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## SYMPOSIUM: GENDER AND ECONOMICS

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# Preferences Underlying Women's Choices in Academic Economics

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**A COMMENT ON: CHRISTINA JONUNG AND ANN-CHARLOTTE STÄHLBERG, "REACHING THE TOP: ON GENDER BALANCE IN THE ECONOMICS PROFESSION,"** *ECON JOURNAL WATCH* 5(2), MAY 2008: 174-192. [LINK](#).

### ABSTRACT

**JONUNG AND STÄHLBERG DOCUMENT A PECULIAR UNDERREPRESENTATION** of women in academic economics, especially at the level of full professor. What is peculiar about the underrepresentation of women in economics is that no gender disparity of this magnitude exists in other behavioral sciences. In my own discipline, psychology, nearly 72% of new PhD and PsyDs in psychology are women (Cynkar 2007), and 39% of psychology faculty are female (Long 2001). In contrast, Jonung and Ståhlberg point out that the percentage of female economics PhD students in both my country of the United States and Sweden is only 32% and the number of female economics faculty in both countries is only 16%. Similar percentages are found in Great Britain, Canada, and Australia. They document comparable differences in gender disparity at the rank of full professor. In the U.S., 25% of all full professors in psychology are women (Cynkar 2007), whereas only 8.7% of full professors in economics at the top 50 US universities are female (Nelson 2004). Depending on the source one consults, the percentage of female full professors in economics in Sweden is somewhere between 1% and 6%. Why the gender disparities in economics are so much more dramatic than in other fields is an intriguing question, one that I am pleased to be able to explore with Jonung and Ståhlberg.

Jonung and Ståhlberg's intentions of course go far beyond documenting the underrepresentation of women in economics. They also hope to encourage further research and discussion on this topic in order to increase the number of women in economics and the number of women attaining the rank of full professor in econom-

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ics. They provide two reasons for wanting to do this. One is that women are missing out on an exceptionally rewarding career: “Our interest in the issue of the presence of women in academic economics is based not only on the opinion that women should be able to partake in the gourmet meal” (175). The second is that women have a unique perspective that will improve the field of economics: “We also believe that, if more economists are women, economic analysis will be richer, and if more women are familiar with economic reasoning, public debate will be stronger and deeper” (175).

Naturally, our ability to increase the number of women in the field of economics depends on an understanding of the factors that inhibit the entry of women into this field. Jonung and Ståhlberg list four factors that might explain both the overall lack of women in the field and the relatively small number of women at the top positions in economics: (1) discrimination in the form of bias in recruiting and promoting women; (2) preferences unique to women that interfere with career advancement in economics; (3) social institutions and policies that create different incentives for men and women; and (4) cultural rules and values in the profession of economics that set a tone unwelcoming to women. Among these possibilities, Jonung and Ståhlberg are quick to dismiss gender differences in preferences: “Tastes and preferences, talents and capabilities may be part of the story but economists generally stress human capital investments guided by expectations about future labor market participation” (182). I believe that dismissing tastes and preferences just because economists have traditionally ignored such psychological variables until recently is a mistake. I would like to argue that preferences constitute an important explanation for the dearth of women in economics.

In addition to making a case for the explanatory importance of preferences, I would also like to call for a closer analysis of what constitutes underrepresentation versus appropriate representation of women in economics generally and female economists at the rank of full professor, specifically. Although the number of women pursuing a PhD in economics obviously bears, eventually, on the number of women attaining the rank of full professor, I think these two phenomena should be examined separately.

Finally, I think we need to consider carefully the two major reasons for trying to increase the number of women in economics—it is only fair and right for more women to be able to “partake in the gourmet meal” and that a feminine perspective will enrich, strengthen, and deepen economic analysis and public debate. I will explain how these may or may not be good reasons for increasing the number of women in economics.

### **OCCUPATIONAL PREFERENCES: IS ECONOMICS A GOURMET MEAL FOR EVERYONE?**

In psychology we have an entire subfield, vocational psychology, founded on the premise that individuals find different kinds of activities intrinsically

enjoyable. Differences in preferences for particular kinds of activities incline individuals toward different careers. Actual occupational choices are of course constrained by factors studied by economists such as the availability of different kinds of work in the job market and incentives such as salary and health care benefits. Nonetheless, preferences for particular kinds of activities represent a strong motivating force that drives occupational choices, sometimes even in the face of bleak employment opportunities and poor financial compensation. Many a starving artist will tell you that he or she is not in it for the money.

The dominant model of vocational preferences today is John Holland's (1959, 1997) RIASEC model. Fifty years of research on Holland's model has supported the utility of conceptualizing human personalities and work environments in terms of their resemblance to six prototypical categories: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Researchers who employ the Holland model typically refer to each vocational-personality type by the first letter of the type label; hence the acronym RIASEC. Of particular interest to the question of women in economics is the RIASEC classification for an economist and research on gender differences in RIASEC preferences.

Economists, like research psychologists and other scientists, are considered to be primarily Investigative. Investigative individuals like working with ideas more than dealing with people. They do not mind laboring long hours in relative isolation. They also exemplify a cognitive style that Welsh (1975) termed *high Intellectence*. High-Intellectent Investigative persons disengage and distance themselves from the sensate world, preferring to relate to the environment indirectly through abstract symbols (Johnson 1994). Investigative individuals are therefore comfortable with abstract, mathematical representations of reality and enjoy theoretical research and puzzle-solving.

Psychological research has consistently demonstrated that males, as a group, score higher than females on measures of Investigative, Realistic, and Enterprising vocational preferences, while the reverse is true for Social and Artistic preferences (Browne 2006). At the same time, psychologists have also long recognized the existence of considerable individual differences *within* each sex-typical set of interests. Although women are generally more interested in occupations involving working with people (the Holland Social occupations), a certain number of women will be interested in more impersonal kinds of work, including Investigative careers (Lippa 1998). An important question is whether preferences for activities in the Investigative versus Social domains is simply a function of encouragement from parents, teachers, and role models, or whether these preferences are an inherent part of the nature of most men and women.

At one point in my career I was involved in a Johns Hopkins study of over 700 women who returned to college after being out of school for several years (Johnson 1980; Richmond & Lisansky 1984). At the time of enrollment, 37% of the women were unemployed or employed in unskilled jobs. Of the remainder,

90% were employed in traditionally female occupations in the Social, Conventional, and Artistic Holland categories, while only 10% were in nontraditional Realistic, Investigative, and Enterprising occupations. The career *aspirations* of women in this sample was heavily skewed toward the Social occupations (70%). Overall, 78% of the group reported aspiring toward traditional careers for women. Thus, when they began college, the percentage of the women aspiring to nontraditional careers was only slightly higher (22%) than the percentage of women working in nontraditional occupations (10%) prior to college. The increase in nontraditionality was mostly due to the number of women who aspired toward Enterprising careers. The study was, in part, a social experiment, as our research group had hoped to persuade a significant proportion of women to consider nontraditional careers. Half of the women received career counseling that included the agenda of exploring nontraditional careers, and half did not.

The presence or absence of counseling had no impact on the traditionality of the occupations actually attained after college. The percentages of the sample finding employment after college in different areas were as follows: Social (48%), Conventional (20%) Enterprising (15%), Artistic (2%), Investigative (1%) and Realistic (.5%). Oddly, the 13% of the sample who were unemployed at the time of follow-up actually indicated the highest rating of satisfaction with their current occupational situation. They were followed by women in Enterprising, Social, Artistic, and Investigative jobs (each about 3.25 on a four-point scale), women in Conventional jobs (2.95), with women in Realistic occupations at the bottom (2.25). Thus, neither encouragement to consider nontraditional careers nor the college experience itself was able to recruit more than 18% of the sample into nontraditional Enterprising, Investigative, or Realistic career tracks. Only 1% of the women obtained jobs in the sciences.

One might look at the failure of the Johns Hopkins project to encourage more women into entering nontraditional occupations as a problem of the historical time. The project was conducted at the end of the 1970s, so perhaps there were still too many cultural barriers and occupational stereotypes for women to consider nontraditional careers. Jonung and Ståhlberg note the steady increase of economics PhD completion for women in Sweden from 7-9% in the 1970s and 80s to around 17-18% in the 1990s to 26% in the early 2000s. They astutely dismiss the notion that the influx of women into economics and the rising percentages of PhD completion from the 1970s through the 1990s could be due to an increase in women's capacities for abstract and analytical thinking. Rather, they attribute the increase to changes in the labor market. Nonetheless, they also observe that the female share of new PhDs seems to have "plateaued since the late 1990s" (181). The question is whether it is reasonable to assume that the proportion of women in economics can reach parity (50%), or whether it is more likely that there is an upper limit (perhaps 30%?) to the number of women we can expect to see in academic economics. Browne (2006) presents reasons why the latter might be the

more reasonable conjecture.

Browne (2006) notes that there are essentially two competing explanations concerning differential participation by men and women in different occupational fields. One he calls the “purely social view” (151), which attributes differences wholly to culture and claims that biology plays no role or a trivial role in behavioral differences between men and women. The other is the view that both biology and culture play important roles. The purely social view assumes no limits on the proportion of women or men becoming employed in any occupation. With proper encouragement and the removal of cultural barriers, the purely social view would suggest that, in principle, it is possible for women to obtain 50% or even 100% of the positions in academic economics. In contrast, the mixed biological-cultural view holds that any changes in behavioral differences between the sexes will be constrained by biological differences. Browne presents the following argument for the mixed view over the purely cultural view.

The purely cultural view has attributed the lack of participation of women in the sciences to an educational system that discourages girls from taking courses in math and science and hostility within the science professions toward women. Yet the evidence contradicts the hypothesis that girls are discouraged by parents, teachers, and peers from taking math and science courses. In fact, in the U.S., girls and boys take roughly the same number of math and science courses, and high school girls earn higher grades in math and science than boys. Girls are *less* likely than boys to report lack of attention from teachers about science, and female college students are *more* likely than male students to indicate choosing science because of encouragement from parents and teachers, whereas boys report pursuing science due to an interest in the subject (Browne 2006).

If there is hostility in the sciences toward accepting women, Browne (2006) notes that it takes an odd, selective form by subfield. Women earn relatively few doctorates in mining/mineral engineering, but considerably more in bioengineering. Biology is apparently welcoming to women, as women earn 45% of all doctorates in biology. So is medicine, as over 40% of new doctors are women. But biophysics must be hostile, because relatively few women earn a doctorate in this area. Women earn 67% of all doctorates in psychology, but mostly in developmental and child psychology. Few women earn doctorates in psychometrics and quantitative psychology. Finally, Browne specifically mentions the low percentage of PhDs earned by women in economics, compared to the number of PhDs in sociology and anthropology (14%, 36%, and 41% in 1995, according to Long 2001).

The common denominator for fields in which women are scarce, Browne (2006) observes, is that they “tend have the lowest social dimension, while those attracting larger numbers of women tend to have a higher social dimension” (150). Lippa (1998) found that both male-female differences in vocational preferences and differences in preferences for typically male or female activities *within* each sex are powerfully associated with a People-Things dimension of vocational interests,

a dimension that accounts for significant variance in the RIASEC model. Women, as a group, prefer occupations involving people. However, due to individual differences in the masculinizing effects of prenatal hormones, some girls show preferences and cognitive traits that are more typical for boys (Browne 2006). They prefer boy toys and rough-and-tumble play activities and show superior spatial abilities. As adults, they are more likely to prefer typically male occupations.

In their discussion of the “leaky pipeline” in academic economics, Jonung and Ståhlberg (177) suggest that the most profound leak is the very first semester. The proportion of women students in undergraduate economics programs at that point is nearly 50%. But after the first semester, a significant number of women leave the program, many opting for business administration. This strikes me as *prima facie* evidence that these women, after tasting an economic meal, did not consider it to be gourmet quality. The people-oriented field of business administration seemed much more to their liking. As a psychologist, I can empathize with that decision. While mathematics is indispensable to any science, I have read too many economics working papers that have struck me as bloodless formalism bordering on mathematical fetishism. An appropriate goal, it seems to me, would not be to have absolute parity (50% female, 50% male) in academic economics. Rather, we should identify all women with strong Investigative interests (however many there may be) and encourage them to consider a career in academic economics.

### **WHAT COULD BE THE UNIQUE CONTRIBUTION OF WOMEN TO ECONOMICS?**

The second reason that Jonung and Ståhlberg give for increasing the number of women in economics is that there is something special about women that would enhance the field of economics. Surely they cannot mean that women have special perceptual and cognitive abilities that allow them to discover, through basic research, principles of economics that have eluded men. I cannot imagine a similar argument being used to recruit more women into physics and chemistry—that women have special research abilities that allow them to discern natural laws that men cannot comprehend. I assume that Jonung and Ståhlberg are referring more to the realm of economic decision making and policy setting, and here I think they have a good point. I’ll explain by delving a little deeper into the application of Holland’s RIASEC model to economics.

Holland’s RIASEC classifications of occupations go beyond a simple mapping of each occupation onto one of the six types. In addition to the type of primary resemblance, Holland’s “three-letter codes” also designate a secondary and tertiary resemblance to the remaining vocational prototypes. For economists, this is important for distinguishing different types of careers in economics. A professor of economics is classified as an IAS type. The secondary resemblance

to Artistic indicates the importance of symbolic ideation in creative research to professors of economics, and the tertiary link to Social shows an interest in social problems and in teaching students. In contrast, an applied economist who consults with businesses and agencies, recommending policies and plans, is classified as an IEC type. The secondary Enterprising aspect shows involvement in real-world decision making in business, and the tertiary Conventional feature indicates comfort with working with large arrays of numerical data.

As a group, women surpass men in verbal skills and interpersonal competencies (Browne 2006). These abilities may indeed allow them to make uniquely valuable contributions to public discussions and decisions about economic policy. I am unfamiliar with the undergraduate program in Sweden, but I get the sense that the initial courses in economics are being taught as though all of the students are IAS Holland types who are on a track to become academics. If so, it would be no wonder that so many female students leave for Business Administration (Holland code: ESC). This is reminiscent of the attraction of Enterprising careers over other nontraditional careers for women in the Hopkins study. Careers with an Enterprising component are highly people-oriented, and may therefore be more attractive to women. If there is room in the Swedish economics curriculum for applied economists, and Swedish economics departments are interested in retaining more women in the major after the first semester, my recommendation would be to revise the first semester offerings to make them more people-oriented and therefore more palatable to students who are more inclined toward an applied career.

### WHAT ARE THE OBSTACLES TO PROMOTION IN ACADEMIC ECONOMICS?

The question I find most troubling in the Jonung and Ståhlberg paper is whether women professors are being unfairly denied promotion to full professor. As someone who has served on promotion and tenure committees for decades, I must say that discrimination does occasionally occur, despite institutional safeguards to ensure fairness. Discrimination in economics departments may therefore be an impediment to promotion for women, but the way in which Jonung and Ståhlberg present percentages of men and women at different ranks makes it difficult to evaluate whether there is a pattern that might indicate discrimination. When they say that only 1% of all full professors of economics in Sweden are women (according to Statistics Sweden) or only 6% are women (according to their own data), this says nothing about the relative promotion rates of men and women. What we need to do is first rearrange their data to examine the relative proportion of professors at the assistant, associate, and full professor level for each sex separately. When we do, we find that those proportions (using Jonung and Ståhlberg's data) are 42%, 22%, and 36% for men and 54%, 33%, and 13% for women. One does not have to actually compute the chi-square to see that a

significantly greater proportion of men are at the full professor rank. This does not demonstrate discrimination, but does not rule it out, either.

We can reasonably speculate that one reason for a greater proportion of men at the full professor rank is that more men than women have been in the system for a long time. Prior to 1970, only two women received PhDs in economics in Sweden. In the 1970s, 93% of all PhDs in economics were awarded to men. Men have therefore had an enormous head start on working toward the rank of full professor. It will be interesting to see how quickly the current assistant and associate professors (both male and female) advance as the 1940s birth cohort retires. If women do not advance as quickly when these positions open up, we might want to look harder for the reasons. Research cited by Jonung and Ståhlberg indicates that the previously slow progress of women in promotion to full professor cannot be readily explained in terms of family factors. For all but one index, publication rates are about the same for men and women. It is possible that devoting more attention to teaching and administrative work has distracted women from doing the research that is necessary for promotion, but it is not clear whether women have been pressured into these roles or whether it is because female professors are more person-oriented. I, for one, will be keeping an eye on gender trends in promotion to full professor of economics over the next 10 years.

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