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An Interview with Rachel McCulloch

Rachel McCulloch is the Rosen Family Professor Emerita of International Finance at Brandeis University. She has contributed more than forty years of teaching, scholarship, and service to the economics profession while a faculty member at the University of Chicago, Harvard University, the University of Wisconsin and Brandeis University. Professor McCulloch has been an example to women economists since a time when there were few women in the profession. Her scholarship and 2013 Carolyn Shaw Bell Award Winner Rachel McCulloch

Kathryn Graddy

commitment to the field of international trade are impressive: She has published over 100 papers and commentaries, she has been an NBER research associate and a consultant to the World Bank and Asian Development Bank and she has held numerous shortterm positions ranging from Visiting Scholar at the Hoover Institution at Stanford University to member of the U.S.

Presidential Commission on Industrial Competitiveness.

> Professor Mc-Culloch's prolific service has included frequent appointments as

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Reflections on the MEG 2013 Mentoring Workshop for Junior Female Economists

Yoosoon Chang

Last year was Indiana University's turn to host the Annual Meeting of Midwest Econometrics Group (MEG), and I was asked to serve as the organizer. To give a little bit of a fresh spark to this 23-yearold friendly neighborhood conference, I wanted to try something new. That desire resulted in a pre-conference mentoring workshop for a broadly defined group of young female econometricians, including female juniors doing applied, empirical or theoretical econometrics research in all fields of economics. This was the first time such a mentoring workshop has been offered at the MEG meetings. The mentoring workshop was unique in that it tried out a new format of mentoring exclusive to female junior economists—the group in greatest need of such support. I am happy to report that the new format of mentoring was well received by

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About the Authors



John Bound is the George E. Johnson Collegiate Professor of Economics and Senior Research Scientist at the Population Studies Center at the University of Michigan and a Faculty Research Associate at NBER.

Yoosoon Chang is a Professor of Eco-

nomics at Indiana University.



Susan Elmes is a Senior Lecturer in Discipline, Department of Economics, Columbia University.





Senior Economist

Susan Fleck is a

at the Immigrant Investor Program of the U.S. Citizenship and Immigration Service.

Kathryn Graddy is the Fred and Rita Richman Distin-

guished Professor in Economics and the Chair of the Department of Economics at Brandeis University.





Marjorie McElroy is a Professor of Economics at Duke University and Chair of the CSWEP Board.

Serena Ng is a Professor of Economics at Columbia University and a CSWEP Board Member.





Wendy A. Stock is a Professor of Economics and the Head of the Department of Agricultural Economics and Economics at Montana State University.

From the Chair

Marjorie McElroy

From its inception, CSWEP has worked to promote the representation and success of women in the economics profession, and many past issues of the *CSWEP News* have proffered advice to graduate students and junior women. Following up on last summer's focus on the lack of women in the undergraduate major, this current issue proffers advice to undergraduates. Edited by Board member Serena Ng, "Choosing and Finishing a PhD Program" covers every aspect promised in the title – from whether a PhD is right for you, to preparing for, selecting and applying to PhD programs, and to succeeding in your program as well as what to expect upon graduation. My favorite section, with contributions from anonymous PhD students, brilliantly captures the salient aspects of life as a PhD student. I urge you to share this issue with your undergraduate majors and your colleagues who advise them.

As usual your CSWEP Board has been hard at work on ongoing activities with some exciting new initiatives in the offing. Plans are underway for CSWEP Events at the 2015 ASSA/ AEA Meeting in Boston, MA, including three paper sessions on gender topics and three on macro/international economics and enhanced versions of the two mornings of the highly successful Mentoring Breakfasts for Junior Economists. In the works is a new third mentoring event for mid-career economists. Look for details in the next issue of the *CSWEP News*.

If your career as well of those of other women has benefitted from the outstanding mentoring or public service of an economist or if you have a junior colleague who has made fundamental contributions to research in economics, *now* is the time to begin thinking about nominating them for CSWEP's Bell Award or Bennett Prize. Nominations are officially open for both awards, with materials due in late September. See: <u>http://www.aeaweb.org/committees/cswep/</u> <u>awards/</u>. The 2014 awards will be presented at CSWEP's Business Meeting held during the 2015 ASSA/AEA Meeting.

I enthusiastically welcome Ragan Petrie of George Mason University to the Board as our Southern Representative. Ragan has already organized an outstanding professional development session and a paper session for CSWEP at the 2014 SEA and has embraced other committee assignments as well.

Finally, CSWEP wants to hear from you. Send announcements about your career, feedback on CSWEP activities and ideas for the future to cswep@econ.duke.edu.

What is CSWEP?

CSWEP (the Committee on the Status of Women in the Economics Profession) is a standing committee of the American Economic Association charged with serving professional women economists in academia, government agencies and elsewhere by promoting their careers and monitoring their progress. Visit cswep.org for more information.

Getting into and Finishing a PhD Program

In the fall semester of every year, senior undergraduates agonize over whether to attend graduate school. Unlike other disciplines, the traditional path in economics is entry to a PhD program without first getting an MA (though it is worth noting that some departments now offer MA programs designed to prepare students for PhD entry). Students must ask, is a PhD program right for them? How can they best prepare for graduate studies? Should they work first? Even after they decide to pursue a PhD, they struggle over which program best suits their preferences and abilities. This is not an easy decision because students must make a commitment of four years-if not more-without full knowledge of what the return to graduate

schooling is. The decision is also not easy for graduate programs, which have to decide who amongst the many applicants to admit.

In this issue, four parties share their experiences and advice regarding PhD programs. Wendy Stock, head of the Department of Agricultural Economics and Economics at Montana State University, gives an overview of PhD programs that will be useful for anyone contemplating a PhD. Susan Elmes, the director of undergraduate studies in the Department of Economics at Columbia University, discusses how students can prepare to meet graduate program's research expectations and determine if they are likely to find graduate school to be a good fit. John Bound, director of doctoral admissions in the Department of Economics at the University of Michigan, provides a perspective on what PhD programs are looking for in applicants and advice on navigating the admissions process. Last but not least, we hear from current graduate students themselves about the some of the challenges they have faced and how a PhD program is different from undergraduate studies.

Serena Ng

This set of articles will be valuable to anyone considering whether to get a PhD in economics. I look forward to many readers of these articles joining the profession in a few years with their PhD in hand.

Wendy A. Stock

Over the past fifteen years, John Siegfried and I, along with co-authors Al Finegan and Lee Hansen, have studied several stages of the economics PhD production process, from the undergraduate origins of eventual economics PhDs to the job outcomes of economics PhD completers. This essay summarizes some of our findings, particularly those that relate to the typical questions that PhD students (and PhD program applicants) tend to ask us as they ponder graduate education in economics.

Who earns PhDs in economics and which PhD programs should I consider? Students from a wide variety of backgrounds earn graduate degrees in economics. They include economics and non-economics majors, those with and without prior graduate training, and those with and without prior economics employment experience. As shown in Figures I and 2, there have been significant demographic changes

Considering Graduate Education in Economics? A Few Things to Ponder

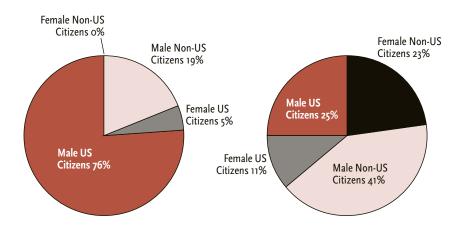
in the makeup of economics PhD students over the past decades. While the number of economics PhDs awarded by American institutions has remained the same since the 1970s, the demographics of the recipients have shifted considerably. Two-thirds of economics PhDs awarded in the United States now go to noncitizens, mostly from Asia, with a rising proportion going to female noncitizens. By contrast, fewer American women are earning PhDs today than 15 years ago. These demographic patterns are mirrored in disciplines related to economics, including finance, political science and mathematics.

In my view, the increase in gender and international diversity of economics graduate students has generated a corresponding increase in competition for graduate program admission and funding. As one example, only 14 percent of the U.S. citizens who entered a U.S. economics PhD program in 2002 held a

prior graduate degree, while 60 percent of non-U.S. citizens in this entering cohort had this educational background. Accordingly, students considering graduate school should think carefully about which programs are best suited to their skills, training and interests. To decide which program is the best fit, potential students should examine their own qualifications (including their GRE scores, their GPA and their mathematical preparation) as well as the methodological approach, fields of specialization, size of program, program culture (cooperative, competitive, etc.), typical time-todegree, required examinations, financial aid, emphasis on mathematics, job prospects and location of the programs to which they apply. For those who wish to pursue academic careers, the availability of training in teaching methods during graduate school may also be a consideration. Some applicants find it

Figure 1: Characteristics of US Economics PhD Recipients 1970

Figure 2: Characteristics of US Economics PhD Recipients 2011



Source: Authors' tabulations from NSF Survey of Earned Doctorates, www.webcaspar.gov

useful to contact students at their target programs to find out about current students' perceptions and experiences.

One of the key criteria that admissions committees use to gauge applicant qualifications is the GRE exam. Research by Finegan, Siegfried and myself published in the 2006 American Economic Review Papers & Proceedings reveals that the average GRE quantitative score for the entering economics PhD class of 2002 was 772 (out of a possible 800, which translates to 161 out of 170 on the most recent GRE quantitative scale), and the average GRE verbal score was 562 (which translates to 157 on the most recent GRE verbal scale). Among students in tier I PhD programs, the averages were 785 (163) and 575 (158); among students in tier 2 programs, the averages were 782 (163) and 547 (156); among students in tier 3 programs, the averages were 765 (160) and 573 (158), respectively. (We used the 1993 National Research Council (NRC) ratings to assign PhD programs into quality tiers. Tier I consists of Chicago, Harvard, MIT, Princeton, Stanford and Yale. Tier 2 consists of California-Berkeley, Columbia, Michigan, Minnesota, Northwestern, Pennsylvania, Rochester, UCLA and Wisconsin. Tier 3 is programs ranked 16-30: UC-San Diego, NYU, Cornell, Cal-Tech, Maryland, Boston University, Duke, Brown, Virginia, UNC-Chapel Hill, University of Washington, Michigan State, University of Illinois-Urbana, Washington University-St. Louis and the University of Iowa.) These scores put students at or above the 80th percentile for scores on the quantitative portion and 75th percentile for the verbal portion of the GRE.

What can I expect in terms of job opportunities after I graduate? Graduate school is a big investment with large opportunity costs. It is important to enter graduate school with realistic career expectations. Many students enter PhD programs in economics expecting to have careers similar to those of the professors who mentored them during their undergraduate degree programs. This is an unrealistic expectation for about half of the students who complete a PhD in economics. Almost all economics PhDs find employment after graduation, but only about half go into academia. In 2011, about 56 percent of graduating PhDs in economics took academic jobs, 17 percent landed jobs in business/industry and 15 percent secured employment in government. We found that academics report higher levels of job satisfaction than their peers in other industries, in spite of earning about 20 percent less on average than those in other sectors.

In addition, it is important to understand that what you do in graduate school and what you do in your job afterward may not match particularly closely. As part of our surveys of graduates of economics PhD programs, Lee Hansen and I asked recent economics PhD graduates how well their graduate programs prepared them for their jobs. The results, published in the 2004 American Economic Review Papers & Proceedings, show that though most graduates felt their programs adequately prepared them for their careers, most found skills in real-world application and communication were less emphasized by their graduate programs but were very important for success in their jobs. Conversely, graduates reported that skills in mathematics were much more important for success in graduate school than in their subsequent jobs.

How long does the PhD take and what are the factors associated with attrition and completion? Among students who complete the economics PhD, the median time to degree is 5.7 years. Overall, about 60 percent of students who enter a PhD program in economics complete their degrees at the university where they started their PhD studies. Another 4–5 percent transfer and earn a PhD from a different economics program. The vast majority (roughly twothirds) of those who drop out of their PhD programs do so within the first two years of starting their graduate studies. The rates of attrition and degree completion differ markedly across quality tiers of PhD programs. The five-year attrition rate at tier I programs is only 15 percent, while at tier 5 programs (those ranked 49 and up in the 1993 NRC ratings) it is 49 percent. Part of this difference in attrition may be related to the programs themselves, but most of the difference likely results from the different types of students who attend tier I versus tier 5 programs. As one example, students at higher-ranked programs have higher quantitative, analytical and verbal GRE scores than those at lowerranked programs, and GRE scores are a good predictor of attrition.

One consistent finding in our research is that students who have access to shared office space during their first

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year of PhD study are less likely to drop out of their PhD program. Since much of the first-year curriculum is dedicated to problem sets, rather than individual reading and thesis research, the first year of PhD study is an ideal time to collaborate and learn from other students. We also found that students on research assistantships were less likely to drop out, even compared to those with nowork fellowships. Although our data did not have enough information to test this hypothesis directly, we believe that this difference is also related to the degree of interaction between first-year graduate students, since students with nowork fellowships may have less access to office space and may have less interaction with other first year students, ceteris paribus.

Characteristics associated with higher probability of completion include being in a program where faculty members have regular monthly or bimonthly contact to check on the progress of students seeking a dissertation topic. We also uncovered differences in completion probabilities across gender. Dropout rates are higher among women than men. Women benefit from programs that offer higher faculty-student ratios, programs that are more accepting of dissertations in essay rather than treatise form, and programs that offer a more flexible completion schedule. Women (but not men) who hold undergraduate degrees in math (whether combined with an economics major or not) are also more likely to complete their degrees. We have also found that having a baby during the program slowed new parents down by about 10 months, and there is some evidence that this impact is larger for women than men. Interestingly, students who already had children when they began the program but who did not add to their brood during their studies finished at the same rate as students without children.

Why do students drop out? Although students drop out of their PhD programs for myriad reasons, the most common reason cited by a sample of dropouts that we surveyed in our research was unsatisfactory academic progress. Indeed, this accounted for 59 percent of all departures—far ahead of personal and family reasons (12 percent) or lost interest in graduate study (10 percent). Among those who dropped out primarily for unsatisfactory academic progress, about half cited "insufficient mathematical preparation" as the root of their problem. Among the 10 percent of dropouts who said they lost interest in getting an economics PhD, the leading cause of their lost interest was a curriculum lacking relevance to real world economic problems and/or policies.

What happens to students who don't complete? Based on surveys of students who left PhD programs in economics, we found that a few transfer to other economics PhD programs, some transfer to Master's degree programs in economics, and some seek degrees in other disciplines (e.g., finance, law). Among those who don't continue their education, a large portion pursues careers as financial or economic analysts or consultants.

Where can I get more information on graduate study in economics? A valuable resource for students considering graduate study in economics, or for students in graduate programs who are contemplating their employment and earnings options, is the American Economic Association Graduate Study in Economics Webpages (http://www. aeaweb.org/gradstudents/index.php). This site includes information on the graduate degrees offered in economics, a list of graduate programs in economics in the U.S. (with links to each program's website), considerations for prospective graduate students in economics including tips on applying, an application timeline, and advice on mathematical preparation and funding graduate school. The site also provides links to research on graduate program rankings, to literature on the economics job market and to literature on graduate economics education. The site also describes careers, compensation and the job market for PhD economists.

For more data on the undergraduate major, PhD students and job market outcomes, see the <u>CSWEP Annual Report</u> in the winter issues of the CSWEP News.

Susan Elmes

Preparation for Research in Graduate School

I have been the director of undergraduate studies in the economics department at Columbia for the past 11 years, and one of the more common (and enjoyable) conversations that I have with our students regards preparation for graduate school in economics. Over the years, this conversation has evolved from one strictly about course selection that centered mostly on needed math and statistics courses to a more wide ranging conversation about preparing for life as a research economist. I open the conversation by asking the student about his or her motivation and goals for graduate study in economics. Some students demonstrate a strong interest in research and recognize that graduate school will primarily prepare them to do research. Others, however, are more vague on their motivations and uncertain as to what the graduate school experience will be. Below, I will share some ideas on how undergraduates can prepare for the research aspect of graduate school as well as determine if a PhD program is the right choice for them. In preparation of this article, I asked some of my former students who are currently in a graduate program or are recent PhDs to give one or two pieces of advice to prospective graduate students. I have incorporated their thoughts in this article.

My top suggestion, seconded by all of my former students, is that every student considering graduate school in economics should take at least one continues on page 6

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research assistant (RA) position either as an undergraduate or after graduation (or both). RA positions are found in universities, government, think tanks and the private sector. At universities, most faculty hire current PhD students as RAs. However, some also hire current undergraduates who generally work with the faculty member and his or her PhD students. In some departments and research centers, there are full-time RA positions for recent graduates. The National Bureau of Economic Research's (NBER) website, http:// nber.org/jobs/, currently posts notices for RA positions both at the NBER and at other locations. Most of these NBER postings are full-time positions working for professors or at academic centers. Outside of academia, there are RA positions at a wide range of institutions. A partial list of these institutions includes the Federal Reserve Banks and Board, IMF, Congressional Budget Office, Treasury Department, Justice Department, Urban Institute and Brookings Institution. Many of these institutions offer both summer internship RA positions for current undergraduates and full-time RA positions for recent graduates. Information about these positions can be found on the institutions' websites and at career services at some schools. Many departments, including my own, also post information about RA positions on their websites.

All of the students that I surveyed had worked as an RA either as an undergraduate, after graduation or both. Some schools, like Columbia, have an RA program set up for our undergraduates that matches students with faculty research projects. When students speak with me regarding graduate school, the first thing that I advise them to do is to take one of these RA positions. If they have already taken one, then I advise them to take a second. At schools where such a program does not exist, then students should speak with the head of the undergraduate program to find out the steps necessary to work as an RA with a faculty member. Alternatively, if you have a good relationship

with a particular professor, there is no harm in asking that professor if he or she would like to take you on as an RA. I do not recommend "cold" emailing faculty with whom you have no prior relationship. Institutions such as the Federal Reserve Banks and the Council of Economic Advisors have summer research internships for juniors. Full-time RA positions for recent BAs are generally limited to two-year positions and are specifically designated as positions for individuals interested in attending a PhD program in economics. In addition to learning technical research skills, fulltime RAs get a preview of life as a graduate student and professional economist. RAs often regularly attend professional seminars and are expected to stay on top of related research. Many of these positions also come with tuition benefits which will enable you to take a class or two to improve your background in economics, math or statistics. These RA positions are very competitive, so you may have to apply to many.

I advise almost every student interested in PhD work at Columbia to apply for these full-time research positions. Sometimes, students worry that by taking two years off to work as an RA, they will be disadvantaged in their applications to graduate school. On the contrary, their applications will be enhanced. More importantly, they are in a better position to make the decision that graduate work is the right choice for them. Nearly all of the students who take one of these full-time positions believe that they will be going to graduate school. However, I would guess that less than half of them will end up in a PhD program in economics. They change their minds not because they are not smart enough to go to graduate school, but because they learn a great deal about themselves and what life would be like as a graduate student and an economist. They simply realize that a PhD program is not the right fit for their career goals. In a few cases, such as students who have two or more years of RA experience, I do support them if they wish to go directly to graduate school

after receiving their BAs. However, even some of these students would benefit by taking a year or two off from school.

Depending on the skills of the RA and the nature of the project, the work that an RA does may include literature reviews, data collection, data analysis, programming, field work and mathematical analysis. Many RAs, especially undergraduate RAs, start out on the basic tasks, such as data collection; and as their skills develop move on to the more complex ones, such as data management and analysis. In some cases, RAs even have the opportunity to do field work. Several of my former students went abroad to oversee a variety of development projects. Most RA positions will involve data work to some extent. Thus, one of the greatest benefits of RA work is that you will improve your statistical and programming skills. Many RA positions will help you to develop fluency with one or more programming language (e.g., STATA, R and MatLab). Given the importance of empirical work in modern economics. good data and programming skills are essential to most economists. Moreover, having these research skills prior to graduate school will make you immediately employable as an RA. I mentioned above that most faculty hire current PhDs as RAs. Faculty are looking for students who already have the necessary research skills, especially statistical and programming skills. Not only will you make some money as a graduate student RA, but working as an RA is one of the best ways to find a faculty mentor and to get a start on your own research in graduate school.

In addition to improving your technical skills, an RA position will teach you how to develop and manage a research project. Working with experienced economists will give you insight on how to formulate a research question, how to break down a large question into analyzable parts and how to adjust the project when things do not go as planned. If you are lucky, your RA position will be in the general area of economics that interests you. However,

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this need not be true for the experience to be valuable. Many of my former students emphasized that matching the research project to their own interests was the least important factor in determining whether a particular RA experience was a worthwhile one. Much more important were the technical skills they learned and the relationships that they developed with their supervisors. Many of these supervisors became their mentors. These mentors helped them make the decision to go to graduate school and advised them on what schools would be the best fit. As a bonus, they are also in a good position to write a recommendation letter for graduate school. A good, informative recommendation letter is one of the most important factors in determining graduate school admission. A research economist who has spent a year or more supervising your work is in an ideal position to comment on whether you are suited to be an economist.

In addition to discussing research positions, I also talk with students about their interests in economics and how they can develop those interests through course selection. When it comes to the topic of "course selection and preparation for graduate school in economics," the list that follows generally includes a number of math, statistics and advanced economic theory classes. However, the list should not end there. I strongly advise undergraduates to take a number of elective courses in economics. The very best undergraduates will often want to take the first-year PhD micro, macro or metrics courses immediately after finishing the undergraduate versions of these classes. Taking the first-year PhD courses gives these students a terrific background in micro, macro and metrics theory but little or no exposure to what the majority of economists study. I am always surprised to learn that there are students finishing their first year in a PhD program in economics who do not know which field courses they will take in their second year. Passing the first-year PhD courses

is a necessary condition for the PhD in economics. However, the success of your graduate school and professional career will be judged on your research. Elective courses will help you to think about the research questions that you want to explore.

Undergraduate elective courses will not impress the PhD admissions committee. The elective courses that you take will vary with your interests as well as the particular strengths of your department. Start with a class that expands on what drew you to study economics. For example, if you are interested in the impact of outsourcing on employment and wages, then taking a trade course would be a logical choice. Depending on what topics you enjoy in the trade course, you might follow it up with a course in industrial organization, development or international finance.

For the past three years I have been the

director of doctoral admissions in the de-

partment of economics at the University

of Michigan. I thought it might be useful

to potential applicants to share my per-

spective on what it takes to get in to our

program. While my experience is limited

to the University of Michigan, I believe

much of what I have to say is applicable

ing class is 25, each year between 700

and 800 individuals apply for our pro-

gram. The majority meet our expecta-

tions for admission, with training in

economics through intermediate mi-

cro- and macroeconomics, as well as

training in calculus, linear algebra,

differential equations and probabili-

tv and statistics. Most also have math

GRE scores above the 80th percentile

and GRE writing scores of 4 or above.

As well, we look at performance levels

in mathematics and economics cours-

es. One low grade will not eliminate an

While our target size for an incom-

to other comparably ranked schools.

Follow your interests. Get to know the faculty and teaching assistants (if any) in these elective courses. These individuals know about the field and how it relates to the other fields in economics. Ask them for advice for follow-up courses. They may also advise you to take related courses in other social science departments, such as political science or sociology. The other social sciences are studying many of the same problems as economists but often use different tools and methodologies or emphasize other aspects of the problems. Those other viewpoints may give you a fresh perspective on an economics problem.

Several of my former students also suggested reading at least some of the economics literature as a way to develop your interests as an economics researcher. In general, undergraduates are not exposed to much of the continues on page 8

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John Bound

What Does It Take? Getting Admitted to a PhD Program

> applicant from consideration, but we do need to be confident that those we admit will be able to flourish in a technical field.

> While applicants must be adequately prepared in mathematics and economics, we also look for individuals capable of doing independent research. In fact, applicants without evidence of such capacity-for example, through their undergraduate or master's thesis, work for a professor or employment research are unlikely to gain admission to our program. In all cases, we are looking for evidence of both creativity and seriousness, and in this regard we pay a good deal of attention to letters of recommendation (especially from economics professors) and to applicants' statement of purpose.

> Many, but certainly not all, of our applicants have work experience with economics professors or at consulting firms (e.g., Brookings Institute, Urban Institute, Boston Federal Reserve Bank or

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NERA). We believe that students learn a great deal through such experiences, at least in part because this work allows them to gauge whether a PhD in economics is something they really want. Having salient job experience is particularly important for applicants with little exposure to their undergraduate professors, which is often the case for students from large research universities. It is also important for those applying from second-tier schools within the United States or abroad. Strong and convincing references from known economists at either firms or universities are helpful in bolstering applications.

While our modal applicant has an undergraduate joint degree in economics and mathematics from a highly ranked school, each year we admit students with undergraduate degrees in other areas. Indeed, over the last three years we have admitted students with undergraduate degrees in English, history, Latin American studies and physics. In all such cases the applicants had done well in the requisite course work in economics and mathematics, though often as non-degree students, and had worked in jobs that suggested they would flourish in the program. Also, although most applicants are in their 20s, we do admit "nontraditional" students in their 30s. One of our students, who just landed her dream job, is about to obtain her PhD at the age of 42, with her two adolescent children and husband cheering her on.

Given the very large number of applications we receive annually, we use a tiered process to narrow the applicant pool. More than half of our applicants are from overseas, and we generally have professors with some expertise in these applicants' geographic arease.g., Russia, Turkey, Germany, China and Argentina-pre-review these applications. Other candidates, including those from U.S. undergraduate institutions, are pre-reviewed by me. In this first step, we select from the 700 to 800 applicants about 300 for a careful review by members of the department's PhD admissions committee. At that point, two readers rank each candidate for promise, and then I categorize applicants as admitted, wait listed or rejected. In weighing applicants for admission, I put primary emphasis on perceived promise, but also strive for a class that is diverse in terms of interests, backgrounds, gender and ethnicity.

As is true for most economics departments in the country, most applicants to our program apply to multiple programs. Applicants we admit often ultimately turn down our offers in order to attend more highly ranked departments, to attend comparably ranked departments that are a better fit for their interests or for more personal reasons. While we admit more than enough applicants to fill an incoming class if most accepted our offer, over the past two years we have always taken individuals off of our wait list. Indeed, we have been filling more than half of the class from

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economics literature because it is often highly technical and written for a specialized audience. However, the Journal of Economics Perspectives (IEP) is a journal written for the non-specialist. Each issue features several articles organized on a single theme, and each article summarizes some of the recent research related to that theme. Although the articles are written for non-specialists, they are intended for an economics-literate audience. The JEP is available and searchable online at the AEA website: http://www.aeaweb.org/jep/. At Columbia, some of our students write senior theses in economics, and I often recommend the *JEP* as a starting point. As their topic develops further, they will move from a *IEP* article to some of the source research articles. Students in seminar courses at Columbia are also exposed to research papers (from the *IEP* and elsewhere). You may not understand all of the technical details of the papers, but you will get a sense of the way economists approach and answer certain questions and of the mathematical and statistical skills that you will be expected to master. So

the wait list group. At the same time, because we currently commit to financially support all accepted students for five years, it is very important to limit the incoming class size to about 25. When admitting individuals from the wait list, I pay attention to perceived promise but also to signs that the applicant will actually choose the University of Michigan over competing schools.

Some of the individuals have records and references that lead me to suspect the individual is almost certain to be admitted to a top tier program such as Harvard, MIT or Princeton. While my practice is somewhat controversial, I put some such applicants into the wait list group rather than the admit group. Some of these applicants may, in the end, not obtain admission to a top program or may have personal reasons for choosing Michigan over more highly

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look for courses in your department that emphasize reading original economics research. At my school, our students are required to take only one seminar course, which they generally take during senior year. However, for students interested in graduate work, I recommend that they take a seminar during junior year and that if they do not write a senior thesis, then they should take a second seminar.

Graduate schools are looking for more than students who can pass the first-year PhD courses. They are looking for students who will become good researchers. Being an RA, taking elective classes and reading economics literature will prepare you to be a better researcher in graduate school. Finding out what it is like to be a graduate student/professional economist and being excited to do research will also help you determine if graduate school is the right choice for you. Having a well-developed set of research skills and a focus on a topic will help you make the transition from coursework to research, which is the most difficult transition for most graduate students.

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ranked programs for which they would qualify. My hope is that, in such cases, applicants will let me know of their continued interest in Michigan. Communications from faculty who know the applicant can be particularly helpful. To illustrate, last year a representative of our business school let us know that the wife of one of their applicants had applied to our program-a woman I viewed as an unlikely accept and had placed on the wait list. Based on this new information, when it became possible to do so, we offered her admission. She is doing well in her first-year classes and I am very pleased for her, for her husband and for us that I was able to do so.

So, my advice to the would-be economics PhD program applicant?

It is essential to do well in collegelevel math and economics courses and to do reasonably well on the GRE. If you discover your interest early, do a joint undergraduate major in math and economics. If you discover your interest relatively late, after graduating from college, take the requisite mathematics and economics courses, get involved in research via a professor or an organization and then apply. This pertains as equally to those with undergraduate degrees in physics or engineering as to those with degrees in history, Latin American studies, political science or philosophy. Another avenue for some successful applicants has been to complete a rigorous master's degree program in economics. For example, Duke and the University of Chicago have such programs. I am sure there are many others.

When you're ready to apply, do research on the requirements, admission rates and substantive strengths of various economics graduate programs. Unless you were an undergraduate at Harvard, MIT or Princeton, won undergraduate prizes for your research and have been assured that you will be admitted to the program of your choice, apply to a range of schools. Pay attention to the match between your strengths and those of the programs. If you have a strong interest and/or background in development economics, environmental economics or economic history, apply to schools that have strength in the relevant area. Not all good programs are strong in all areas of economics. In addition, some schools have separate programs in specific areas. To take one example, UC-Berkeley has a wellrespected program in Agricultural and Resource Economics. If such programs are a good match for your interests, apply. But do not be fooled into thinking that such programs are "economicslight," since they typically have similar applicant expectations as do regular economics programs.

In terms of reference letters, getting one from a mathematics professor who can attest to your math capacities is less important than one from an economist who can comment on your capacity to conduct research.

If you are wait listed at a school that you really want to attend, let them know of your continued interest. Personally communicate the sincerity of your interests and have a professor or employer contact the admission director on your behalf. This step is especially essential for schools ranked below the top five. While Harvard and MIT will assume that you will attend if admitted, the University of Michigan, Duke, the University of Wisconsin and Boston University will not. If invited to a preview day, go if you can, since this will underline your interest.

If you are fortunate enough to be admitted to more than one school, ask for placement records for each, although bearing in mind that these are rather weak predictors of your own prospects. A top PhD student from the University of Michigan may obtain a better placement than many students obtaining PhDs from Harvard. However, the placement record does give you some notion as to the range of possibilities you might expect. It also makes sense to find out what fraction of an entering cohort typically obtains a PhD. Some programs admit many students with the expectation that some will not make it through. Other programs do what they can to make sure all admitted applicants obtain their PhDs. Personally, I think the world is a better place because both kinds of programs exist, but knowing completion rates may help you choose the program that's best for you.

Good luck.

Views from the Trenches By Current Economics Graduate Students

To obtain a student perspective on the graduate school experience, CSWEP informally surveyed current students (both male and female) in PhD programs at six U.S. universities. Students were promised anonymity and were specifically asked to address the question, "What have you found the most challenging about the transition from undergraduate to graduate studies?"

A summary of the students' feedback follows, with verbatim responses quoted. CSWEP extends a huge "Thank you!" to each of the students who participated.

Many students commented that graduate school is much harder than undergrad. As one said, "The hardest thing was the workload. In college, I could take some time off and still do well. In the first two years of the PhD, when I reached my optimal point I was working all the time—around 12 to 13 hours a day, weekends included." They noted that the increased workload required being more organized and managing their time more carefully than in undergrad. Whereas many had studied alone in college, they now needed to visit the professor and study with other students in order to understand the material.

Students identified several reasons why graduate school was harder than undergraduate studies. One reason given was the increase in mathematical

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rigor. As one student articulated, "Econ undergrad is not mathematical at all, and then suddenly students begin being bombarded by Real Analysis and proofs. All these successful students in undergrad suddenly become miserable in the 1st and 2nd year of a PhD."

Another reason is that students are expected to learn independently in graduate school. One student observed that graduate school requires understanding concepts both more deeply and more broadly. As she said, "Undergraduate exams are normally very close to what has been covered in lectures and homework assignments, whereas the graduate level exams rightfully test the degree

Some cited finding a dissertation topic as the single most difficult part of graduate school.

to which a student has really internalized the concept I have to make sure that I not only understand what was said in lectures but also practice as much as possible, read about the same concept from different sources, rewrite notes several times to make sure I truly understand, make up my own examples/counter examples, think about extensions, etc. Normally as an undergrad your professors would do a large part of this work for you, whereas as a graduate student you have to get used to learning more independently." However, students also mentioned that professors in graduate school were more helpful and more invested in students' success than in undergrad.

Several students remarked that almost everyone was at the top of their undergraduate class, a pattern that of course not all can continue in graduate school. As one 1st year student stated, "There was little warning of the feeling of being in the bottom of the class ... suddenly I am one of the dumbest people in the room. This is one of the most ego-deflating effects of graduate school." A 2nd year student reported, "It's a humbling transition ... it's very possible that you won't be successful, which is usually uncommon for the caliber of student that typically enters graduate programs."

One female respondent had this to say about gender issues: "The most difficult part of the PhD process for me has been the overtly male culture. I knew when beginning the program that the math would be extremely challenging and that I would be rusty, since I worked for four years between undergraduate and graduate. I also knew that because I had no programming skills and had not used statistical software. I would have to catch up in order to meet the expectation that programming, while never taught, must be learned. But these things I knew. I did not realize there would be so few American women in the program, that there would be no tenured female faculty in the department until the end of my first year, that my choice of advisors was entirely male, and that the invited seminar speakers rarely featured a woman. Every professor I have spoken to about this sees it as a significant problem. Economics needs more women, and they wholeheartedly agree. But it's still a boy's club. It still exudes all the men-in-large-group traits that most women find very off-putting, and most men are probably not aware of."

Many students who were in their 3rd or higher year noted difficulties writing their dissertation. Some cited finding a dissertation topic as the single most difficult part of graduate school. Finding an advisor was also noted as a challenge. Others, however, commented on how much they enjoyed doing their own research and how helpful their advisors were during the dissertation phase.

Students who worked between undergraduate and graduate studies evidenced several features of the transition that students coming directly from undergraduate studies may not experience. They explained that graduate school is a complete lifestyle change from working. In particular, graduate school meant having less free time and considerably less income, and hence a lower level of consumption, than when

working. One returning student remarked, "The biggest difficulty you may face is that, no matter how strong your motivation is (and, I assure you, you need a very strong one in order to decide to quit your job), there will be times when you'll find yourself wondering whether you just made the wrong call. In contrast to people coming to grad school directly from college, you know exactly what your outside option is, you know whether you are good or not at it and how satisfied you may be with it. Especially in your first years, this lack of uncertainty may make you second-guess your choice of coming to grad school and make you lose focus on your coursework."

Students also acknowledged that what they would do after graduation was a major source of stress. As one student wrote, "In a lot of ways, it wasn't the transition into the program which scared me. It was the transition out of it." Students commented they were uncertain whether they would be able to find a tenure-track job, whether they wanted to work in consulting, the public sector or academia, and where they would end up geographically—and this uncertainty was stressful.

A few students did comment that their transition to graduate school was smooth and that they had experienced few, if any, difficulties. One student said, "Grad school is a unique experience. It is intense and challenging. It's also exciting and rewarding . . . for the first time in your life, you have a chance to work on a problem that nobody knows the answer to."

One student perhaps summed it best: "Every once in a while, I would think back on my journey through grad school, and realize how disciplined my thinking had become, how expert I was now on topics I knew nothing about two years ago, how much my model had developed from its first early iterations, and I would realize that not only had my work come further than I thought, but that I had changed, too. I had become an economist."

Matching Markets in Action Speed Mentoring in Washington, DC

Over a period of three years and a few meetings, CSWEP members in the Washington DC, Maryland and Virginia area have pulled together 100 women economists from public, private, international and academic organizations to network, mentor, collaborate and build connections with the informal support of the CSWEP Board.

We have held two big events. In 2012, we had an informative panel discussion on work-life balance (or juggle?), including the now-Chair of the Federal Reserve, the Honorable Janet Yellen. (Shout out to Claudia Sahm for organizing the event!)

In May 2013, we held a speed-mentoring event, kicked off by CSWEP affiliate and recently appointed BLS Commissioner Erica Groshen. A lot of people have asked us about speed mentoring. They want to know what it is and how we carried it out. What follows is a simple guide for organizing a speed mentoring event.

Speed mentoring is a timed event that allows many mentors to meet with many mentees. For those of you who have heard of speed dating, you will recognize the organizing tenets. We identified an approximate number of mentors and mentees and set up a plan to recruit them. We wanted at least 10 mentors, and we were willing to have twice as many mentees as mentors. (Since this was not an exact matching market like speed dating is, we weren't worried about parity in numbers.)

We established ground rules about time and information sharing. We set aside five minutes for each encounter, asking mentees to briefly introduce themselves, but providing the background on mentors in advance of the event in order to use time efficiently. Unlike speed dating, we allowed people to share all of their contact information and recommended they swap business cards. We asked mentors to be available for future follow up, and mentees to take the initiative to contact a mentor they liked.

We recruited 16 mentors (women with work or research experience willing to share their experience and give advice) and signed up 35 mentees (students and recent graduates at all levels and young professionals). We set up a table for each mentor, and we had mentees in pairs and singles rotate around the mentor tables. The face-to-face introduction allowed almost all of the mentees to meet almost all of the mentors, swap business cards, and get snippets of advice. While we didn't carry out any follow up to see if mentees contacted mentors afterwards, we did have plenty of positive feedback about the event.

The biggest challenge to organizing the event was sticking to the time limit. Not surprisingly, it wasn't easy to stop discussion mid-sentence and move on, even though we had a timekeeper and a bell ringer! Many participants commented that five minutes was too short of a time to get to know people, but on the other hand, almost as many participants really liked meeting such a large number of professionals and students. While our objective was achieved, it was obvious that everyone wanted more and deeper interaction. This lesson will be used for organizing future events.

The DC-area group plans to discuss recently developed CSWEP guidelines on carrying out CSWEP-related and CSWEP-supported activities this coming spring. If you want more information on speed mentoring or on the activities of the DC-based CSWEP members, feel free to contact me at **susan_fleck@ yahoo.com.**

CSWEP-DC's speed mentoring session was hosted by the Bureau of Labor Statistics (BLS) and organized by BLS economists **Sabrina Pabilonia** and **Maureen Doherty, Judy Yang** (World Bank), **Xiaotung Niu** (Congressional Budget Office) and **Susan Fleck** (U.S. Citizenship and Immigration Service). CSWEP sponsored a networking lunch for the participants.

Susan Fleck

In Gratitude

CSWEP thanks the following senior mentors for their dedicated service at the May 2013 CSWEP-DC Speed Mentoring Event.

Jessica Banthin, Senior Advisor, Congressional Budget Office

Marguerite Berger, Vice President for Impact Evaluation and Research, Vital Voices Global Partnership

Terry Dinan, Senior Advisor, Congressional Budget Office

Maureen Doherty, Supervisory Economist, Division of Producer Price Indexes, Bureau of Labor Statistics

Susan Fleck, Division Chief, Major Sector Productivity, Bureau of Labor Statistics

Claire Gallagher, Supervisory Economist, Consumer Price Index, Bureau of Labor Statistics

Gillian Garcia, Retired, International Monetary Fund

Thesia I. Garner, Senior Researcher Economist, Division of Price and Index Number Research, Bureau of Labor Statistics

Jane Ihrig, Deputy Associate Director, Federal Reserve Board

Kelly Maguire, Economist, U.S. Environmental Protection Agency

Joyce Manchester, Chief, Long-Term Analysis Unit, Congressional Budget Office

Sabrina Pabilonia, Research Economist, Bureau of Labor Statistics

Donna Rothstein, Research Economist, National Longitudinal Surveys, Bureau of Labor Statistics

Susan Singer, Chief Economist, Wireless Telecommunications Bureau, Federal Communications Commission

Martha Stancill, Assistant Division Chief for Economics, Federal Communications Commission

Joann Weiner, Lecturer, Department of Economics, George Washington University

In Gratitude

CSWEP thanks the following senior mentors for their dedicated service at the October 2013 MEG Pre-Conference Mentoring Workshop for Junior Economists.

Hilde C. Bjørnland, BI Norwegian School of Business

Yoosoon Chang, Indiana University

Marcelle Chauvet, University of California at Riverside

Xiaohong Chen, Yale University

Ana Maria Herrera, University of Kentucky

Elena Pesavento, Emory University

Anne Royalty, Indiana University— Purdue University Indianapolis

Anastasia Semykina, Florida State University

Kosali Simon, Indiana University

Tara Sinclair, George Washington University

Cindy Shin-Huei Wang, University of Catholique de Louvain and National Tsing Hua University

Xueyan Zhao, Monash University

Help Fill CSWEP's Brag Box

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

We want to hear from you! Send announcements of honors, awards, grants received, promotions, tenure decisions and new appointments to <u>cswep@econ.</u> <u>duke.edu</u>. It will be our pleasure to share your good news with the CSWEP Community.

MEG Mentoring Workshop 1 continued from page 1

both mentors and mentees, and the workshop was well attended by a truly diverse group of participants not just from the Midwest states but from many other parts of the world including Australia, Belgium, Canada, Ghana, Netherlands, Norway, United Kingdom and many other states in the U.S. I am pleased to share with CSWEP members the new mentoring idea and the details of the workshop.

In the workshop, a novel and unconventional way of mentoring was implemented through mentor-mentee pair presentations. A mentor presented her mentee's paper as if it were her own, and the mentee discussed her own paper as a formal discussant. The intent for this new format of mentoring is to provide an opportunity for mentors to more deeply learn about the actual content of their mentees' research so that they may start building a more substantive intellectual relationship, which is likely to survive long after the conference is over. With this foundation, mentors can be much more easily updated with recent research developments of their mentees, thereby enabling them to continue to provide constructive comments. It will also naturally open up possibilities for them to start a joint research project.

We selected 10 mentor-mentee pairs to present at the workshop based solely on the availability of an appropriate senior female mentor with substantial research overlap with a mentee. I first identified 12 senior female economists who were able to participate in the conference. These 12 mentors were asked to pick and rank two or three papers from the entire pool of 37 submissions by female junior economists that best matched their current research interests and/or which they felt most comfortable presenting. Based on the mentors' choices, each mentor was matched with a mentee whose submission was most closely related to her research areas in order to create the maximally desirable win-win outcomes for both mentors and mentees.

The mentoring workshop had three main events: a networking dinner, a breakfast and formal introduction of mentor-mentee pair presenters, and a mentoring workshop consisting of three sessions on econometrics, empirical microeconomics and empirical macroeconomics. Several post-conference activities were also arranged to help facilitate further networking and interactions among the mentors and mentees who travelled a long distance and thus stayed an extra day.

We strongly encouraged that all female junior economists participate in the mentoring workshop regardless of whether they were selected among the 10 mentees presenting in the mentoring sessions. Those who were not selected presented at a regular session in the main conference, and all the participating senior mentors were encouraged to attend the presentations by the female junior economists throughout the conference in order to learn more about the research content of junior economists in their research areas. We also encouraged junior economists to attend the presentations by the senior economists in their research areas, as it provides an excellent opportunity for both potential mentors and mentees to develop deeper understanding of each other's research content.

I was, and still am, excited by this new way of mentoring, which we hope will foster a collaborative relationship between mentors and mentees. I am hopeful that the benefits of feedback from both sides of the relationship will prove useful to all participants involved. Without a doubt, what makes this new format of mentoring possible is the participating mentors' genuine dedication for mentoring juniors, which in turn has led them to decide to make such a substantial investment in their mentees' research. I would like to thank them once again for their willingness to play such a critical role and celebrate their contribution and commitment.

MEG 2013 was hosted by Indiana State University and sponsored by the Centre for Econometrics Research, the *Journal* of Applied Econometrics and STATA. A grant from the Joan Haworth Mentoring Fund and additional CSWEP funding helped to defray Mentor travel and lodging.

In Memory of Suzanne Scotchmer

Marjorie B. McElroy

Suzanne A. Scotchmer, an internationally renowned economist in the fields of applied theory and game theory, passed away in January 2014. Scotchmer traced an unusual path for a woman born in 1950 in Pelican, Alaska—a fishing village with a population of 130. After receiving a BA from the University of Washington, where she was honored in 2013 with a Distinguished Alumnus Award, she earned an MA in Statistics and a PhD in Economics from the University of California, Berkeley. Her first position in academia was Assistant, then Associate. Professor of Economics at Harvard University; and in 1986 she returned to Berkeley, becoming a Professor of Economics and Professor of Law in the School of Public Policy.

Writing soon after her death, Gillian Lester, Dean of the School of Law, noted, "Suzanne was particularly inspirational as one of very few women writing in the field of theoretical economics. Friends, colleagues and students across the campus and across her disciplines shared a deep appreciation for Suzanne's tirelessly creative mind, her enthusiasm for intellectual engagement at the highest level, and her preternatural ability to see to the heart of a complex problem immediately and describe it with clarity and insight" (Brad DeLong's blog, http://bit.ly/ImF6HEK).

As a PhD advisor, Scotchmer was known to be generous with her time and ideas. In addition to advising students on dissertation papers (which she insisted be written by the student alone), Scotchmer often wrote papers with students. Deborah Minehart, an economist working in the Antitrust Division at the United States Department of Justice, recollects that Scotchmer was working on projects with at least four graduate students in her PhD cohort at the University of California, Berkeley. "All of us went on to have these papers published," she recalls. "We also all felt that we were blossoming under her nurturing."

Scotchmer's ability to use economic techniques to elucidate public policy concerns led to significant contributions in models of innovation, where her work on patents and incentives for research and development influenced policy design on major intellectual property issues. She was instrumental in demonstrating that innovation is not a one-off event, but rather a cumulative event where innovations combine to become a ladder of increasing improvements. Her 2004 book, Innovation and *Incentives,* was hailed by the economic and legal professions as a practical and important proposal for legal reform.

On May 1, 2014, a conference titled "Innovation and Intellectual Property: A Tribute to Suzanne Scotchmer's Work" was co-sponsored by the UC Berkeley School of Law and the Berkeley Center for Law & Technology. The program focused on patent policy, cumulative innovation, incentives to innovate and club theory; and the speakers included twenty-six co-authors and colleagues. A link to the program is <u>https://www.law.</u> berkeley.edu/16882.htm/.

Scotchmer also advanced club theory, identifying the influence of the bundling of land with club membership on economic outcome. As an evolutionary game theorist, her work on attitudes of risk shaped the understanding of certain risk strategies as rational behavior. Her scholarship was recognized with visiting scholar positions in 10 different countries, research fellowships at Yale University and Stanford University, and teaching or visiting appointments at many distinguished institutions, including Harvard University, the University of California at Los Angeles, the New School of Economics, the Stockholm School of Economics, the University of Auckland, Tel Aviv University and the University of Paris (Sorbonne).



Suzanne Scotchmer

She also served as an associate editor for the Journal of Economic Literature, Journal of Economic Perspectives, American Economic Review, Journal of Public Economics and Regional Science and Urban Economics, and was a research associate of the National Bureau of Economic Research.

Throughout, Scotchmer never lost her connection to her Alaskan roots. A collection of personal stories crafted for publications such as *Alaska Magazine* and available at http://socrates.berkeley. edu/~scotch/alaska/, speak of her lifelong ties—often in the form of kippered salmon shipped to her by her father on such occasions as her PhD oral defense—to her rain-soaked home town.

Her reflections in "Devils Club Tea," printed in 1996 in the Anchorage Daily News Sunday Magazine (We Alaskans), are especially poignant. Offering the medicinal tea to a friend, she recounts the experience of her Alaskan friend, Clarence, who took it when he was sick with cancer. "Did it cure the cancer?" her friend asked. "Maybe for a while," Scotchmer responded. "But eventually we lost him."

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a panelist, judge, referee and member of advisory committees. She has been a quiet mentor to countless individuals, both male and female, who have gone on to distinguish themselves in the economics profession. She reads colleagues' drafts thoroughly and gives her time and knowledge to others without restraint. Perhaps one of her greatest contributions at Brandeis has been her support of undergraduates, and especially her success in helping female undergraduates gain admission to top graduate institutions. She continues to challenge her colleagues intellectually, and she generously provides advice that, in the words of one department member. "Is better to be followed than not."

Why did you decide to become an economist?

That is a long story. During my undergraduate years at Penn, the thought of becoming an economist never even crossed my mind. I entered college in 1959, soon after Sputnik. In an atmosphere that emphasized the importance of science, I started out in chemical engineering, the only major that would allow me to take math, physics and chemistry in my freshman year. By sophomore year I had migrated to chemistry. There I soon found that I lacked the manual dexterity needed for success in the lab. After numerous accidents of various kinds, I switched to math, a safer major that left me free of acid burns. But to graduate, I needed one social science course. That turned out to be economics, which I chose mainly because my boyfriend was also taking the course. I had a wonderful teacher, Irving Kravis, and loved the course. Professor Kravis even encouraged me to consider majoring in economics. However, by then I had already been accepted to graduate school in math.

I did manage to complete the first year of graduate math courses at the University of Chicago, but I could already see that I did not have what it would take to go on to research in the field. I taught high school math in Chicago for a couple of years. After moving to Boston, I worked at the Massachusetts Institute of Technology (MIT) as a programmer-analyst in the Aeronautics and Astronautics Department. That job helped me to cross over into applied math. But after a year of calculations about nose cones and trajectories, I wanted to find a field of application that was more interesting. Joe Ostroy, a friend who was a graduate student in economics, told me that advanced math was beginning to be applied in economics. One day I walked over to the MIT economics department, where I met with Karl Shell, then an assistant professor. He had also entered economics with a math background and told me that I had come to the right place. Following Professor Shell's advice, I enrolled in MIT's graduate theory courses as a special student. After a few very tough weeks, I never doubted that my future was in economics. The following year I entered the PhD program at the University of Chicago.

Chicago must have been very different from MIT. What was your experience?

During my year at MIT, the senior faculty seemed obsessed with Chicago, and definitely not in a positive way. My teachers believed in a long-run tradeoff between inflation and unemployment. We were told that Chicago economists didn't care about the unemployment that MIT macroeconomists saw as an inevitable result of low inflation. Robert Solow famously quipped, "Everything reminds Milton Friedman of the money supply. Well, everything reminds me of sex, but I keep it out of my papers." Arriving in Chicago I had expected to find a similar obsession with MIT, but in fact the whole atmosphere was quite different. Both students and faculty were passionate about economics and much more diverse in their opinions than their MIT counterparts. Everyone was bubbling over with excitement about new ideas. It is not surprising to me that many of the faculty from those days went on to win the Nobel Prize.

Chicago's Department of Economics fostered a real sense of community. The 4:00PM "tea" brought students and faculty together on a daily basis, and discussions sometimes continued well into the supper hour. At night, faculty and students met at Jimmy's, the seedy campus bar. Senior faculty also invited students to their homes whenever hosting the many economists who visited Chicago, and we students had the opportunity to socialize with some of the leading economists of the time. One dark side of all this intellectually charged social activity was the role of alcohol. Although some faculty members remained sober, others routinely drank to excess, as did many of the students.

What was it like to be a woman student at Chicago?

My entering class of 60 had only four women, so we were very conspicuous. That cut both ways—anything we did, positive or negative, was more likely to be noticed. I emerged as a top student in my cohort, and being one of just a few women often worked in my favor. This was the 1960s, and sexism certainly was not dead, but in a strange way it sometimes had a positive effect. Because everyone accepted that Chicago (and most places) discriminated against women in a variety of ways, a successful woman was assumed to be highly qualified indeed. But there were times when it was helpful to have a very thick skin. I remember an evening at Jimmy's early in our first year when one of my classmates wanted to be absolutely clear that I would have to pay for my own beer. And toward the end of my time in Chicago, another classmate conjectured that my collaboration with my thesis advisor, Harry Johnson, probably meant that we had a relationship other than student and teacher.

How were you attracted to the field of international trade?

In those days international trade and investment were much less important for the United States than they are today. Students who specialized in international economics were usually from other countries with more exposure to international transactions. Given my math background, I had expected to become a theorist or an econometrician.



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My early mentors at Chicago included Hirofumi Uzawa, a leading theorist, and Zvi Griliches, a leading econometrician. But by the time I was starting to look for a thesis topic, Professor Uzawa had returned to Japan and Professor Griliches had moved to Harvard. Like many Chicago students of the time, I had taken several courses in international economics, and Harry Johnson and Robert Mundell, both world-renowned international economists, were still at Chicago. I got the idea for my thesis from a summer job in Washington at the Cabinet Task Force on Oil Import Control, which studied the effects of the quotas then restricting U.S. oil imports.

Harry Johnson was my primary advisor, and he was a wonderful mentor. He helped with every aspect of my thesis as well as my early publications. Harry was a very heavy drinker until close to the end of his life, but this never had a noticeable effect on his professional behavior. While working on my thesis I would drop off a draft in the early morning. On his desk, Harry would have a full bottle of his favorite booze. In the evening I would come back to get his comments. The bottle would be empty. And though Harry traveled incessantly, he nonetheless replied quickly to any correspondence, often just scribbling an answer on my letter.

What do you consider to be your greatest contribution to the profession?

I don't lose any sleep on the morning when the winners of the Nobel Prize in economics are to be announced! Although I have been successful in publishing in the top journals, none of my research papers can really be regarded as a home run. In fact, as a young economist I was amazed to find that even a paper in the American Economic Review could, once published, sink like a stone in the sea. I think my best papers have been ones that try to pull together what I and other economists have contributed to understanding real-life issues. My monograph, Surprising Real Effects of Floating Exchange Rates, reviewed what advocates and opponents of floating rates had written prior to 1973 and

contrasted these analyses with what actually happened in the first decade after the demise of the Bretton Woods system. This monograph was reprinted in several places as people tried to understand the events that accompanied the new monetary arrangements.

I would have to say that I've made a larger impact on the profession as a teacher than as a researcher. Over the years, many former students have told me that I was influential in their decision to become an economist or helped them to continue on when things became difficult. It has been a great pleasure to see these students go on to illustrious careers.

Being an academic economist often requires a fine balance between being conscientious in teaching and administrative duties, and forging ahead with research. Do you perceive that women more often than men err on the side of conscientiousness? Any advice?

In the CSWEP News I once read the advice that young economists should aim to be "good enough" teachers. That was never my philosophy. I always wanted to be as good a teacher as I could be, and I never regretted the time I spent. I haven't noticed that women tend to be more conscientious than men in either teaching or administrative duties. But for men as well as women, time spent in teaching can also become a form of procrastination. I found it was important to allocate some part of each week specifically to research. Even so, most of my new research projects were begun during the summer or over breaks.

Administrative duties are different. As director of the PhD program and later as department chair, I set some definite goals and worked to achieve them. I'm pleased that my innovations have remained in place under subsequent chairs. I was also active in recruiting strong new faculty. But as department chair I spent many, many hours in meetings that were largely a waste of everyone's time. For our own department, I tried to minimize the number of meetings and to keep them short.

Women are usually asked about how they have balanced professional demands with those of family. What has been your experience?

Especially for women, the "up or out" tenure system poses an important dilemma. My own case was atypical-I'm probably the only woman who ever got tenure by having a baby. Our first child was born while my husband and I were both junior faculty members at the Economics Department at Harvard. Although I shared a secretary with the department chairman, he had never once inquired about my plans. At that time Harvard had no family leave, and I went back to work soon afterward. But because promotion to tenure tended to be the exception rather than the rule at Harvard, news of our situation motivated several other universities to make tenured offers to both of us. We moved to the University of Wisconsin as tenured associate professors.

Like most families with young children, we struggled with finding good childcare that we could afford. However, for me the early years presented much less of a challenge than parenting teenagers. In fact, the only time I seriously considered cutting back on work to be at home with our kids was when they were teens. Now our daughter, who earned a PhD in neuroscience, is the stay-athome mother of four young children. She has taken pains to assure me that the choice does not reflect any negative feelings about her own childhood!

Do you have any regrets regarding your career?

Overall, things have gone very well for me, though often not at all in the way I anticipated. I have been fortunate in entering a field that I still find very engaging, and I've had many satisfying professional experiences and relationships as a result of being in the right place at the right time. Like anyone else, I've made some decisions that in retrospect were probably not ideal, but even for those it is hard to know the counterfactual. Basically, I am a person who prefers to look forward rather than back.

Calls & Announcements

Visit <u>cswep.org</u> for full details on each of the below opportunities including submission guidelines for paper and application calls as well as participant, panelist and paper titles for currently scheduled sessions.

CSWEP Call for Nominations for the 2014 Elaine Bennett Research Prize

The Elaine Bennett Research Prize is awarded every other year to recognize, support and encourage outstanding contributions by young women in the economics profession. Nominees have demonstrated exemplary research contributions in their field at the beginning of their career and are within seven years of completing their dissertation. Nominations should contain the candidate's CV, relevant publications, a letter of nomination and two supporting letters. The letter of nomination and supporting letters should describe the candidate's research and its significance.

Deadline: September 22, 2014.

CSWEP Call for Nominations for the 2014 Carolyn Shaw Bell Award

The Carolyn Shaw Bell Award is given annually to an individual (male or female) 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 and mentoring others. Nominations should include a nomination letter, updated CV and three or more supporting letters, with preferably at least two from mentees. As this award celebrates mentoring, nomination letters should be geared toward that activity, rather than toward academic achievements. All nominations are automatically kept alive for consideration by the Award Committee for a period of three years.

Deadline: September 29, 2014.

CSWEP Call for Applications for the 2015 CeMENT Nationals Workshop

Boston, MA. Every year CSWEP organizes a national mentoring (CeMENT) workshop aimed at mentoring female junior faculty at institutions where promotion is primarily based on research output. The next national mentoring workshop will occur in conjunction with the ASSA meetings in January 2015. A call for applications will be published in July 2014.

Deadline: September 15, 2014

CSWEP Call for Applications for the Joan Haworth Mentoring Fund

CSWEP welcomes applications to the Joan Haworth Mentoring Fund, which was established to encourage senior mentoring women and institutions to incorporate mentoring of junior professionals into their programs. The fund provides small grants (typically less than \$1K) to permit mentors to either extend a visit to an institution for the purpose of mentoring or to visit an institution for that purpose alone. Applications for funds may be submitted by the institution, junior women or the mentor herself. The application must include cost-sharing with the home institution and the mentoring must benefit more than an individual faculty member. Mentoring does not need to be field specific and can also include professional development advice. Successful applicants will be asked to write a summary of what they have gained from the mentoring effort. **Deadline: Ongoing.**

CSWEP Sessions @ the 2014 Western Economic Association International Conference

Denver, CO. Organizer: Bevin M. Ashenmiller, Occidental College

Saturday, June 28, 2014

7:00AM – 9:00AM, CSWEP Networking Breakfast

- 10:15AM 12:00PM, Panel: Using Government Data
- 12:30PM 2:15PM, Environmental Economics
- 2:30PM 4:15PM, Investments in Children
- 4:30PM 6:15PM, Jobs for Economists: A Panel on the Pros and Cons of Government, Academic, Research and Private Sector Jobs

Sunday, June 29, 2014

- 8:15AM 10:00AM, Caregiving and Investment Choices for Older Americans
- Questions? Contact cswep@econ.duke.edu.

Directory of CSWEP Board Members

Marjorie McElroy,

Chair Professor of Economics Duke University Durham, NC 27708-0097 (919) 660-1840 Fax: (919) 684-8974 cswep@econ.duke.edu

Bevin Ashenmiller, Western

Representative Associate Professor of Economics Occidental College 1600 Campus Road Los Angeles, CA 90041 (323) 259-2905 Fax: (323) 259-2704 bevin@oxy.edu

Cecilia Conrad, at-large

Vice President, MacArthur Fellows Program 140 S. Dearborn Street Chicago, IL 60603-5285 (312) 726-8000 Fax: (312) 920-6258 cconrad@macfound.org

Linda Goldberg, at-large

Vice President of International Research, International Research Function Federal Reserve Bank of New York 33 Liberty Street New York, NY 10045 (212) 720-2836 Fax: (212) 720-6831 linda.goldberg@ny.frb.org

Kovin Long at large

Kevin Lang, at-large Professor of Economics Boston University, Room 302A Boston, MA 02215 (617) 353-5694 Fax: (617) 353-4449 lang@bu.edu

Amalia Miller, Eastern Representative Associate Professor of Economics P.O. Box 400182 Charlottesville, VA 22904-4182

(434) 924-6750 Fax: (434) 982-2904 armiller@virginia.edu

Serena Ng, at-large Professor of Economics Columbia University 1012 International Affairs Building 420 W. 118th Street New York, NY 10027 (212) 854-5488 Fax: (212) 854-8059 serena.ng@columbia.edu

Ragan Petrie, Southern Representative Associate Professor of Economics George Mason University 4400 University Drive, MSN 1B2 Fairfax, VA 22030 (703) 993-4842 Fax: (703) 993-4831 rpetrie1@gmu.edu

Kosali Simon,

CeMENT Director Professor, School of Public and Environmental Affairs Indiana University Room 359, 1315 East Tenth Street Bloomington, IN 47405 (812) 856-3850 Fax: (812) 855-7802 simonkos@indiana.edu

Petra Todd, at-large Professor of Economics University of Pennsylvania 3718 Locust Walk, McNeil 160 Philadelphia, PA 19104 (215) 898-4084 Fax: (215) 573-2057 ptodd@econ.upenn.edu

Anne Winkler, Midwestern Representative Professor of Economics University of Missouri– St. Louis One University Boulevard St. Louis, MO 63121 (314) 516-5563 Fax: (314) 516-5352 awinkler@umsl.edu

Madeline Zavodny,

Newsletter Oversight Editor Professor of Economics Agnes Scott College 141 E. College Avenue Decatur, GA 30030 (404) 471-6377 Fax: (404) 471-5478 mzavodny@agnesscott. edu

Newsletter Staff

Marjorie McElroy, Editor Serena Ng, Co-editor Madeline Zavodny, Oversight Editor Jennifer Socey, Assistant Editor Leda Black, **Graphic Designer**