

Universities, Careers, and Women

A research symposium presented by
The Sanford C. Bernstein & Co. Center for Leadership and Ethics
Friday, September 19, 2008
The Italian Academy



Symposium Introduction

Ann Bartel

Merrill Lynch Professor of Workplace Transformation and
Director of Columbia Business School's Workforce Transformation Research Initiative

Bruce Kogut

Sanford C. Bernstein & Co. Professor of Leadership and Ethics and
Director of the Sanford C. Bernstein & Co. Center for Leadership and Ethics

As faculty members at a globally premier business school, we participate in the education of talented and promising students and executives. Upon leaving Columbia Business School, these students embark on career paths defined by their goals and the opportunities that the world provides them. The data we have indicate that, on average, they enjoy exceptional material success.

One of the most striking demographic changes in business schools during the past decade or more, including Columbia, is the now large percentage of MBA students who are women. This percentage hovers just under 40 percent at the top business schools, far higher than the percentage of faculty or business school board members who are women. Universities and business schools should be expected to open their doors to talent and ability regardless of gender. And the data across many fields and many degree programs show remarkable progress.

But how well do women graduates do once they enter the workforce? Since higher education represents a significant investment in human capital, is this highly trained capital well employed in business? These questions have a pedagogical and an ethical dimension: Are we training our students appropriately for the world as it exists, namely, one that shows far more inequality than our degree programs? Is there anything that we can do to address the needs of our graduates in their career journeys?

These questions were the background to the decision to organize a research conference on the theme of "Universities, Careers and Women," held at Columbia University on September 19, 2008. The conference was built upon the ongoing findings of an ambitious scientific research project, headed by Professors Claudia Goldin and Larry Katz of the economics department at Harvard University. The early sessions were filled with statistical results drawn from the studies on the life earnings and experiences of cohorts graduating from elite universities and graduate programs in the United States.

This document summarizes the principal findings discussed at the conference. To put the research question into the language of economics, the presenters at the

conference were interested in knowing whether work and family are complements or substitutes—that is, can you have both, or must you choose? And does the solution to this dilemma change if you are a man or a woman?

In brief, the pattern indicates that women have achieved in particular fields—such as branches of medicine and, though less so, law—complementaries in both working and family lives. In science, the quantitative and particularly qualitative data indicate a starker trade-off, with women often unable to find the right mentor or to allocate the time needed to research in the fragile early part of their careers.

The most striking results were the comparative career and life patterns of men and women who chose business. Here the data show quite clearly that male graduates can expect to earn far more. Women earn less; having children has a clear impact on work and work participation, and having a wealthy husband drives the career and life balance far more toward substitutes (you must choose) than toward complements (you can do both). The adage that you can have it all is not a common reality. The data seem to show a tipping point story: unless women achieved a high enough percentage in a given occupation, the career and life choices presented themselves as substitutes.

In any study of this nature, there are important questions of values and of what constitutes success and happiness. Educated parents who choose to stay home are able to provide their families with a supportive and intellectually rich environment. The conference also highlighted that there are different interpretations of the observed outcomes. Marianne Bertrand suggests that what we see in fact is the labor market equilibrium reflecting the choices of male and female managers. Muriel Niederle's experiments indicate that women are less confrontational and less competitive than men. These explanations are not necessarily at odds, though Niederle's findings point to a more profound well of explanations that require substantial thinking about corporate cultures and career incentives. And as one panelist noted, whatever women may be on average, the women competing at the top of the managerial ladder are anything but average.

The conference animated by our speakers was



Bruce Kogut, the Sanford C. Bernstein & Co. Professor of Leadership and Ethics and director of the Sanford C. Bernstein & Co. Center at Columbia Business School, introduced the keynote speaker.

an indubitable success for those attending. The full-capacity audience enjoyed the high quality of the research conference, designed to disseminate important ideas of meaning and significance to them and to the public at large. We are pleased to have captured this morning into a written product that you have before you now.

The Sanford C. Bernstein & Co. Center for Leadership and Ethics is concerned not only with the tasks of teaching and researching the ethics of don't do wrong but also with the objective to engage the faculty members and students in major questions of social equity and justice. The Columbia Business School Workforce Transformation Initiative, funded by a generous grant from Merrill Lynch, sponsors research on how companies can redesign jobs to transform work-life choices from substitutes to complements. This initiative also includes new pedagogical venues, such as the Greater Returns executive program launched this year, to assist women in their career transitions.

We are delighted to have had the opportunity to work together in staging this conference. We owe thanks to many people, including Claudia Goldin and the team of researchers who gave us their time, as well as Sandra Navalli '03, codirector of the Bernstein Center, who provided intellectual and administrative leadership to this joint endeavor. Carolyn Tharp has our gratitude for the excellent organization of the conference. It was a great event that will have lasting consequences for subsequent research and practical measures to assist our graduates in their careers and lives.

*Acknowledgements:
Written by Jen Itzenson
Photography by Leslye Smith*



Ann Bartel, the Merrill Lynch Professor of Workforce Transformation and director of Columbia Business School's Workforce Transformation Research Initiative, welcomed guests to the symposium.

Symposium Participants *(In order of symposium agenda)*

Claudia Goldin
Henry Lee Professor of Economics
Harvard University

Janet Currie,
Chair and Professor, Department of Economics
Columbia University

Marianne Bertrand
Fred G. Steingraber/ A.T. Kearney Professor of Economics
University of Chicago

Lawrence Katz
Elizabeth Allison Professor of Economics
Harvard University

Anne Preston
Chair and Professor, Department of Economics
Haverford College

Jessica Reyes
Assistant Professor of Economics
Amherst College

Debora Spar
President
Barnard College

Muriel Niederle
Associate Professor
Stanford University

Subha V. Barry
Managing Director, Head of Global Diversity & Inclusion
Merrill Lynch

Philip Berry
President
Philip Berry Associates LLC

Geraldine Downey
Vice Provost for Diversity Initiatives, Professor of Psychology
Columbia University

Keynote Presentation

“Education and Careers: Insights from the Harvard and Beyond Project”

Claudia Goldin

Henry Lee Professor of Economics,
Harvard University

For three decades, more than half of the BA degrees from U.S. universities have been awarded to women. Women are now the majority of BA candidates in even the most selective schools. Women account for more than a third of MBA graduates and for half of all graduates from medical and law schools. But are these women, many of whom have made substantial investments of time and money to enter demanding professions, able to have both a family and a career?

Claudia Goldin, a professor of economics at Harvard University who has written extensively about the female labor force and U.S. economic history, addressed this question in her keynote presentation, “Education and Careers: Insights from the Harvard and Beyond Project.” Using data from the National Longitudinal Surveys, compiled by the Bureau of Labor Statistics, and from data compiled by Goldin and Lawrence Katz, Goldin analyzed how generations of women, dating from the early 20th century to almost the present day, have faced the demands of family and career.

Goldin divided the women in her study into five generational groups, or cohorts. The first cohort graduated in the two decades before World War I. Goldin found that this pioneering group had either a

family or a career after graduation; very few had both. Their rates of marriage were very low, with more than 30 percent unmarried by the age of 50. Only half had children by age 40. Those who did work fell largely into the professions of teaching, social work and journalism.

The second cohort, composed of women who graduated in the interwar years, married at a higher rate and had more children. Between 65 percent and 70 percent had a first child by age 40. However, like the previous generation, those women who married usually did not participate in the workforce. Among those who were married by age 30, only 25 percent worked. Teaching remained the dominant occupation. Rather than choosing between a family and a career, this cohort tended to have a job, and only later have a family.

A significant shift came with the following cohort. These women, who graduated from the end of World War II through the mid-1960s, would become the mothers of the baby boom. They married at much higher rates—only 8 percent had not married by age 50, or as Goldin said, “about as low as it can get,” and 83 percent had children by age 40. Some tended first to the demands of a family and then launched their careers. (A notable example is Sandra Day O’Connor, who worked part-time and had three sons in the early years of her marriage before her rise in public service.) Yet this third cohort’s success in the family sphere came at a cost. “They were less involved in careers than they were in jobs that could be reentered once their children were in their teens,” Goldin said. As Betty Friedan wrote in *The Feminine Mystique*, the suburban wives of this generation were devoted to their

Demographic and Economic Characteristics of the Cohorts of College Graduate Women							
Cohort/ College interval	Approx. birth year	Characterization of desired family and career path	No marriage (by 50)	No children (by 40)	Work at age 30 (if married)	Work at age 45 (if married)	Dominant occupation
Cohort 1/ 1900-1919	1878-1897	Family or career	> 30%	> 50%	Low	20%	Teaching, office work
Cohort 2/ 1920-1945	1898-1923	Job then family	15-20%	30-35%	25%	50%	Teaching, office work
Cohort 3/ 1946-1965	1924-1943	Family then job	8%	17%	25-30%	75%	Teaching
Cohort 4/ 1966-1979	1944-1957	Career then family (13 to 18% attained)	12% (but deferral)	28%	65%	80%	Varied professions
Cohort 5/ 1980-1990	1958-1968	Career then family (21 to 27% attained)	(not old enough)	26%	80%	(not old enough)	Varied professions

Figure 1: Family and career characterization of cohorts. Source: Goldin, Claudia, in R. Ehrenberg and F. Blau, eds., “The Long Road to the Fast Track: Career and Family,” *Annals of the American Academy of Political and Social Science*, 596 (Nov. 2004), pp. 20-35.

husbands, children and household chores, but found themselves afraid to even voice the question, “Is this all?”

It was only with the fourth cohort, graduates from the mid-1960s to around 1980, that women truly began to make their presence felt in their careers. The word career, Goldin points out, comes from the French word for running a race. “The notion is you’re doing something over time,” she said, rather than pursuing an immediate goal. These graduates worked in occupations that required extensive education, had the opportunity for advancement and were described as careers by these women and others. Goldin described this group as initiating a “quiet revolution” that transformed the economic role of women (a revolution that is ongoing). This fourth cohort achieved a career first and then turned to marriage and families. “They were learning from these previous generations that seemed to make having families so easy and having careers so difficult,” Goldin said. However, although these women were very successful in their careers, their rates of childbearing plummeted from the previous generation, nearly dropping to the levels of the second cohort. Only 12 percent did not marry, but many chose to delay marriage. About 28 percent did not have any children by age 40. “That which is put off is often not achieved,” Goldin said.

The final cohort of women that Goldin studied graduated from 1980 to 1990 and are now in their 40s. Their fate remains uncertain. So far, it appears that these women (and subsequent female college graduates) have grappled with what the previous generation did wrong, Goldin said. The available data show that this fifth cohort has managed to achieve somewhat more in their careers and, at the same time, have slightly more children. After four generations of shifting goals and achievements, this cohort insisted upon having both a family and a career. But were they successful? Goldin found that almost three-quarters had children by age 40, and 80 percent of those who were married by age 30 also worked.

Taking a closer look at the data for this group, Goldin found that between 21 percent and 27 percent managed to have both a family and a career. “You might look at these numbers and say they’re so low,” Goldin said. “In fact, this is probably the greatest achievement of career and family among college-graduate women that was achieved in the last century.”

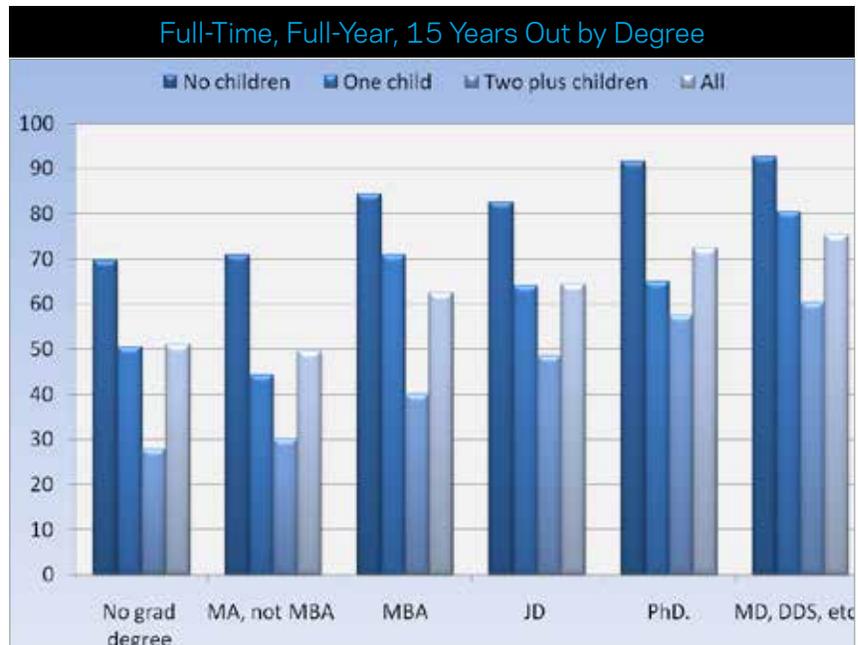


Figure 2: All cohorts, with advanced degrees, and various stages of family development while working full-time all year, 15 years after graduation. Source: The Harvard and Beyond Project by Claudia Goldin and Lawrence Katz.

Goldin sought a way to study these generational changes while keeping one factor—the quality of education that the women received—constant. She turned to data from the Harvard and Beyond Project, a study of the career and family transitions of Harvard graduates across several generations. Goldin focused on three samples of women: those who graduated around 1970, 1980 and 1990. She surveyed more than 6,500 Harvard and Radcliffe graduates about their educational, work and family histories, and pinpointed three different moments in the respondents’ lives: right after graduation, 15 years later and the present time.

In this study, Goldin found that women who graduated around 1970 married early (more than one-third married within two years of receiving their BA) but delayed childbirth. This group went on to graduate and professional schools in high numbers, with more than 18 percent receiving an MD or other medical degree—more than 45 times the rate of the average female college graduate. “They were truly the leading edge,” Goldin said. About 17 percent completed law school, and more than 5 percent graduated from business school. Fifteen years out, the percentage of women who worked in financial services, management and consulting rose sharply, with the percentage of women in these occupations almost doubling between the 1970 group and the 1990 group.

“By most definitions of career, the women in these classes would appear to be doing extraordinarily



Claudia Goldin, the Henry Lee Professor of Economics at Harvard University, delivered the keynote address.

well in comparison to those at other institutions and historically,” Goldin said. However, she found that this was less true of their earnings in comparison with their male peers. In 2005, women working full-time, full-year earned an average of \$216,540. The average man took home more than double that, earning \$443,876 a year.

When she analyzed how well these women were able to combine career and family, Goldin found surprisingly little change among the three groups. Overall, about 60 percent of women were working full-time at the 15-year mark after graduation. But there were clear differences between those who had children and those who did not. About 80 percent of women without children worked full time. That percentage dropped to 60 percent for women with one child, and to just 45 percent for women with two or more children.

And what percentage “had it all,” Goldin asked, if that concept can even be defined? “Having it all would be satisfaction in your work, something that you think of as your own career, an identity, a social network, and also a loving family of two sweet children,” she joked. For the purposes of her research, she defined ‘having it all’ as working full time, full year, with children. She found that 30 percent of the women Harvard graduates fit that description, compared with 65 percent of the men. That percentage barely moved

from the 1970s graduates to those who finished college two decades later.

Among high-achieving female graduates, the choice of career dictates how close one gets to “having it all.” MBAs face the highest barriers.

However, Goldin found differences linked to the types of careers the women entered. Doctors, she found, fared the best. About 45 percent of MDs were able to work full-time while having a family, compared with 35 percent of JDs and just more than 30 percent of MBAs. In addition, professions such as optometry, veterinary medicine and pharmacy allow for a work week with more flexibility than many other professions. In recent years, women have moved to these professions in astounding numbers. More than three-quarters of all veterinary school graduates are women, as are 70 percent of new pharmacists and 60 percent of new optometrists. These occupations may be more amenable to a family-career balance, because they have predictable career paths, greater workplace flexibility and, in some cases, shorter training times. Also, “some professions may be male-dominated and may require the need to ask,” Goldin said. “We know that women tend to do extremely well in asking, but asking for oneself is often different.”

Overall, these high-achieving graduates managed to have both a family and a career to a considerable degree. “But they do better in certain professions than in others,” she said. “And they do worse than their male peers on the income side of the equation.”

Throughout the past century, Goldin found, each generation of female college graduates built on the successes and learned from the failures of the preceding generation. During this time, external factors had enormous impacts on the role of women in the workforce. The market barriers to women eased. World War II increased demand for women’s labor. Women also gained more control of their childbearing

Full-Year, Full-Time Annual Earnings—2005		
Earnings	Females	Males
Median earnings	\$112,500	\$187,500
Mean earnings	\$216,540	\$443,876
% more than \$100K	58.6%	77.6%
% more than \$250K	15.6%	36.9%
% more than \$1MM	2.5%	8.2%

Figure 3: 2005 earnings across all three cohorts for the Harvard and Beyond Project. Source: Joint research from Goldin and Katz.

constraints, thanks to innovations like the Pill. The pursuits and achievements of female college graduates changed—from the earliest generation that had either a family or a career; to the interwar generation that had a job and then a family; to the Baby Boom mothers who had a family and then a job; to those who initiated a quiet revolution by pursuing a career and then a family; to the most contemporary generation, with its insistence that it can have it all. Whether this goal is attainable for the majority of women remains uncertain, but the current cohort might devise new ways to resolve the struggle. As Goldin noted, it was only four decades ago that female college graduates could even consider having both a family and a career, and “the question ever since has been how to have both.”



Attendees of the conference listened to Claudia Goldin's keynote presentation.

Research Panel

“Women in the Professions: Business, Medicine, Law, Engineering, Science and Academia”

Many new mothers find it impossible to take even a short break from their careers without losing ground. When they return to the workforce, they often must accept significant drops in pay and status. Faced with these high costs, many choose not to return at all. Yet women in some occupations, such as the optometrists and pharmacists discussed by Claudia Goldin in her research, seem remarkably adept at achieving a family-career balance.

In a panel presentation moderated by Janet Currie, professor and chair of the economics department at Columbia University, four economists gave a broad view of how women are faring in some of the most competitive occupations—business, law, science and medicine. University data show that young women have overtaken men in the academic preparation for many careers. Women account for almost 60 percent of college graduates and 57 percent of honor students. Unlike women four decades ago, the typical graduate today gets married in her late 20s and starts having children in her early 30s. These women seem to have an abundance of early advantages, but they face wide disparities with men once they begin their careers.

And although women now make up one-third of MBA students, it appears they are not achieving as much as they could in business and finance. In 2006, less than one-third of the largest 1,500 U.S. firms had at least one woman on their senior management teams, according to Standard & Poor's Execucomp. Only 2.5 percent of these firms had a female CEO.

Marianne Bertrand, a professor of economics at the University of Chicago Booth School of Business, looked at what is holding women back in business and finance. She explored possibilities including differences in taste and ability, family-career conflicts, discrimination, a failure to negotiate aggressively for salaries or promotions and an aversion to competitive environments.

Ten years into the workforce, women MBAs earn 60 percent less than their male counterparts.

Bertrand surveyed Chicago graduates from 1990 to 2006 about their careers, families and work interruptions. Though these graduates were a fairly homogenous group, Bertrand found differences in their MBA experiences. The women took slightly fewer finance courses than men—a seemingly insignificant difference of about half a class, but one that turned

out to be highly predictive of earnings. The women's GPAs were also somewhat lower in every subject, from entrepreneurship to marketing. "The human capital these students are accumulating in MBA programs seems to be slightly different for women and men," Bertrand said.

She also looked at differences in labor supply. In the first year after graduation, men and women work about 60 hours a week. But by 10 years out, women work about 50 hours a week, compared to almost 57 hours for men. And by this date, about 40 percent of women have had a period of six months or more out of the office, compared to just 10 percent of men. Earnings diverge rapidly between the genders, with an 11 percent earnings gap one year after graduation that widens to 60 percent at 10 years out.

The overwhelming reason for the difference in labor supply is children, Bertrand found. "If you compare a woman without a child and a man, they don't look that different." A wealthy husband also has a dramatic impact on whether a woman leaves the workforce after having children. "Having a child slows you down," she said. "But it slows you down way more if your spouse is well-off."

Bertrand explored whether there were any predictive differences between the women who had children and those who did not. Perhaps those who had

children were not destined to do as well in a corporate environment, she speculated. However, she found no evidence of this. "They are not the women who come to MBA programs and don't take any finance and have a C average," she said. "If anything, they look slightly better than the women who don't have children, in terms of their MBA experience."

Neither did Bertrand find signs of discrimination. "It's hard to imagine a discrimination scenario where only women with well-off spouses would be forced to slow down." Differences in tastes and bargaining ability also did not appear to be factors. "It really boils down to human capital and labor supply," she said. "And the differences in labor supply are determined by children."

Lawrence Katz, a professor of economics at Harvard University, addressed the question of labor supply in medicine, law and academia. While the percentage of women in these professions has increased, women remain underrepresented in their top ranks, and all have a significant gender-earnings gap.

As in the world of business, women in these professions who take time off from work to care for children do so at a significant cost. "Discrete amounts of time off seem to have a bigger impact than just working a little less," Katz said. A work interruption is associated with an immediate 25 percent drop in earnings, he found. The typical spell out of work, of about 15 to 18 months, leads to a 35 percent earning gap upon reentering the labor market.

Across professions, work interruptions are associated with an average drop of 25 percent in earnings. For female MBAs, a year and a half break can cut earnings by half.

Katz found substantial differences across the professions. Medical doctors incur less of a penalty for taking time off than the other high-powered occupations. As suggested by Bertrand's research, Katz found that MBAs are among the hardest-hit of the professions. Any career interruption translates to a 30 percent earnings gap, and an 18-month break cuts a woman's earnings by half. Even within the MBA world, there are differences. While the majority of women in consulting can reenter the workforce at a relatively low cost, women in "investment banking and management basically fall off the map," Katz said. Those with JDs and PhDs, he found, fall in between.

"It's difficult to come back full-time, full-year and get what you had before as an MBA," Katz said. This partly explains why 10 years after graduation, only 40 percent of MBAs with two or more children are working full-time, compared with 60 percent of MDs—even though MDs have more children. "Where the economic

Earnings (in 2006 USD) by Gender and Years Since MBA Graduation, Chicago Booth School of Business Alumni				
Number of years since graduation	Mean		Median	
	Female	Male	Female	Male
0	114,928	130,156	105,882	125,000
1	130,321	162,785	113,404	136,520
2	146,616	196,208	121,184	146,237
3	163,835	227,143	125,000	154,601
4	182,103	258,785	129,412	169,657
5	204,702	294,934	136,957	180,645
6	230,084	330,114	143,874	196,109
7	235,733	359,822	146,342	204,878
8	242,528	391,075	151,261	204,878
9	252,421	400,488	148,432	211,573
10 or more	243,481	442,353	146,342	242,367

Figure 4 Source: Bertrand, Goldin and Katz, "Dynamics of the Gender Gap for Young Professionals in the Financial and Corporate Sectors," September 2008, University of Chicago Booth School of Business, and Harvard University.

cost appears to be higher," Katz said, "women are much more likely to opt out or opt for part-time work." The earnings of a woman's spouse turned out to be a significant factor, Katz found. The spouses of MDs, JDs and PhDs are not as well off as the spouses of MBAs. In fact, more than 25 percent of the husbands of women Harvard MBAs earn more than \$1 million a year. "If many MDs had multimillionaire husbands," he said, "we don't know what changes they would make."

These factors are also at play in the science profession. Although efforts at encouraging girls and young women to study science have been successful, there has been little research on the careers of women with science degrees. Anne Preston, professor of economics at Haverford College, investigated the career paths of these women and why so many of them leave the field.

Through the 1990s, almost one-third of women employed in scientific occupations left after six years, compared with 20 percent of men. Preston, who studied data from the National Science Foundation and a large public university, found that several personal and industry characteristics influenced the decision to leave. Graduates with PhDs, not surprisingly, were the least likely to exit. But salary affected the genders differently. "Those women whose salaries are lower than you'd expect in the science occupations are the ones who are leaving," she said. "The men who are leaving are the ones who are the most successful in science and have high salaries."

Preston conducted her own survey to get specifics on why women leave science. The most prominent reason, she found, was discontent with the lack of mentoring, the struggle to make personal connections, the difficulties in balancing family and career and the pressures of specialization. "The PhD scientists talked about how in order to win grant money, you had to



Lawrence Katz, the Elizabeth Allison Professor of Economics at Harvard University, discussed labor supply in medicine, law, and academia.

have such a high degree of tunnel vision that you really couldn't have any other kind of interest," she said. "Not only was the work narrow, but the people were narrow."

Many women cited family responsibilities as a key difficulty. Women spent about four times as many hours on childcare as men and managed 65 percent of their families' housework. Women faced further challenges because of the structure of work at the postdoctoral level. Typically, a scientist with a PhD moves from lab to lab several times in her early career, making it difficult to raise a family. All of the married PhD women whom Preston surveyed said they restricted their job searches geographically to be near their husbands and that this had a negative impact on their careers.



Marianne Bertrand, the Fred G. Steingraber / A.T. Kearney Professor of Economics at the University of Chicago, and Jonah Rockoff, associate professor of finance and economics at Columbia Business School, talked during a break.

As in other top professions, women earned less than men, with an average earning gap of 15 percent to 20 percent. Having children was a primary cause of this earnings gap, the women said. "Many women talked about hiding their pregnancies as long as possible so that they could maintain the career paths they were hoping for," Preston said. With good reason—after leaving science, she found, the women typically had lower lifetime earnings.

In medicine, the earnings gap is even more pronounced. The percentage of women in medicine has soared from 8 percent in 1970 to 27 percent in 2005, yet women earn 30 percent to 40 percent

less than men. Jessica Reyes, an assistant professor of economics at Amherst College, investigated this earnings disparity. She found that it could be partly explained by segregation across the specialties. About 60 percent to 70 percent of women are in primary care specialties, some of the lowest-paying fields, while women account for just 3 percent of the highest-paying specialty, orthopedic surgery (with an average income of \$300,000 a year).

In order to get past these specialization choices and understand how women fare relative to similarly-situated men, Reyes narrowed her study to the single specialty of obstetrics and gynecology. Although many ob-gyn patients prefer to be treated by women, only a minority of ob-gyns are women. Even within this specialty, women earn less. As in other professions, much of this difference is tied to labor supply, she found. Women tend to do work similar to the work of their male colleagues, but do less of it. They see fewer patients and perform fewer surgical procedures. Also, men tend to subspecialize at a greater rate and are more likely to work in private rather than salaried practice. “Women are making different choices about how to structure their work,” Reyes said.

Given that the earnings gap can be explained by the differences in the type and amount of work, it seems that in the ob-gyn field, at least, the opportunity for equal pay for equal work exists. “It’s a nice phrase,” Reyes said. “But this is recent, and it doesn’t imply equal pay, because the work isn’t equal.”

One question she asked is whether women are really choosing a less financially rewarding practice style. Many of the women ob-gyns with whom she spoke said this was not the case. The women said their schedules tended to get booked with routine patient visits, leaving the men in their practices available for more of the high-paying, specialized procedures. An entrenched medical culture—with older men still holding power in many practices has made it difficult



Anne Preston, professor of economics and department chair at Haverford College, presented her research on women and science.

for young female ob-gyns to change the way practices are structured. “It’s equality only if these differences are truly by choice and if returns haven’t changed in a way that favors men,” Reyes said.

The economists’ findings raise many other questions. If women MDs can achieve a family-career balance but many MBAs and lawyers cannot, does that mean there are inherent differences in the production capacities of these jobs? Are two MDs who work 40-hour weeks the equal of one MD who works 80 hours, making medicine more open to flexible schedules? What is the economic cost of a 40-hour week for investment bankers who want to care for their children? The research suggests that when women are given the opportunity to move smoothly in and out of the

Mentoring Statistics by Sex in the Sciences (Interview Sample: n=102)		
	Women	Men
% with mentor as an undergraduate student	13.5	40.0
% with mentor as a graduate student	20.5	65.7
Effect of mentoring on probability of graduating	Increases from 0.6 to 1.0	No change
% with mentor in early employment	52	51
Effect of mentoring on probability of successful employment outcome	Increases from 0.5 to 1.0	Increases from 0.7 to 0.8

Family Responsibilities by Sex (University survey-sample sizes in parentheses)		
	Women	Men
% of household chores for which spouse is responsible	34.8 (649)	65.1 (479)
% of child care for which spouse is responsible	15.1 (449)	67.0 (363)
% of child care for which individual is responsible	60.2 (449)	17.6 (363)

Figures 5 and 6: Preston found that among the reasons women leave science at a faster rate than men were the significant differences in mentoring received and household responsibilities assumed.

Income and Female Share of Medical Specialities, 2000		
Specialty	Income (USD)	Share female (2000)
Cardiology	300,000	8%
Orthopedic surgery	300,000	3%
Diagnostic radiology	298,000	20%
Dermatology	270,000	33%
Urology	270,000	3%
Gastroenterology	260,000	9%
Pathology	250,000	30%
Anesthesiology	236,000	21%
General surgery	232,000	11%
Emergency medicine	214,000	19%
All physicians	211,000	24%
Obstetrics/gynecology	203,000	35%
Ophthalmology	200,000	14%
Otolaryngology	200,000	9%
Neurology	170,000	21%
General internal medicine	160,000	28%
Pediatrics	145,000	49%
Psychiatry	140,000	30%
Family practice	135,000	28%

Sources: Physician Socioeconomic Statistics 2000-2002, AMA. Physician Characteristics and Distribution 2001, AMA.

Figure 7: Jessica Reyes of Amherst College found that among medical specialties women are often concentrated in lower-paying specialties, while the highest-paying specialties have few women. Dermatology is a notable exception.

workplace—coming back to a similar position to what they had before, or one that allows them to manage their families and careers—they generally opt to return. The next step, for both firms and the academic institutions that prepare women for professional careers, is how to make this possible.

Professional Panel

“Women and Competition: Gender Differences in Competition and Class Choice”

Top business schools have come up against an unexpected challenge in recent years: how to help their alumnae through the family and career transitions that tend to strike in the first 10 years after graduation, when many women start having children and often leave the workplace. But the focus on economics in the previous panel discussion on “Women in the Professions,” leaves aside a key question: whether there are behavioral qualities that explain the paths taken by women and men in their careers.

Muriel Niederle, an associate professor of economics at Stanford University, took up this controversial issue in her presentation, “Gender Differences in Competition and Class Choice.” Niederle conducted several lab experiments to study how women and men perform in competitive environments. In the first, women and men completed maze puzzles for 15 minutes. The participants were paid at a piece rate; the more puzzles they solved, the more money they earned. In her second test, only the participant who completed the most puzzles received a prize. The men improved their performance by about 40 percent, while women did not improve at all.

The results might suggest that women did not enjoy working harder in a competitive environment or that they felt that they could not win. Investigating further, Niederle had the women and men enter same-sex tournaments. This time, both groups improved their scores. In fact, there was no difference between the performance of the women and men. “It looks like women aren’t competing that well against men,” Niederle said, “but they are very happy to compete against other women.”

In a Stanford study, only 25 percent of the highest-performing women chose to compete in a tournament against both men and women. About 75 percent of the men entered the tournament.

Niederle conducted a separate experiment to determine whether women shied away from competition. She had women and men add two-digit numbers in a timed contest, first in a piece-rate format, then in a tournament setting with a prize awarded only to the winner. Afterward, without telling the participants their scores, she allowed the women and men to choose whether to compete in an additional piece-rate or tournament contest. The tournament format awarded a bigger prize. She found that only 25 percent of the highest-scoring women, compared with 75 percent of the men, chose to enter the tournament. This revealed a strong difference in their attitudes

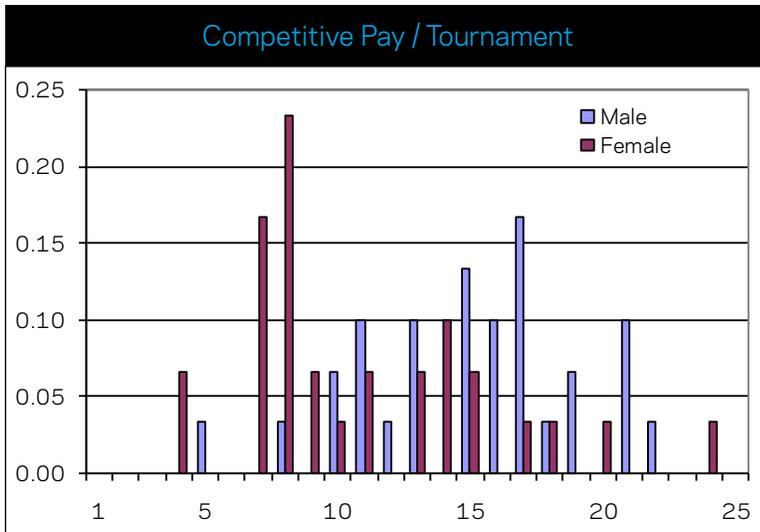


Figure 8: Performance results when women and men compete in mixed, competitive pay tournaments. Presented by Muriel Niederle, associate professor of economics at Stanford University.

toward competition. For the men, their performance was not really a factor in their decision to enter the tournament. However, Niederle said, “even the very best women just don’t enter these competitions.”

These findings led Niederle to research how women can be encouraged to enter contests, and at what cost—a proxy for affirmative-action programs. She compared two tournaments: one in which only the best performers won, and another in which one woman would win for every man who won. Affirmative-action policies can entice women to enter competitions, she found. When the participants were told that they were participating in an affirmative-action tournament, many more women entered,

making it not “costly” to recruit additional women.

The last of Niederle’s experiments tested whether women and men would rather perform a difficult or easy task in a noncompetitive setting. Participants were given a choice of task and told that the top 40 percent of performers would receive higher earnings by completing the difficult task, while the rest would earn more by completing the easy task. She found that women tended to choose the easy task, while men chose the difficult task, regardless of how they performed. This meant that the best-performing women did not earn as much as they could (as did the lower-performing men). However, by providing feedback Niederle was able to encourage the women to select the difficult task. “Letting them try the task and see how well they do,” she said, “really seems to help.”

Niederle concluded that there might be gender differences in attitudes toward competition. Women may be more risk-averse, and believe that good performance in less challenging work will not translate to success in a competitive environment. Affirmative action can reduce these differences by encouraging women, especially high-performing women, to enter competitive realms they would normally avoid. “The way we want to pursue our work,” she said, “is to think about what institutional changes we can make and how costly they will be.”

Niederle presented her findings in a panel discussion moderated by Debora Spar, president of Barnard College. Spar, a political economist and author of

The Baby Business, a book on the fertility industry, discussed her previous years at Harvard Business School. “One of the things that became an obsession for me was watching the fate of women,” she said, “both my women students who went out into the workforce and were occasionally terrified by what eventually befell them, and also the fate of my women colleagues, who oftentimes encountered career obstacles that they hadn’t imagined up front.”

The other panelists were Subha Barry, managing director and head of global diversity and inclusion for Merrill Lynch; Philip Berry, president at Philip Berry Associates; and Geraldine Downey, vice provost for diversity initiatives and professor of psychology at Columbia University.

“There has been, here and elsewhere, an awful lot of attention placed on differences in the workplace and differences in career

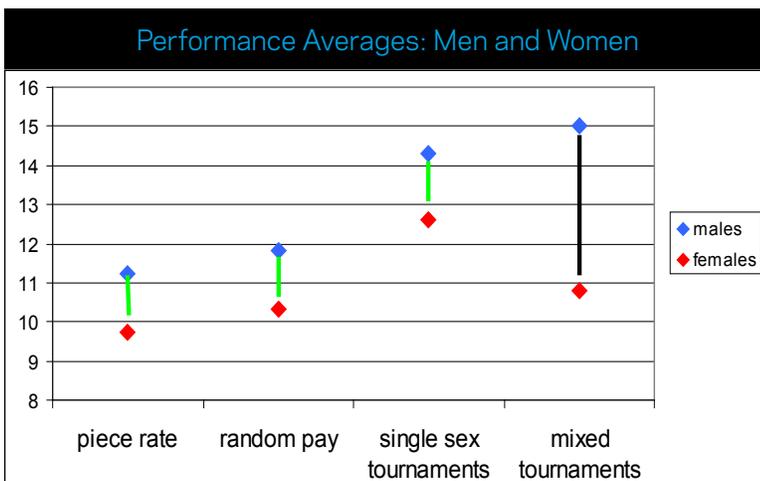


Figure 9: Performance averages for women and men in different contests. Presented by Muriel Niederle, associate professor of economics at Stanford University.

trajectories, and less attention paid to inherent gender differences,” Spar said. She posed this question to the panelists: “Are there built-in differences in women, compared to men, that may explain some of the behavioral patterns we see?”

In niche professions like investment banking, men and women face equal amounts of career stress. But women bear a disproportionate amount of the stress at home.

Subha Barry of Merrill Lynch answered that a certain kind of woman tends to be attracted to extremely competitive environments, such as the financial services industry. “It’s an extreme job industry,” she said, “that really puts uncommon demands on the people who choose to enter it, both men and women.” Merrill Lynch can usually meet its goals of recruiting women for different niches of its business, such as investment banking, she said. “Our challenge is actually holding onto them.”

Within these niche groups, men and women face equal amounts of stress, Barry said, but women bear a disproportionate amount of the stress at home. “I would draw a tongue-in-cheek conclusion [from the research discussion],” she said, “that a woman choosing to come into our industry should either choose not to have children or, if you do have children, marry someone who is less educated and has less earnings potential.”

One disadvantage women face is the lack of role models. Many women in senior positions feel they can’t offer advice outside of their own experiences.

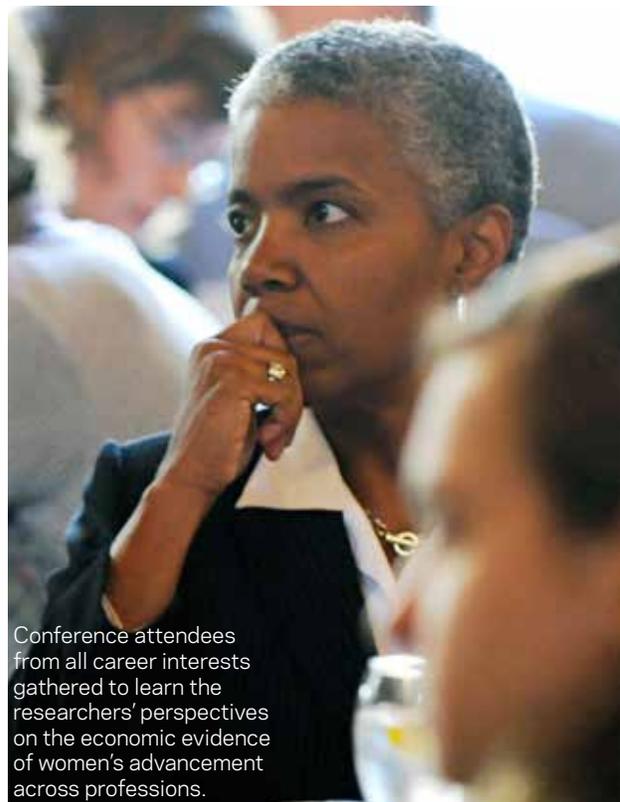
The problem is not that women are averse to competition, she said. Barry noted that she was the first woman in her family to leave home without getting married. In those days, she measured her success in financial terms: “I wanted the biggest car, the biggest house, the most money.” She started her career as a commodities trader and had a hard time getting hired. “I had a pronounced accent. I was this Indian woman with no natural network, and here I was walking into Merrill Lynch trying to get a job. And I remember having to tell this manager, ‘If you don’t hire me after the seventh interview, you’re going to make the biggest mistake of your life. I will make it my life’s mission to take every good account away from you.’” She added, “I may be an extreme case, but we attract plenty of women like me for a variety of different reasons at companies like Merrill Lynch.”

Yet once these women are hired, they face pressures that pull them out of the workforce, she said. One disadvantage is the lack of role models. Though women

who reach senior positions are often criticized for not mentoring younger women, this is because many senior women feel that they cannot offer advice outside their own experience, Barry said. She noted that only a small percentage of men at the top of the industry are married to women who earn more money than they do, while nearly all the women have husbands who earn more. When these women have children and weigh the options of continuing to work in a cutthroat environment or caring for their children, they often choose the latter. “We are capable of the competition,” Barry said. “We come in knowing that. But there are things within the system that beat us down.”

Philip Berry, of Philip Berry Associates, a leadership and diversity consulting firm, largely concurred with this assessment. “My wife and I graduated from Columbia Graduate School about 30 years ago, and one thing my wife used to say is, ‘I need a wife, because there are stressors that I have in this journey that you don’t have.’” In the course of Berry’s career, he has worked at Colgate-Palmolive, Procter & Gamble and IBM. “There are a lot of women who are performing very well,” he said. “But unfortunately, when I look over a period of 30 years’ time, I do not see as many women moving into some of the senior levels.”

Commenting on research by Marianne Bertrand and others that suggests women choose to leave work to care for their children, particularly if their husbands have higher incomes, Philip Berry said a woman’s



Conference attendees from all career interests gathered to learn the researchers’ perspectives on the economic evidence of women’s advancement across professions.



Panelists discussed career issues that women face in universities and in business.

“choice” may be compelled. He cautioned against accepting the salary differentials that come out of a business culture in which women leave the workforce after having children. “We have to make changes,” he said, “in the institutions and in the criteria that are used for advancement.”

“Women are extremely capable of being very, very competitive,” Philip Berry said. “But there’s a point in one’s career where there are additional hoops to go through.” For example, a requirement for reaching the chief officer level at one of the companies he worked for is having an international career. But it can be difficult for a woman to move abroad, particularly if her husband earns more money and must give up his job. Other factors can also impede a woman’s advancement, some of which are outside the realm of work, such as joining the executives’ golf club. “As you move higher up in the company, it’s not really your technical skills, it’s getting along and being part of the club,” Philip Berry said. “Some barriers are explicit, some are very subtle.”

Changes at the institutional level are necessary for women to achieve balance in their lives and careers.

For Geraldine Downey of Columbia, the primary issue is how individuals and societies value work. “What we’ve heard here is that women will compete under certain circumstances and not under others,” she said. “And men will compete for anything, no matter what the value is.” She recounted a story of a PhD candidate who said he inspired students by having them read the acceptance speeches of Nobel laureates. Downey, whose background is in developmental psychology (an area that tends to attract women, she noted), said she

inspires students by telling them how they can improve the world.

Choice, Downey said, does play a role for high-performing women who are facing family-career conflicts. “We’re talking about jobs that are enormously stressful,” she said, “and people who can make decisions about what they want to do with their time. Women may spend a lot more time thinking, ‘Should I stay in this rat race or should I spend more time with my family?’”

The panelists agreed that changes at the institutional level are necessary for women in highly competitive environments to achieve balance in their lives. Muriel Niederle stressed the importance of feedback for women in the workplace. “Knowing what is ahead of you is a really important issue,” she said. Subha Barry called for coaching senior women about how to mentor younger women. Philip Berry advocated accommodation policies that would prevent women from having to leave the workforce to care for their families. A comment by Geraldine Downey cut to the essence of the issue: “We have to make our careers look attractive to younger women. We need to try to acknowledge that people have lives outside their work.”

In the four decades since large numbers of female college graduates began pursuing the goal of having both a family and a career, there have been profound shifts that have made this more possible. Fifteen years ago, the Family and Medical Leave Act guaranteed the right of all workers, including new mothers, to take 12 weeks of unpaid leave to care for a child without forfeiting their jobs. (This still leaves the United States far behind European countries, some of which fund a year of paid leave.) Perhaps studies of the most recent generation of professional women will offer new

solutions to the family-career tradeoff. But the barriers remain high.

The debate about whether these barriers are a function of economics, as Marianne Bertrand discussed in her research on human capital and labor supply, or a question of innate gender differences is central to creating appropriate policies. It is clear, given the range of outcomes across the professions, that women can achieve a family-work balance when workplace policy permits. Changes in business and culture have eased the way. Many firms now have formal mentorship programs. More industries allow job-sharing and flexible schedules. Affirmative-action and recruitment programs, as Muriel Niederle's research indicates, have encouraged women to enter competitive fields that not long ago were almost entirely male. And, of course, there is the hope that as increasing numbers of women reach the top levels of their professions, they can make more of these opportunities available for those who follow.



Panelists Philip Berry, managing principal of Berry Block and Bernstein LLC, and Subha Barry, managing director and head of Global Diversity & Inclusion at Merrill Lynch, spoke with Columbia Business School's Ann Bartel.



Event attendees spoke during a coffee break.

 **Columbia Business School**

The Sanford C. Bernstein & Co. Center
for Leadership and Ethics

Columbia Business School

Uris Hall

3022 Broadway, Room 203

New York, NY 10027-6902

Phone: 212-854-1060

Fax: 212-854-0016

www.gsb.columbia.edu/leadership

leadershipethics@gsb.columbia.edu

 **COLUMBIA UNIVERSITY**
IN THE CITY OF NEW YORK