



Department of Economics University of Toronto

### Fall 2000

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## Message from the Retiring Chair

### by Nancy Gallini

The upswing in the Canadian economy is finally reaching the universities. For the first time, after a decade of budget cuts and salary freezes, Canadian universities in Ontario can plan for the future without the anxiety that an economic crisis will sabotage their efforts. However, it is too early to relax--at least in economics departments. The funding situation in Canada may be improving but our relative ability to compete in the international arena (particularly, the U.S.) remains weak. Economic expansion in the U.S. has been stronger and investments in its public

and private universities are more plentiful. So, despite increasing prosperity in Canada, economics departments must run harder than ever to maintain their competitive position.

Adding to this challenge are exploding enrollments in our economics programs, a response to increased market demand for students with economics training. This is good news for us when we have sufficient faculty to teach them. But we are undergoing significant faculty turnover, resulting from the wave of resignations and early retirements. Replacing these faculty is not easy, given the nature of the market in which we compete and our commitment to hire only the highest quality. We must reach out to business and to the larger community we serve to help us achieve our goals. With spectacular talent in our Department, a growing demand for economics, and an expanding economy, the conditions couldn't be more ideal for investing in the education of Canada's future economic leaders.

Thus far, we have fared well in attracting a most impressive group of junior faculty. Winning the prestigious Polanyi Prize in each of the past three years is only one example of their many outstanding achievements. While these hires replace some of our lost faculty, broad and deep gaps still remain in our research and teaching programs. In our quest to close these gaps, we once again devoted enormous time and energy toward the search for bright new junior faculty and once again we struck gold. Joining the previous year's hires (featured in this newsletter) are our newest assistant professors Ettore Damiano, theorist from Yale University, Li Hao, applied theorist from the University of Chicago, Alex Maynard, econometrician from Yale University and Robert McMillan, public economist from Stanford University. This year we will undergo further turnover as we enter the market for junior talent again while bidding farewell and best wishes to senior faculty who have recently retired (please see inside story).

Sometimes turnover calls for celebration, as in the case of our students. Last year we congratulated our stellar graduates: over 500 Economics Specialists and majors (undergraduate students) and 55 M.A. and Ph.D. students. The best of luck to our newest alumni, many of whom will enter the ranks of Canada's professonal economists.

The other area where occasional turnover is healthy is in the Department's administration. After all, everyone should have the opportunity to try it out, if for no other reason than to appreciate the good life of teaching and research. On June 30, Greg Jump completed his term as associate chair of undergraduate studies. Greg was outstanding! We are so grateful to him for the tremendous progress he made and the unbounded energy he gave to our undergraduate students and programs. Thanks also to Francois Casas who has donned the associate chair cap for a second time to take Greg's place during this busy time of enrollment expansion.

I guess that leaves only me. On June 30 I completed my five-year term as chair of the Department of Economics. Leading the charge for the Department over the next six years are two outstanding individuals. Mel Fuss, an industrial organization scholar, is acting chair this year, and Michael Berkowitz, a scholar of financial economics, will be chair for the following five years. They come to the job equipped with wisdom, strong wills and a lot of experience. As former chair of the Department and recent guru of our recruiting activities, Mel knows better than most what it takes to attract top quality faculty. As former associate chair of the Department, former associate dean of the Faculty of Arts and Science and the architect of the

new and highly successful Masters of Financial Economics, Michael comes to the job with a vision for the future. The Department is in most capable and innovative hands.

And so, with the transfer of responsibilities I have liberated many spaces in my agenda and returned to the good life of teaching and research. Yet, there is so much that I will miss about the job, particularly the individuals with whom I interacted so frequently. In closing, I would like to thank a subset of the key players in the Department's drama over the past five years. Starting with the first-rate leadership at the top, I wish to thank former President Rob Prichard, Provost Adel Sedra and Dean Carl Amrhein for joining us early on to find solutions to the intense competition we face. Special thanks goes to Carl for his efforts in helping us attract twelve new colleagues to the Department over the past three years. I am grateful to an expert administrative staff who always responded to my "urgent" requests with creativity and intelligence; particularly, Rachel Kasimir in the Provost's Office, Paul McCann in the Dean's Office and Margaret AbouHaidar in the Department. The outstanding student leaders deserve much credit: Michael Hong of the undergraduate Economics Course Organization, Robert Gray, Sonia Laszlo and Eric Santor of the Graduate Student Union, to name a special few.

Finally, I am deeply indebted to my colleagues. Learning about the unique contributions of every single individual, be it as a superb teacher, a prominent scholar or a wise administrator, was among the most gratifying aspects of the job. I am profoundly grateful to so many: my predecessor Gordon Anderson for his valuable counsel; the associate chairs of undergraduate studies and recruiting--Michael Berkowitz, David Nowlan, Greg Jump, Arthur Hosios, Angelo Melino, Mike Denny and Mel Fuss--for their exceptional leadership and guidance; those held captive for hours in my office while I burdened them with the crisis of the day (especially Ralph and Kristin Winter); and so many who gave their energy, wisdom and friendship. Chairing this magnificent Department of Economics has been a tremendous privilege.

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### **Graduate Program News**

by Angelo Melino, Associate Chair

We must be doing something right. Applications to our PhD programs surged by 25% this year, and total applications to all our graduate programs in economics reached an all-time high. Although the incoming class is one of the largest ever, we still had to turn away dozens of interesting candidates.

Last year, we made some important changes to our MA program. Contact hours in micro and macro were increased from two to three hours per week (plus a tutorial). We feared that the additional time devoted to these core areas would make life difficult for students, so we polled them for their reaction. The feedback was very favourable. In response to students' comments, next year we will increase the contact hours in MA econometrics as well.

The MA program in Financial Economics is now in the third and final year of its trial period. Although small, it has attracted worldwide attention and the competition for the five places was fierce; in fact, this program accounted for 40% of all MA applications to the Department. Along with the Rotman School of Management, we have completed a proposal for a new MA program in Financial Economics that the University will review this Fall and then submit for approval to the Ontario Council for Graduate Studies (OCGS). If approved, this new degree program will expand fairly quickly and will admit about 25 students per year in the steady state.

The Department's other specialized MA programs (Combined LLB/MA and Collaborative Programs with International Studies and with Environmental Studies) attract a total of four or five high quality students each year. I hope to review these specialized programs next year to make sure that they are meeting students' expectations and to see what can be done to make them even better. I would be most interested in receiving suggestions from graduates, so if you have the chance please send me an email with your comments.

Continuing a tradition started by last year's class, the MA students organized a graduation dinner in April 2000. About 90 students, faculty, and friends enjoyed a memorable evening of good food and excellent company. Special thanks to the Graduate Economics Union, and especially to Karen King and Rob Gray, for their organizational efforts. The Department's digital camera was put to good use and a link to photos from this year's event--four of which are reproduced below along with a separate story on the dinner--can be found on the graduate web site.

The Department's graduate committee completed a review of our first-year PhD program. The program begins in late August with an intensive three-week math-stat review. Students then take four 26-hour modules in each of the core areas of micro, macro, and econometrics. They finish up their first-year with comprehensive exams in micro and macro. We polled students and faculty on several issues: Should the introductory modules be reduced from four to three hours per week? Was the math-stat review effective or should it be taught alongside the core modules in the first term? How could the first-year sequence be improved? The committee received a number of thoughtful responses and some minor suggestions. Students found the first-year program to be demanding and difficult, but they were pleased with the basic structure and they argued against fiddling with it. In fact, students saved most of their complaints for the second and higher years of the PhD program. Partially in response, the Department will offer several new upper-year PhD courses next year. Some changes already made to the second year program and to ease the transition to the thesis writing stage were too recent to be incorporated into student feedback. I plan to look more closely at the second and higher years of the PhD program.

An external review prompted a thorough redesign of our Collaborative Program in Management and Economics. Although it attracted a number of applications, this program has failed to produce even one PhD graduate in its eight-year history. A committee from the Rotman School and the Department met several times last year and produced a more streamlined program of study. The new program, which has already received OCGS approval, allows students to reach the all-but-dissertation stage in about 2.5 years (the old program's requirements could take up to four years, depending on the student's background). If successful, this revised program may be extended beyond its emphasis on financial economics to include other areas in management such as marketing.

The job market last year was good to both MA and PhD graduates. For anyone still looking for work or looking to change jobs, I remind you that job announcements are regularly posted on our alumni discussion page. I hope you'll find the page useful and that you'll visit often. Let me conclude by extending congratulations to last year's PhD graduates: Mary Grant, Huiwen Lai, Samita Sareen, Moin Yahya, and Terence Yuen. As pleased as we were to have you as students, we're even more pleased to see you leave as successful graduates.

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# **Advising Undergraduates**

by Greg Jump, Associate Chair

Whenever I meet our alumni at parties and other gatherings I am often asked how many students enrol in undergraduate Economics courses each year. When I reply that the number is in the neighborhood of 7,000 students the typical response is: "Wow! That's a lot. What fraction of those students come to you---the Associate Chair for Undergraduate Studies---with problems and complaints?" I really don't know the answer to that question, but it has been asked so frequently that I should try to work it out.

In the two years that I served as Associate Chair I must have seen an average of about 9 different students per week in my office. I have corresponded with an average of perhaps another 15 per week via e-mail or the telephone. Of course, not all weeks are the same. Student contact is heavier at the start and end of terms than at other times, but the figures cited are probably close to the weekly averages during the 50 weeks of the year that the Department is open. (We close for approximately two weeks over the Christmas/New Year's Holidays.) That works out to 1,200 individual students per year. So I dealt directly with about 17 percent of the undergraduate students enrolled in Economics courses during a typical year. That is a lot higher than I would have guessed. And the proportion of students who visit the Department with problems or complaints is actually much higher. The Administrative Assistant for Undergraduate Studies, Ms. Robbie Innes, handled most student queries---perhaps four or five times the number I handled. Thank you Robbie!

I suspect that the 17 percent figure is considerably higher than the proportion of students who would have had direct contact with the Associate Chair ten years ago for the simple reason that many more students have e-mail accounts today than was the case then. It was quite easy for a student with a question to send me an e-mail. And from my point of view, a query by e-mail is preferable to a telephone call or an office visit because I can respond at any time of my choosing.

The one situation in which e-mail is not a substitute for meeting one-on-one with a student has to do with the assessment of transfer credits for courses taken at other universities. A fairly large

proportion of students at the University of Toronto---some 20 to 25 percent---earn at least one academic credit at some other university. One of my duties as Associate Chair was to assess the content of all Economics courses taken elsewhere by students who are enrolled at U of T. This is a fairly routine task for courses taken at universities such as York and Queen's, which have curricula similar to our own. If a student has taken an Economics course at, say, Queen's University, he/she need only provide me with the course identifier (e.g. *ECON-111*). I could then find the course content at the Queen's web site and quickly determine whether to grant a transfer credit for that course. However, it can be quite challenging to make an assessment of a course taken in parts of Africa, Asia and Europe. In these cases I had to ask the student to provide me with the student to better learn the content of the course and determine whether it merits transfer credit. In recent years there has been a large influx of transfer students from the former Soviet Union, forcing me to become quite knowledgeable about the content of Economics course offered by universities in Latvia, the Ukraine, etc.

For the most part my one-on-one encounters with students, whether in person or via e-mail or the telephone, were quite pleasant. After transfer credit assessments, the most common reason a student called upon me was to seek advice on course or program selection. I was always happy to assist these students. A few come seeking special exemptions or waivers from certain course prerequisites or program requirements. These students are usually disappointed because our Department has a firm policy about not waiving prerequisites and the Faculty of Arts and Science is very strict about program requirements. It is very rare that a student will come with a complaint about a specific faculty or staff member. Indeed, I received only one complaint during the two years, and that one was mailed to me, unsigned. An investigation proved the complaint to be unfounded.

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# **Understanding Participatory Democracy----by Martin Osborne**

You show up at a PTA meeting to discuss homework policy and find there are only five other parents in the audience. Two of them favor a minimum of three hours homework, seven days a week, while the other three strenuously argue that homework should be abolished.

PTA meetings are not the only decision-making processes plagued by low attendance: Aristotle writes of the Athenian assembly of the fifth century B.C. that "absenteeism was common" despite "all sorts of tricks" used to encourage people to attend.

Nor are PTA meetings the only forums in which participants' views can be extreme. For example, in her book *Tree Huggers*, Kathie Durbin describes timber policy in the Pacific Northwest in the 1970s to 1990s as the outcome of a conflict between extreme environmentalists

who would not countenance the felling of a single tree and timber companies who wanted to clearcut every forest in sight.

How can we explain these observations? Do they depend on the specific characteristics of the three situations? Or is participatory democracy inherently flawed? Jeffrey Rosenthal of the Department of Statistics, my colleague Matthew Turner, and I have recently studied an abstract game-theoretic model that encompasses the three situations, as well as many others. (The paper will be published in the *American Economic Review* this year.)

The model abstracts from the details of any given situation. We take a policy to be simply a number (the number of hours of homework, the tax rate to impose, the percentage of forests to fell). Different people favor different policies. Anyone may participate, if they wish, in the process that selects a policy. (Anyone may attend a PTA meeting or make a submission to a public hearing.) But participation is costly (at least in terms of time). The policy chosen is a compromise among the participants' favorite policies. In a simple case that we study, the compromise is the median of the participants' favorite policies. (When the number of participants is odd, the median is the middle policy when the participants' favorite policies are put in order; when the number of participants is even, the median is the median of the two middle positions.) This case is of particular interest because the median is an equilibrium outcome in models in which a compromise is reached by a procedure involving majority voting.

Which patterns of participation are stable ("equilibria")? Suppose that you, a potential participant, expect the participants' favorite policies to cover a broad spectrum. Then your participation will have little impact on the participants' median favorite policy. Suppose, for example, that you favor no homework and expect that in your absence the participants' median favorite policy at a PTA meeting will be 30 minutes of homework a day. Suppose also that you expect there to be participants whose favorite policies are 25 minutes a day and 35 minutes a day. Then your presence at the meeting will change the median by at most 2.5 minutes, from 30 to at least 27.5. (The number will be exactly 27.5 if no participant has a favorite policy between 25 and 30.) So unless your cost of participation is very low you won't participate.

What configuration of the participants' favorite positions will draw you away from the good book you'd like to read? Suppose you think that there will be two equally numerous extremist camps at the meeting---five people who favor no homework, five who press for three hours a day. If you don't show up the outcome will be a compromise of an hour and half a day. If you do show up you'll change the balance of the meeting entirely; the median will be your favorite position---no homework at all!

Further, such a configuration, in which there is a large "gap" exactly in the middle of the set of the participants' positions, is the only type of configuration that will provide you---or anyone else---with a strong incentive to attend. That is, the exclusive participation of extremists is a characteristic of any equilibrium in which attendance is positive.

Rosenthal, Turner, and I show also that low attendance is a characteristic of any equilibrium. The reason is subtle. Suppose that there is a small chance that anyone who intends to participate is prevented from doing so (their car gets a flat tire on the way to the meeting, for example). For

any given meeting some people who plan to attend may not be able to do so: the set of people who manage to participate is random, depending, for example, on whose car gets a flat tire. Now suppose that the number of people who intend to participate is large. How likely is it that the set of favorite positions of the people who actually manage to participate (those who do not get a flat tire on the way to the meeting) consists of two subsets of exactly the same size, separated by a large gap? A *central limit theorem* from statistics tells us that such a configuration is unlikely. Even if the set of favorite positions of the people who are prevented from participate takes this form, the numbers of people on each side who are prevented from participating are unlikely to be exactly the same. (If you toss 1000 pennies the chance that you get exactly 500 heads and 500 tails is very small.) Thus each participant is extremely unlikely to be a swing vote that shifts the outcome from one extreme to the other when the number of participants is large.

But as I have argued above, every configuration for which anyone has an incentive to attend has a large gap exactly in the middle of the set of the participants' positions. Thus we conclude that in the presence of a little randomness a large gap is likely to appear, and participation to pay, only if the number of participants is small! Hence, in any equilibrium few people participate.

These results make us see that Aristotle's complaints, the pleas of the PTA chair that you come to the meeting, and the character of the input into timber policy in the Pacific Northwest have a common denominator. In a wide range of situations in which a collective decision is the outcome of a procedure in which participation is voluntary and costly, the participants are likely to be a small number of extremists.

For a more in-depth analysis of these issues, see Martin J. Osborne, Jeffrey S. Rosenthal, and Matthew A. Turner, "Meetings with costly participation", to appear in the *American Economic Review*, 90, 2000, 927-943.

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### **Confessons of an Alumnus----by Nonnie Balcer**

An awful lot has changed since June 1975, when I graduated from Trinity College with a BA in Political Economy. This was brought home to me this past June when, for the first time ever, I spent an "alumna" weekend at U of T. First off, as I discovered when I visited the second floor of the Sidney Smith Building to pay my respects to the old Political Economy Course Union office (I chaired PECU in 1974-75), it's not Political Economy any more. Then, the Department of Economics extended a generous welcome to alumni at a cocktail party hosted by the Chair, Professor Nancy Gallini. A woman Chair of the Department...and I never even had a female Professor!

So much of my working career, both during and after my time at U of T, involved being "the first woman" this, that or other. In my university classes, however, there were always lots of talented women--and wonderful teachers. My love of analyzing patterns was fostered by Professors Neufeld, Easterbrook and, of course, Vincent Bladen, who met one-on-one with me for a few

hours every week of my fourth year. Under Bladen's guidance, I carefully studied the sacred texts of Classical Political Economy. My economics professors all promoted a "statesmanlike" view of economics--what was best for the community.

So moneymaking was definitely not on my mind when I took up a Commonwealth Scholarship at Clare College, Cambridge, eventually completing a Doctorate in History of Economic Thought under the supervision of John (now Lord) Eatwell. On my return to Canada, I was hired as "the first woman" (of course) corporate finance officer at JP Morgan of Canada. My U of T economics degree definitely got me in the door at Morgan: my interviewer put his fingers in his ears as I started to describe my Cambridge research work on the Ricardian Socialists, saying "I'll just write down Ph.D. Economics!"

The next twenty years were exciting ones. Transferred to Head Office on Wall Street, I enjoyed several careers within Morgan: as an International Treasury Consultant to some of the largest corporations in the world, as the founder of an innovative Fixed Income Training Programme as Morgan vaulted over the Glass-Stiegel barriers, as a strategist for Morgan Private Banking worldwide...among others! I was happy, though, to negotiate an early retirement package recently. With two sons (now 10 and 12) and my husband running an extremely busy and successful architectural firm, it was time to cut back on the 18-hour days. I'm having it all--just sequentially.

Nonnie Balcer currently divides her time between Hastings-on-Hudson, N.Y. and Bark Lake, Quebec.

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## **Short-term Visitors**

### Professor Ariel Rubinstein

For two weeks in February 2000, Prof. Ariel Rubinstein, of Tel Aviv and Princeton Universities, visited the Department, supported by the Canadian Friends of Tel Aviv University. Prof. Rubinstein is a leading game theorist who has made major contributions in a wide variety of fields. During his visit he taught a PhD course, presented a seminar, and discussed his research with many faculty members.

His graduate class covered the theories of bargaining and repeated games, two fields in which he has made key contributions. His seminal work on the alternating offer bargaining model in the early 1980s generated a huge volume of research that has improved our understanding of many economic phenomena. He was also one of the originators of a key result in the theory of repeated games.

The paper he presented in the seminar (written jointly with Jacob Glazer of Tel Aviv University) illustrates well the originality of his work. It studies debates from a game theoretic viewpoint. In

the model, a listener must choose between two outcomes. The best outcome for her depends on the values of several variables---values that she does not know. Two debaters make arguments about these values. For each argument x made by one of the debaters, the listener must decide whether or not the counterargument y of the other debater is convincing. Suppose that the listener wants to maximize her probability of choosing the outcome she prefers. Glazer and Rubinstein show, surprisingly, that there must then exist two arguments x and y such that the listener regards y as a convincing counterargument to x and she also regards x as a convincing counterargument to y. As they state in the paper, this result suggests that "the optimal design of debating rules is subtle and contains ... features [that] are not intuitive".

### by Martin Osborne

### Professor Daniel Tsiddon

During the Fall semester, for a two-week period, the Department benefitted greatly from the visit of Prof. Daniel Tsiddon of Tel Aviv University. Daniel is a leading macroeconomist with important research contributions in the area of economic growth. His research emphasizes channels linking income distribution and economic growth, especially fertility and demographic changes, human capital accumulation, technological progress and labour mobility. He has also made important contributions in the area of price rigidity, inflation, and business cycles.

We kept Daniel very busy during his visit. He gave 6 two-hour lectures, presented a seminar in the Macro Workshop, and interacted extensively with faculty and graduate students. His lectures concentrated on the topic of income distribution and economic growth, providing a self-contained mini-course for graduate students. After reviewing the main empirical findings in the literature on distribution and growth, Daniel approached the subject by studying theories with different channels of interaction---endogenous tax systems, credit imperfections for human capital investment, communities and stratification, and population dynamics---emphasizing the cross-country as well as the time series implications. In particular, analyzing economies over time, Daniel studied in detail the role of technological progress, which has been at the center of the income distribution evolution in developed countries in recent times.

Daniel presented the paper "Born to Be Unemployed: Unemployment and Wages Over the Business Cycle" (written jointly with Yona Rubinstein) in the Macro Workshop. The main goal of the paper is to document a new set of facts regarding unemployment and wages in business cycles and to provide an explanation for those facts. A key insight is to decompose individuals' human capital into knowledge and ability, where ability is a more general skill than knowledge, being less attached to a specific state of technology, and is exogenous to individuals' decisions while knowledge is endogenous, depending on education, training and learning by doing. Applying this decomposition to the data, a striking finding emerges. During recessions the real wages of high-ability individuals increase! The findings suggest that the demand for ability increases during recessions---recessions are times of change and ability becomes more valuable when things are changing.

by Diego Restuccia

### **Long-term Visitors**

#### **Gilles Duranton**

Gilles Duranton, a specialist in economic geography, joined us for the winter term. Gilles taught for us a special-topics course in spacial analysis.

#### Douglas Hodgson

Doug Hodgson from the University of Rochester spent the entire year with us on his sabbatical. Doug is an econometrician who specializes in time-series analysis.

#### John Isbister

Professor John Isbister visited us for the academic year from The University of California at Santa Cruz. John specializes in economic development and immigration policy.

#### James MacKinnon

We were fortunate to have Professor James MacKinnon, a world-renowned econometrician from Queen's University, join us during the fall term. James taught one of the four segments of our graduate econometrics sequence.

#### David Pines

David Pines, a specialist in urban and public economics, visited us for the year from Tel Aviv University where he holds the Distinguished Chair in Public Economics.

### Al Slivinski

Al Slivinski, Professor of Economics at the University of Western Ontario, visited the Department in the fall term. A well-known researcher who studies non-profit organizations and the economics of politics, Professor Slivinski taught one of our courses in Public Economics for graduate students.

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# **Editorships and Associated Editorships of Department Members**

One of our most important functions is to facilitate the dissemination of knowledge by editing or assisting in the editing of academic journals. Our current activities in this regard are noted below.

- Dwayne Benjamin is on the Board of Editors of the Canadian Journal of Economics
- **Loren Brandt** is on the Editorial Board and is East Asian Editor of the *Oxford Encyclopedia of Economic History*. He is also on the Editorial Board of *Explorations in Economic History*.
- Albert Breton is on the Editorial Boards of *Public Choice*, *Public Finance/Finance Publiques* and *Constitutional Political Economy*.
- Nancy Gallini is on the Editorial Board of the Journal of Economic Literature.
- **Morley Gunderson** is on the Editorial Boards of the *International Journal of Manpower* and the *Journal of Labor Research* and a co-editor of the *Labour Arbitration Yearbook*.
- **Gerry Helleiner** is on the Editorial Boards of World Development, African Development Review, The World Economy, Journal of African Economies, Canadian Foreign Policy, Oxford Development Studies, The World Bank Economic Review, and International Labour Review.
- Frank Mathewson is on the Editorial Boards of the *Journal of Economics of Business* and *Managerial and Decision Economics*
- Angelo Melino is an Associate Editor of the Journal of Empirical Finance.
- Noah Meltz is Chair of the Editorial Board of *Relations Industrielles/Industrial Relations*
- Jack Mintz, together with Assaf Razin of the University of Tel Aviv, is an Editor-in-Chief of International Tax and Public Finance and is on the Editorial Board of Contemporary Accounting Research.
- **Don Moggridge** is Review Editor of *History of Political Economy* and Associate Editor for 20th Century, Economics of the *New Dictionary of Political Biography*. He is also on the editorial boards of *History of Political Economy* and the *Journal of the History of Economic Thought*.
- John Munro is on the Editorial Boards of *Explorations in Economic History*, the Editorial Board of the *Oxford Encyclopedia of Economic History* as Medieval Area Editor, and *The Collected Works of Erasmus*, published by University of Toronto Press.
- Martin Osborne is an Associate Editor of both *The International Journal of Game Theory* and *Mathematical Sciences*.
- **Peter Pauly** is Co-Editor of *Economic Modelling*.
- **Mike Peters** is on the Editorial Board of the *Canadian Journal of Economics*.
- **Carolyn Pitchik** is on the Editorial Board of the *Canadian Journal of Economics*.
- Diego Puga is on the Editorial Board of the Canadian Journal of Economics.
- Adonis Yatchew is Co-Editor of the *Energy Journal*, a journal that is based here in the Department at the University of Toronto.

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# The Basis of Pay Equity in Canada----by Michael Baker

Canada is a world leader in pay equity---if you work for the government or in the private sector of Ontario or Quebec your job is probably covered by pay equity legislation. Also, pay equity programs can be costly---the federal government is paying 3 to 5 billion dollars in pay equity awards to its workers in underpaid "female jobs". The stakes here are not small. You needn't take sides to wonder why Canada leads in this area, and whether this is tax money well spent.

Pay equity promotes equal pay for work of equal value. This isn't equal pay for two individuals doing the same job, but for two individuals doing different jobs that are determined to have equal value by a gender-neutral evaluation scheme. Pay equity policies are based on two arguments:

- that the male-female wage gap represents sexual discrimination.
- that a significant part of the wage gap is due to the fact that "female jobs" are paid less than
  equally valuable "male jobs".

Both these arguments are needed. Pay equity attempts to redress any wage differential that results from relatively low pay in female jobs. If the first argument were true (that is, there is discrimination) but the second argument were not true (the wage gap is not significantly related to low pay in female jobs), you still might want public policy to combat discrimination, but pay equity would be the wrong choice.

If Canada is a world leader in pay equity then both of these arguments must be true, right? Yes and no. Yes, there are a growing number studies that conclude that some part of the male/female wage differential may be due to discrimination, although (unsurprisingly) there is dissent. But no, there is little research connecting the wage differential in Canada to low pay in female jobs. This would appear, then, to be a case of policy getting ahead of measurement.

In a series of recent papers Nicole Fortin of the University of British Columbia and I have been trying to fill in some of the missing details. One of our approaches is to use data on male and female wages by detailed occupational categories numbering approximately 500. For each occupation we calculate the percentage of workers who are female. Then we determine whether female occupations (60% or more of the workers are female) are systematically paid less than male occupations (30% or less are females). We find that for males the answer is yes---males are paid less in female occupations than in male occupatons. For females, however, differences in wages between the two types of jobs are quite small---in fact in most cases, using standard statistical techniques, we cannot reject the proposition that there is no difference. As a result we find that lower wages in female jobs contribute relatively little to the male/female wage differential. The bottom line is that gender wage differentials are "equal opportunity"---females are low paid in all job types, not *because* and *only when* they work in female jobs.

With these results in hand, our current research proceeds in a number of directions. First, why are the wage differences between male and female jobs much larger in the US? Our work suggests that the larger differences in the US are associated with its lower rate of unionization, and with the relatively higher wages in Canada of certain jobs that are traditionally held by females (such as teaching and nursing). Second, what effect has pay equity legislation in Canada

had on the male/female wage differential? We are studying the introduction of pay equity to the private sector in Ontario in the early 1990s. This research is still in progress, but an early finding is that many firms did not comply with the Ontario pay equity law. The story here appears to be pretty simple. Much fun was made of the "arcane" statistical procedures that were bandied about in the recent federal pay equity case. Terms such as "linear regression" and "heteroskedasticity" led one columnist to conclude that, "Something that cannot be explained in reasonably clear English (or French) is something that is inherently sneaky" (Jeffrey Simpson, "The Politics of Redress" The Globe and Mail, Wed. October 20, 1999, A23). However mysterious or comically named, the statistical methods are a necessary part of the conceptually difficult exercise of determining equal value. It is necessary to find for each job, other jobs that are equivalent in skills, responsibilities, working conditions, etc. Large firms have job evaluation and pay administration systems in place that are potentially up to this task. Smaller firms, however, typically have much simpler procedures. Therefore, small employers must either invest in these potentially costly systems, or brush off their statistics and econometrics notes and do the job themselves. Surveys of compliance suggest many small firms followed a third path: they ignored the law.

This highlights a neglected, but potentially important, qualification to pay equity policies. Other labour market regulations are fairly simple: it's pretty straightforward to figure out if you're in violation of a minimum wage law. Pay equity, on the other hand, requires statistical procedures that hours of tribunal and court testimony suggest are not widely understood and are open to dispute. Pay equity may just be too complicated for widespread adoption in a decentralized economy.

A more complete analysis is available in the following papers, co-authored with Nicole Fortin:

"Women's Wages in Women's Work: A US/Canada Comparison of the Roles of Unions and 'Public Goods' Sector Jobs", *American Economic Review Papers and Proceedings*, 89, May 1999, 198-203.

"Occupational Gender Composition and Wages in Canada: 1987-1988", *Canadian Journal of Economics*, Forthcoming.

"Comparable Worth Comes to the Private Sector: The Case of Ontario", University of Toronto, March 2000.

"Gender Composition and Wages: Why is Canada Different from the United States?", Analytical Studies Research Branch Working Paper No. 140, Statistics Canada, April 2000.

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# The Malim Harding Debate: Professors Richard Harris and David Laidler

We decided to make this year's Malim Harding Lecture Series event a debate between two distinguished Canadian economists rather than a lecture. We were fortunate to have **Professor David Laidler** from the University of Western Ontario and **Professor Richard Harris** from Simon Frazer University join us to debate an important contemporary policy question: Should Canada attempt to become part of a North American Monetary Union? The moderator for the debate was distinguished journalist **Terrance Corcoran**.

The debate was held on March 22, 2000 and was well attended by both faculty and students in Economics and Political Science. Also present was Victor Harding, representing the Harding family who have generously provided the funding for the annual Malim Harding lectures.

Professor Harris, speaking in favor of a North American Monetary Union, made essentially three arguments. First, he noted that at the global level the role of national currencies as instruments of national policy is diminishing over time, the advent of the Euro last year being a major watershed in this evolution. He then argued that Canada's floating exchange rate is doing more harm than good. The benefits of an independent monetary policy are more than offset by the cost of exchange rate volatility and misalignment---the most recent depreciation of the currency provides ample evidence. Exchange rate movements are contributing, he claimed, to lower growth by slowing a structural shift toward high technology manufacturing and service activities. Finally, in view of this he argued that Canada's long-term objective should be to push for a North American Monetary Union with a currency based on adoption of the U.S. dollar. This he considers preferable to the inevitable on-going process in North America of informal "U.S. dollarization" in that it would give Canada some formal participation in the process by which monetary policy is formulated for the continent.

Professor Laidler, making the case against North American Monetary Union, argued that it was unrealistic to expect the U.S. either to abandon its dollar for a new currency, or to concede any influence over its domestic policy to another country. Monetary union would therefore be a matter of unilateral adoption of the U.S. dollar by Canada, either explicitly, or by way of a currency board. This would mean Canada's ceding power over its own monetary policy to the United States authorities, who would in no way be accountable to the Canadian electorate. And it would deprive the Canadian financial system of the lender of last resort services of the Bank of Canada too. All of these sacrifices might be worthwhile for a country with a long history of fiscal and monetary chaos, such as Argentina, but the current Canadian monetary order, though perhaps fragile because of its reliance on domestic political support---an inevitable consequence of requiring the monetary authorities to be accountable to the electorate----is functioning well and does not need replacing.

A spirited discussion from the audience then followed, reflecting the concern evident in a poll before the debate that any movement toward North American union would involve a loss of Canadian sovereignty.

Once again, we are indebted to the Harding family for bringing to the University a lively and interesting discussion of important ideas.

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### The Research Interests of Some of Our Faculty

Jack Carr is currently working on three projects. One project with colleague John Floyd examines the determinants of the Canadian Dollar exchange rate. The main empirical conclusion is that changes in the exchange rate have been due to real and not to monetary factors. This empirical result has implications in the current debate on the suitability of Canada adopting the US dollar. The second project continues research with Frank Mathewson and Neil Quigley on Deposit Insurance and Stability of the Canadian Financial System. Contrary to the views of some economists, Canadian financial institutions survived the Great Depression without Government aid and without deposit insurance. The third project continues research with Kam Hon Chu on the Political Economy of Inflation. This research investigates the role that income inequality plays in determining equilibrium inflation rates. The main empirical conclusion is that high income inequality in Latin American countries has contributed to their high inflation rates.

**Don Dewees** is working on ways to make air pollution regulations more flexible by allowing polluters with high costs of controlling emissions to purchase some of the regulated limits of polluters with low costs of control. This reduces total costs of pollution control without increasing emissions. The breakdown of monopoly that is part of the restructuring of electricity generation across North America is focussing interest on such trading of emissions rights to reduce the cost of protecting the environment in the newly competitive electricity market. The research is intended to explore the needs of regions such as Ontario for small-scale trading systems that advance environmental goals and are economically efficient, recognizing the special characteristics of the electricity market.

**Miguel Faig** is working with **Pauline Shum** from York University on how financial asset portfolios are affected by investment in illiquid projects such as unincorporated businesses and residential housing. An interesting issue is whether this interaction can help explain the composition of financial portfolios observed in reality. He is also working with graduate student **Sonia Laszlo** on liquidity effects of monetary shocks in situations where there are multi-period production projects. Miguel has also started working on the demand for money in the framework of random matching models.

**Morley Gunderson** is currently investigating wage differentials between the public and private sector, with particular emphasis on changes that have occurred since 1970. This research focuses on the extent to which these differentials vary by such factors as occupation, gender, union status, and level of government. In another project he is analyzing survey data on the extent to which individuals are informed about features of the occupational pension plans such as early and delayed retirement provisions, compulsory retirement age, contribution and benefit formulas and inflation protection. Also, in his capacity as the newly appointed Chair of Youth

Employment, here at the University, he is analyzing the time pattern of youth unemployment, with particular emphasis on the upswing that has occurred over the 1990s.

**Frank Mathewson** is focusing his research on competition and monopoly. One project deals with the economics of employee sales and incentive commissions, where the latter can simultaneously include bonuses and penalties. A second project involves analyzing firms' decisions to perform functions internally as opposed to contracting them out. Another project concerns financial institutions and their market performance. Co-authors in various parts of this latter work include **Jack Carr, Ignatius Horstmann** of the University of Western Ontario and **Neil Quigley** of Victoria University in New Zealand.

**Diego Puga** is currently focusing on six projects. With **Matt Turner** and **Henry Overman** he is looking at urban sprawl in the US. With **Gilles Duranton** he is studying why business services cluster in large diverse cities. They are also working on a framework which suggests that international product cycles can give rise to productivity mirages. Also with **Henry Overman**, he is assessing the importance of buyer/supplier relationships as determinants of firm location patterns across Europe. And together with **Pierre-Philippe Combes** and **Miren Lafourcade** he is making a more detailed assessment of this issue for France. Finally, he is looking at the efficacy of improvements in transport infrastructure in reducing regional inequalities.

**Joanne Roberts** is currently working on a variety of projects. With **Patrick Francois** (Tilburg University) she is investigating the effects of incomplete contracting on the standard predictions of endogenous growth models, attempting to show a relationship between productivity growth and the nature of production relationships. In joint work with **Huw Lloyd-Ellis**, she is studying the relationship between endogenous growth and endogenous human capital accumulation decisions, showing that technological innovation and human capital accumulation are both essential for growth. And in joint work with colleague **Loren Brandt** and **Li Hongbin** of Stanford University she is looking at the privatization of township-owned enterprises in China.

**Dan Trefler** is continuing his research in the modeling of international trade flows and the labour market consequences of trade and trade policy. Together with **Huiwen Lai**, he is writing a paper quantifying the effects of tariffs and nontariff barriers to trade in preventing the free flow of goods across international boundaries. The results show that there are benefits from further tariff liberalization internationally, especially for Canada. Dan is also completing a retrospective study of the effects of the Canada-U.S. Free Trade Agreement. He finds that the effects have been complex, but often small in magnitude. One surprising result that leaves little room for doubt is that the Agreement has promoted productivity growth, a contention that flies in the face of journalistic "wisdom". Finally, Dan is documenting and analyzing the conflict between the World Trade Organization's free-trade agenda and the agendas of consumer advocates, environmentalists, labour groups, and others. In a draft paper he offers suggestions for reconciling these conflicting agendas.

**Ralph Winter** is working mainly on economic issues relating to competition policy, and has just co-authored a book with Michael Trebilcock, Edward Iacobucci and Paul Collins on the law and economics of Canadian competition policy. Ralph is developing a paper on pricing in advertising

markets (radio and television), another paper on exclusivity restrictions in contracts, and is completing an empirical study of capital structure decisions by insurance companies.

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### Retirees

#### Wahid Haque

Wahid has been teaching economics and mathematics here since 1966 as a member of both the Department of Economics and the Department of Mathematics. He has contributed some two dozen articles that bridge the fields of mathematics and economics and is currently working on two monographs in value and capital theory and the microfoundations of macroeconomics. Wahid has served as economic advisor to the United Nations and the Government of Bangladesh.

### **Richard Bird**



Richard joined the department in 1968, after holding teaching and research positions at Harvard and Columbia. He established a strong international scholarly reputation in the field of Public Economics, with particular attention to public finance issues in developing countries, federalism and intergovernmental finance issues. His publications include 36 books, 96 contributions to books, and 107 articles and notes in professional journals. He has acted as a consultant to numerous international organizations and research institutes, including the World Bank, the IMF and UN organizations and undertook responsibility for major reviews of the tax systems of several developing countries. including Columbia, Jamaica and Egypt and made recommendations for reform. Richard was thesis supervisor for several graduate students who have since gone on to make their own marks professionally. Despite retirment, Richard remains Senior Fellow at the World Bank Institute,

Washington, D.C., the Petro-Canada Scholar at the C.D. Howe Institute, Toronto, and Distinguished Visiting Professor at the Andrew Young School of Public Policy, Georgia State University, Atlanta, Georgia. He is also Co-Director of the International Tax Program at the Rotman School.

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# **New Colleagues**

Martin Osborne



Martin is an established scholar in game theoretic analysis who taught extensively at Columbia and McMaster universities before taking up a senior theory position here. Martin has two books, jointly authored with Ariel Rubinstein, and many articles in professional journals to his credit. He is currently involved in an extensive program of research in various applications of game theory, some results of which he presents in his article in this issue.

### Michelle Alexopoulos



Michelle, a graduate of our Specialist Economics and Mathematics Program, comes to us with a Ph.D from Northwestern University where she worked with Marty Eichenbaum and Larry

Christiano. Her specialty is macroeconomics, particularly business cycle models and the functioning of financial institutions.

Diego Restuccia



Originally from Venezuela, Diego is a Ph.D from the University of Minnesota who joins us after one year on the faculty of the University of Western Ontario. His interests range across macroeconomics, economic growth and labour economics and his specialty is quantitative general equilibrium analysis.

### Mark Stabile



Mark is a specialist in Health Economics who did his undergraduate work here and went on to obtain his Ph.D at Columbia University, earning scholarships both here and at Columbia. He has already established a substantial research program in the economics of health insurance.

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### What's Happening in the Department of Economics

### Erindale News

The Erindale economists are pleased to welcome Mark Stabile (who arrived last fall) and Robert McMillan who joined us this September. Mark is a Ph.D from Columbia and has a strong interest in health economics and Robert did his graduate work at Stanford in the field of economics of education. Unfortunately, we also lost two valued senior colleagues, Myrna Wooders to a senior position at the University of Warwick in England, and Sam Rea to early retirement.

The college faces a big increase in student numbers in the next few years and is currently planning for that eventuality combined with the introduction of a new major program in culture, communications and information technology. These developments are bound to have a profound impact on the Department's program at Erindale since economics will be an obvious companion-major to the newly proposed program.

### The Annual Graduate Economics Union Dinner

On April 25 the Graduate Economics Union celebrated the end of the academic term with its second annual Faculty and Graduate Student dinner party. Over 85 graduate students, faculty and guests attended the dinner, a capacity crowd at the Yorkville Movenpick's Restauraunt. After an excellent dinner and conversation the party moved to a favorite College street establishment and continued on into the late hours of the night. Many thanks go the Rob Gray, Karen King and Sonia Laszlo, for organizing the event, and to the Department of Economics for generously helping to support the evening.

Photos from the dinner:





### Other News

- Last year's Polanyi Prize in Economics (based on a Province-wide competition) was awarded to Michael Smart. It has just been announced that Diego Puga has been awarded the Polanyi Prize in Economics for 2000.
- Dan Trefler has been appointed to the Advisory Board of the Department of External Affairs and International Trade.
- John Munro has been elected to the Scientific Committee of the Istituto Internazionale Di Storia Economica, in Prato, Italy. He has also been elected a member of the Belgian Royal Academy.
- Sam Hollander was awarded an LLD degree, honoris causa, by McMaster University this past November.

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### Department of Economics Welcome Page

Communications, suggestions, and information about alumni and other matters should be addressed to:

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