-519).

Do you have an item for the brag box about yourself or a colleague? Send it to: cswepnews@cornell.edu
tributions by young women in the economics profession. The next award will be presented in January 2005.

The prize is made possible by contributions from William Zame and others, in memory of Elaine Bennett, who made significant contributions in economic theory and experimental economics and encouraged the work of young women in all areas of economics.

Nominees should be at the beginning of their career but have demonstrated exemplary research contributions in their field.

Nominations should contain the candidate's CV, relevant publications, a letter of nomination and two supporting letters. The letters of the nomination and supporting letters should describe the candidate's research and its significance. Nominations will be judged by a committee appointed by CSWEP. Inquiries, nominations and donations may be sent to:

Francine D. Blau, CSWEP Chair
Cornell University
School of Industrial and Labor Relations
265 Ives Hall
Ithaca, NY 14853-3901
607-255-2438
cswep@cornell.edu
The Nomination Deadline is September 15, 2004

## DONATIONS WELCOME

CSWEP is currently in accepting donations for our annual
Carolyn Shaw Bell Award to help defray the cost associated with the Award. Donations go into a separate account specifically earmarked for this award. If you would like to make a donation, please send your tax-deductible check made out to the "American Economics Association" to:

Liane O'Brien
CSWEP
Cornell University
204 Ives Hall
Ithaca, NY 14853

## QUARTERLY LUNCHEON EVENT IN WASHINGTON D.C.

 On Thursday June 10th, CSWEP and the National Economics Club (NEC) are co-sponsoring a speaker in their continuing series of quarterly luncheon events in Washington, DC. The speech by Janet Norwood, Commissioner of the Bureau of Labor Statistics from 1979-1991, is entitled "The 2000 Census: Counting Under Adversity" and will discuss some of the findings of the National Academies' Panel with particular emphasis on coverage. The luncheon begins at noon, ends at 1:30, at the Chinatown Garden Restaurant-618 H Street NW (just east of the H Street exit from the Chinatown/ Gallery Place Metro Station). The speech begins at 12:35. Reservations are required for those who want lunch by 11AM on Tuesday June 8th through the NEC reservations line (703-493-8824) or on-line. The cost of the luncheon is $\$ 15$ for CSWEP and NEC associates/members, $\$ 20$ for others. Confirmation of location, any changes to this posted schedule, and future co-sponsored events will be listed at www.nationaleconomists.org.
## FUNDING ANNOUNCEMENT

New Cross-Cutting Funding Opportunity in Human and Social Dynamics
The National Science Foundation (NSF) has announced a new program solicitation inviting proposals for its first full competition in the Human and Social Dynamics (HSD) priority area. Its aim is to foster breakthroughs in knowledge about human action and development as well as organizational, cultural, and societal adaptation and change in a comprehensive and multidisciplinary context across the sciences, engineering, and education. The FY2004 HSD Competition will include three topical emphasis areas (Agents of Change;

Dynamics of Human Behavior; and Decision Making and Risk) and three resource-related emphasis areas (Spatial Social Science; Modeling Human and Social Dynamics; and Instrumentation and Data Resource Development). Support will be provided for research-focused, educa-tion-focused, infrastructure-focused, and exploratory projects. The budget for HSD for this year is about \$18 million.

Complete information about the mandatory Letter of Intent (deadline of March 3, 2004) and Proposal Preparation and Submission (deadline of March 30, 2004) as well as de-
scriptive information about the HSD priority area may be found at http: //www.nsf.gov/home/ crssprgm/hsd. For further information, contact Dr. Miriam Heller, HSD Competition Coordinator; phone: 703-292-7025; e-mail: mheller@nsf.gov; or Dr. Sally Kane, Chair, HSD Implementation Group; phone: 703-292-8700; skane@nsf.gov; or the Economics Program staff: Nancy Lutz 703-2927267 nlutz@nsf.gov and Dan Newlon 703-292-7276 dnewlon@nsf.gov.

Please pass this information along to your colleagues.

## CREDIT CARDS ACCEPTED!

CSWEP has updated some of its membership services and is now accepting credit card payment information for donations you send to CSWEP. As in past years, you may also choose to pay by check. By keeping your membership current, you not only support CSWEP activities, you ensure that we have your current mailing address allowing us to remain in contact with you. If you have not contributed $\$ 25$ or more for the current year (January 1, 2004 through December 31, 2004) please do so.

CSWEP is also continually interested in increasing the number of women economists with whom it has contact. Please encourage your economist female colleagues in your department and other units of your organization to become members. The wider our network, the more impact we can have on the status of women in the economics profession.

## HOW TO BECOME A CSWEP ASSOCIATE

CSWEP depends on all of its associates to continue its activities. In addition to publishing the newsletter, CSWEP organizes sessions at the meetings of the AEA and the regional economics associations and publishes an annual report on the status of women in the economics profession.

If you have not made your donation for the current member year (January 1, 2004 to December 31, 2004) we urge you to do so.

If you have already made your donation, please pass this on to a student, friend, or colleague and tell them about our work.

Students do not have to give a donation to become a CSWEP associate.
Thank you!
NAME:
MAILING ADDRESS:
CITY, STATE, ZIP:
E-MAIL ADDRESS:
$\square$ check here if currently an AEA member
$\square$ check here if currently a student
Institute name:
Expected graduation date:
Paying by: $\square$ check
$\square$ credit card (MasterCard/Visa/Amex)
Credit card number:
Name as it appears on the credit card:
Expiration date: $\qquad$ Authorizing signature: $\qquad$
If paying by check please send $\$ 25.00$ to:
CSWEP, c/o Joan Haworth, Ph.D.
4901 Tower Court
Tallahassee, FL
32303
(Please make check payable to CSWEP).
If paying by credit card, you may either mail your form to the above address or fax it to (850) 562-3838

## CSWEP Directory

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| :--- | :--- |
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| Ithaca, New York 14853-3901 | aowen@hamilton.edu |
| fdb4@Cornell.edu | CSWEP Midwest: |
| Routine Matters and Items for Newsletter: | Lisa Barrow |
| Liane 0'Brien | Federal Reserve Bank of Chicago |
| School of Industrial and Labor Relations | 230 S. LaSalle Street |
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| $l k l e t z e r @ u c s c . e d u ~$ |  |

## ATTENTION CSWEP MEMBERS!

Pass this newsletter along to a colleague.
Encourage them to become a CSWEP associate and support our professional community!

## 2004 Regional Meetings

## Eastern Economic Association

February 20-22, 2004
Hyatt Regency Washington on Capitol Hill
Washington D.C.
http://www.iona.edu/eea/

## Midwest Economic Association

March 19-21, 2004
Westin Michigan Avenue
Chicago, IL
http://web.grinnell.edu/mea

## Western Economic Association

June 29 - July 3, 2004
Sheraton Wall Centre
Vancouver, B.C.
http://www.weainternational.org

## Southern Economic Association

November 21-23, 2004
Fairmont Hotel
New Orleans, LA
http://www.etnetpubs.com/conferenceprograms/sea/
If you are interested in submitting an abstract for the CSWEP sessions at the Southern Economic Association Annual Meeting, please see the call for papers listed on page 20.


American Economic Association
CSWEP
c/o Francine Blau
Cornell University
School of Industrial \& Labor Relations
265 Ives Hall
Nonprofit Organization
U.S. Postage PAID
Ithaca, NY
Permit No. 780
Ithaca, New York 14853-3901


[^0]:    -Francine Blau

[^1]:    ${ }^{1}$ A small number of schools (5) that were surveyed in 2002 were deleted from the sample because they were not included in the Carnegie listing.
    ${ }^{2}$ While the number of departments providing 1982 data on faculty is not available, the data are from the AEA's Universal Academic Questionnaire (1983 Annual Report) and thus represent a sample comparable in size to subsequent years.
    ${ }^{3}$ One exception is that the female share of full professors in 1993 (6.8 percent) is about the same as the female share of associate professors in 1982 (6.4 percent).

[^2]:    ${ }^{4}$ See Siegfried and Stock (2004), Tables 1 and 2.
    ${ }^{5}$ Blau (2004); based on calculations using unpublished tabulations provided by Siegfried and Stock.

[^3]:    ${ }^{6}$ CSWEP data in Table 5 indicate especially high levels of female representation among first year students in 1999 and 2000-35.6 and 38.8 percent respectively. Thus there may be a spike in female representation among new Ph.D.'s coming in the next few years. Alternatively, these estimates, which appear out of line with previous and subsequent years, may be due to sampling variation. The estimate of new Ph.D.'s from the CSWEP data for those years are higher than in the NCES data (26.7 for 1998-99 and 26.6 for 1999-2000), particularly for 1998-1999.
    ${ }^{7}$ These rankings are taken from US News and World Report 2004 Edition. The top ten departments include, Massachusetts Institute of Technology; Harvard University; Princeton University; Stanford University; University of Chicago; University of California-Berkeley; Yale University; Northwestern University; University of Pennsylvania; and University of Wisconsin-Madison. The top twenty departments additionally include University of California-Los Angeles; University of Michigan-Ann Arbor; University of Minnesota-Twin Cities; California Institute of Technology; Columbia University; University of Rochester; Cornell University; University of California-San Diego; Carnegie Mellon; and New York University. These are the same rankings used in the 2002 CSWEP Annual Report but represent an updating compared to previous reports. This updating seems advisable since this breakdown is designed to measure women's representation at what are generally regarded as the leading departments rather than at a fixed set of schools.

[^4]:    Notes: U refers to untenured and T refers to tenured.

[^5]:    ${ }^{3}$ A more complete description of the survey and information on how to purchase the annual reports that result from it can be found at http:// it.okstate.edu/irim/FacultySalary.html
    ${ }^{4}$ Sadly, relative to higher paying fields such as business, economics department faculty members' salaries fell during the period.
    ${ }^{5}$ I am grateful to Lee Tarrant of the OSU Office of Institutional Research and Management for making these calculations for me.

