

Ron Ehrenberg: His Life and Economics

June 2017

Introduction

This volume is meant to serve as at least a partial record of, and tribute to, the great career and influence of Ron Ehrenberg. The volume itself contains a number of tributes to Ron, written by many of the people whose lives he has had a positive influence on during his career. It also contains five pieces written and selected by Ron. But perhaps most importantly, this volume will accompany a conference, organized to celebrate his career. The research presented at this conference collectively captures the essence of Ron Ehrenberg.

What one immediately notices is the broad range of topics upon which the presentations touch. This range of questions is consistent with Ron's intellectual breadth - his nimble, alert and inquisitive mind - which has led him to eagerly engage with any number of questions as scholar and to imbue those whom he has taught or who have read his work with some portion of excitement, whatever their particular topical interest.

Although addressing very different topics, the papers being presented are all micro-economic investigations of interesting, policy-relevant questions. This befits Ron's scholarly legacy, which one searches in vain for the project studying an unimportant question, without relevance for the lives of real people. That legacy is marked by work that is thorough and original and always interesting.

Perhaps the most important thing about these papers is that each is written by one of the many scores of us fortunate to have had in our lives, and to have benefited from his friendship and learned from his example. Former students, like me, are among the authors, and so too are colleagues, friends - even grandstudents.

Each of them has the deepest respect and appreciation for Ron. Admiration, affection, gratitude are among the feelings we all share, and are the sentiments that bring us together from hither and yon. My own love for Ron is deep and profound. Such successes as I have achieved professionally would not have been possible without him. I know others feel similarly, so I am especially gratified to say these few words on their behalf.

- Kerwin Kofi Charles

The Ronathon

Dates: Saturday and Sunday, June 3-4, 2017

Location: Room 105 Ives Hall, Cornell University

Tentative Schedule

SATURDAY

- | | |
|-------------------------|--|
| 8:50 a.m. – 9:00 a.m. | Welcome |
| 9:00 a.m. – 9:45 a.m. | Mike Lovenheim , Cornell University: “How Does For-Profit College Attendance Affect Student Loans, Defaults and Earnings?” |
| 9:45 a.m. – 10:30 a.m. | Doug Webber , Temple University: “The Returns to College Persistence for Marginal Students: Regression Discontinuity Evidence from University Dismissal Policies” |
| 10:30 a.m. – 10:45 a.m. | Break |
| 10:45 a.m. – 11:30 a.m. | Jessica Pan , National University of Singapore: “The Mommy Effect: Motherhood's Effect on Employment and Gender Norms” |
| 11:30 a.m. – 12:15 p.m. | Charles Clotfelter , Duke University: “Unequal Colleges in the Age of Disparity” |
| 12:15 p.m. – 1:30 p.m. | Lunch |
| 1:30 p.m. – 2:15 p.m. | Henry Farber , Princeton University: “Unions and the Decline in Long Term Employment Relationships” |
| 2:15 p.m. – 3:00 p.m. | Maria Fitzpatrick , Cornell University: “Pension-Spiking, Free-Riding, and the Effects of Pension Reform on Teachers' Earnings.” |
| 3:00 p.m. – 3:15 p.m. | Break |
| 3:15 p.m. – 4:00 p.m. | Joseph Price , Brigham Young University: “The Long-run Consequences of Occupation Destruction” |
| 4:00 p.m. – 4:45 p.m. | Daniel Hamermesh , Royal Holloway University of London: “Two Short Papers on Time Use” |
| 7:00 p.m. | Dinner , Physical Sciences Building, Cornell University |

SUNDAY

9:00 a.m. – 9:45 a.m.

Kirabo Jackson, Northwestern University: “Reducing Inequality Through Dynamic Complementarity: Evidence from Head Start and Public School Spending.”

9:45 a.m. – 10:30 a.m.

Amanda Griffith, Wake Forest University: “There is no I in Team: Peer Effects in Engineering”

10:30 a.m. – 10:45 a.m.

Break

10:45 a.m. – 11:30 a.m.

Kerwin Charles, University of Chicago: “Taste-Based Discrimination and the Labor Market Outcomes of Arab and Muslim Men in the United States”

11:30 a.m. – 1:30 p.m.

Lunch

A Dedication to Ron Ehrenberg

I was just twenty-three years old when I boarded a plane bound for New York to interview with Professor Ronald Ehrenberg at Cornell University. I was nervous. I was meeting a man who had graduated at the top of his class at Northwestern and was part of an elite group of economists. In my mind, Professor Ehrenberg was distinguished, academic, and scary-smart. He had twenty years of work behind him and was the co-author of the quintessential textbook in our field, *Modern Labor Economics: Theory and Public Policy*.

Nothing prepares you for the moment when you first meet your mentor. The morning I arrived in Ithaca, I expected to meet someone larger than life, but here was Ron Ehrenberg. He was a serious scholar, and yet he was approachable and above all human – a *mensch* is the Yiddish word for that.

Over the past twenty-seven years, Ron taught me so many essential life lessons. For example, he taught me: “The academic work we do is important, but always keep it in perspective.” I also learned that “the right variable may not be this one or that one, but the ratio of the two.” And Ron showed me how we endure tragedy; how we live in the moment and draw our loved ones close and make a family.

A great teacher gives us hope, direction, and new ideas. He challenges us and shapes the way we see the world forever. This volume is Ron’s legacy, and it’s his labor of love, too. It’s a roadmap from the teacher to the student; instructions for how we should live our lives and conduct our research in the years ahead.

Thank you, Ron, for being ever-present in our lives, and for your friendship, which is evident in every photograph and tribute in this book.

Dominic Brewer - Gale and Ira Drukier Dean

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Ronald G. Ehrenberg **Cornell University**

**Irving M. Ives Professor of Industrial and
Labor Relations and Economics**

Stephen H. Weiss Presidential Fellow

**Director - Cornell Higher Education
Research Institute**



Ronald G. Ehrenberg is the Irving M. Ives Professor of Industrial and Labor Relations and Economics at Cornell University and a Stephen H. Weiss Presidential Fellow. He also is Director of the [Cornell Higher Education Research Institute](#). From July 1, 1995 to June 30, 1998 he served as Cornell's [Vice President for Academic Programs, Planning and Budgeting](#).

Ehrenberg served as an elected member of the Cornell Board of Trustees from July 1, 2006 to June 30, 2010. Governor David Paterson nominated him for membership on the SUNY Board of Trustees in May 2009. His appointment was confirmed by the New York State Senate in March 2010. He currently chairs the Board's Academic Affairs Committee and is a member of its Executive, Communications and External Affairs, Finance and Administration, and Research and Economic Development Committees, and was on the system wide provost search and compensation committees.

He received a B.A. in mathematics from Harpur College (SUNY Binghamton) in 1966, M.A. and Ph.D. in economics from Northwestern University in 1970, an Honorary Doctor of Science from SUNY in 2008, and an Honorary Doctor of Humane Letters from Penn State University in 2011. A member of the Cornell faculty for 40 years, Ehrenberg has authored or co-authored over 160 papers and authored or edited 26 books.

Ehrenberg was the founding editor of *Research in Labor Economics*, and served a ten-year term as co-editor of the *Journal of Human Resources*. He has served, or is serving, on several editorial boards and as a consultant to numerous governmental agencies and commissions and university and private research corporations. He is a research associate at the National Bureau of Economic Research, a research fellow at IZA (Berlin), was a member of the Executive Committee of the American Economic Association, chaired the AAUP Committees on Retirement and the Economic Status of the Profession, and is Past President of the Society of Labor Economists. He also chaired the National Research Council's Board of Higher Education and served on its committee on Gender Differences in the Careers of Science, Engineering and Mathematics Faculty Measuring Higher Education Productivity and Research Universities committees, on the NACUBO Endowment Advisory Panel, on The College Boards Rethinking Student Aid Study Group and was a member of the Board of Trustees of Emeriti Retirement Health Solutions.

Currently he is a Fellow of the Society of Labor Economists, the TIAA-CREF Institute, the American Educational Research Association, and the Labor and Employment Relations Association; a member of the National Academy of Education; and a National Associate of the National Academies of Science and Engineering.

The Society of Labor Economists presented him with the Jacob Mincer Award, in 2011, for lifetime contributions to the field of labor economics. In 2013, the Association for the Study of Higher Education presented him with the Howard Bowen Distinguished Career Award for advancing the field through extraordinary scholarship, leadership and service. In recognition of all of his achievements and contributions to Cornell University, in 2014 Cornell honored him by creating the Ronald G. Ehrenberg Professorship in Labor Economics position at the university. In 2015, he received the Glen G. Bartle Distinguished Alumnus Award from the Binghamton University Alumni Association.

Coauthor of the leading textbook, *Modern Labor Economics: Theory and Public Policy* (12th ed.), his recent research has focused on higher education issues. He is the editor of *American University: National Treasure or Endangered Species* (Cornell University Press, 1997) and the author of *Tuition Rising: Why College Costs So Much* (Harvard University Press, 2002). He is the editor of *Governing Academia* (Cornell University Press, 2004), and *What's Happening to Public Higher Education?* (Johns Hopkins University Press, 2007), and coeditor of *Science and the University* (University of Wisconsin Press, 2007) and *Doctoral Education and the Faculty of the Future* (Cornell University Press, 2008). Ehrenberg is a coauthor of *Educating Scholars: Doctoral Education in the Humanities* (Princeton University Press, 2010).

Ehrenberg has supervised the dissertations of 46 Ph.D. students and served on committees for countless more. He is also passionate about undergraduate education, involves undergraduate students in his research, and has co-authored papers with a number of these undergraduates. In 2003, ILR-Cornell awarded him the *General Mills Foundation Award for Exemplary Undergraduate Teaching*. In 2005, he was named a Stephen H. Weiss Presidential Fellow, the highest award for undergraduate teaching that exists at Cornell.

Finally, Ehrenberg has served as a consultant to faculty and administrative groups and trustees at a number of colleges and universities on issues relating to tuition and financial aid policies, faculty compensation policies, faculty retirement policies, and other budgetary and planning issues. Among the institutions he has worked with are Brandeis University, Oberlin College, Northeastern University, The University of North Carolina, the University of Chicago, Vanderbilt University, the U.S. Naval Academy, the National Technical Institute for the Deaf at the Rochester Institute of Technology, Smith College, the Suffolk University Law School, Albany University (SUNY), George Washington University, the University of Akron, and University of Vermont, and the University of Maryland, Baltimore County.

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School of Industrial
and Labor Relations

Chapter 1: Tributes to the career of Ronald G. Ehrenberg

The Ron Ehrenberg Legacy: 41+ years of graduate students

	Name	Year	Dissertation	Current Position
1	James Hewlett (UMASS)	1975	Failure Rates as an Indicator of Social Program Success	Economist U.S. Department of Energy (retired)
2	Emily Hoffman (UMASS)	1975	Faculty Salary Differentials at the Univ. of Massachusetts	Professor Emerita of Economics, Western Michigan University
3	Jack Whiting	1979	Compensating Wage Differences and Pension Coverage	first job, Asst Prof, Grad School of Business Univ. of Chicago
4	James Lockett	1980	Estimating Unemployment Duration and Unemployment Flows	consultant to private non profits
5	Peter Scherer	1980	Wage Policies and Income Distribution in an Open Economy	Head Social Policy Division OECD (retired)
6	Marty Mauro	1981	Strikes as a Result of Imperfect Information	Fixed Income Strategist Bank of America
7	Elizabeth Li	1982	Compensating Wage Differentials for Unemployment Risk	first job, Asst Prof of Economics, Temple Univ.
8	David Rogers	1982	Tests of Dual Labor Market Theory	President, Morrisville State (SUNY)
9	Paul Schumann	1983	Decision to Attend College, Work, or Enter the Armed Forces	Prof. of Business, Minnesota State Univ (Mankato)
10	Gee San	1984	Labor Force Experience of College Students and Post College Success	Prof. of Economics, National Central Univ.(Taiwan)
11	Hyun -Joun Chang	1985	Age and Length of Unemployment Spells	Editorial Board, Chung-Ang, Seoul daily newspaper
12	Daniel Sherman	1986	Determinants of the Demand for Education by Sectoral Control	Senior Economist, American Institutes for Research
13	Noel Gaston	1988	Variability of Hours as a Job Characteristic	Prof of Economics, Monash University (Australia)
14	Jaewhan Sung	1988	Labor Mobility in Korea	Profesor at Korean University
15	Richard Chaykowski	1988	Determinants of Nonwage Collective Bargaining Outcomes in Canada	Prof of Policy Studies, Queens University ,Canada
16	Julie Hotchkiss	1989	Economic Analyses of Part-Time Employment	Prof of Econ Georgia State Univ/Senior Economist FRB of Atlanta
17	Daechang Lee	1989	Job Offer Arrival Rate and a Screening Model of Education	Director, Hyundai Motors, Korea
18	Christian Belzil	1990	Unemployment Insurance and Labor Market Transitions in Canada	Res.Prof ecole Polytechnique and Assoc Prof ENSAE (Paris)
19	Michael Bognanno	1990	An Empirical Test of Tournament Theory	Assoc Prof of Economics, Temple University
20	Jo Ho Lee	1990	Essays on Public Sector Labor Markets	Assoc Dean School of Pub. Pol. Mgt, Korean Development Institute
21	Jong Baek Kim	1991	Essays on Short- Time Compensation Programs	Attorney for a major Korean company
22	Nabinita Datta Gupta	1992	Preferences and Constraints in Male/Female Occupational Differences	Prof Aarhus School of Business (Denmark)
23	Dan Rees	1992	Essays on Unionism in the Public Sector	Prof of Economics, University of Colorado (Denver) Now also Editor of the Economics of Education Review
24	Panagiotis Mavros	1993	Econometric Estimation of Duration Models	Statistician, Merck Pharmaceuticals
25	Dominic Brewer	1994	Teachers, Administrators and Educational Productivity	Dean of Steinhardt School of Education and Culture, NYU
26	Daniel Goldhaber	1994	Public or Private High Schools: School Choice and Consequences	Research Prof of Public Policy, University of Washington Now also VP at American Institutes for Research

27	Daniel Hosken	1995	Teachers Early Career Attrition Retirement and Wage Determinants	Economist, Federal Trade Commission
28	Donna Rothstein	1995	Gender, Race and Ethnicity in Early Career Outcomes	Research Economist, Bureau of Labor Statistics
29	Kerwin Charles	1996	An Inquiry into the Labor Market Consequences of Disabling Illnesses	Chaired Professor, Harris School of Public Policy, University of Chicago
30	Alicia Dowd	1998	Influences on Curriculum Choices in College: A Case Study of English Essays on Wage Variation	Prof. of Education, Pennsylvania State University
31	Robert Olsen	1999	Essays on Wage Variation	Principal Scientist, Abt Associates
32	Samid Hussain	2000	Human Capital Accumulation, Social Distance and Financial Markets	Vice President, Cornerstone Research
33	John Cheslock	2001	Two Essays on Enrollment Policies in Higher Education	Assoc. Prof of Education, Pennsylvania State University
34	Berk Ozler	2001	Decentralization and Student Achievement: The Case of Nicaragua	Economist, World Bank
35	Michael Rizzo	2004	Public Higher Education - A Nonzero (losing) Sum Game	Asst Prof Econ Univ of Rochester
36	Virginia Augusta	2005	Growing Stratification in Academic Labor Markets	Principal Gift Officer, Oxford University (England)
37	Liang Zhang	2005	Three Essays in Higher Education Economics	Assoc. Prof of Education, Pennsylvania State University
38	Andrew Nutting	2005	Two Year Colleges and the Transfer Function in SUNY	Asst Prof of Econ Hamilton, now Asst Prof of Econ Bryn Mawr
39	Joseph Price	2007	Essays on the Economics of the Family	Assoc Prof of Economics, Brigham Young University
40	Albert Liu	2009	Essays on the Economics of Immigration and Education Policy	Economist, Mathematica Policy Research
41	Amanda Griffith	2009	Essays in Higher Education Economics	Assoc Prof of Econ, Wake Forest University
42	Joshua Price	2010	Essays on the Economics of Education and Health	Asst Prof of Econ, S. Utah Univ.
43	Ben Ost	2011	Three Essays in the Economics of Education	Asst Prof of Econ., Univ of Illinois-Chicago
44	Joyce Main	2011	Doctoral Student-Faculty Advisor Relationships: The Impact of Gender Matching on Student Educational and Employment Outcomes	Asst Prof of Eng. Educ., Purdue University
45	Douglas Webber	2012	Essays on Imperfect Competition in the Labor Market	Asst. Prof of Economics, Temple University
46	Richard Patterson	2015	Essays on the Economics of Education and Health	Asst. Prof of Economics, U.S Military Academy (West Point)
47	Mirinda Martin	2016	Educational and Labor Market Outcomes of Gap Year Students	Asst. Prof. of Economics, Brigham Young University/Idaho
48	Ross Milton	2017	Three Essays in Local Public Finance	Asst. Prof. Of Economics, Kansas State University

“On Ron as a Mentor extraordinaire”

Prior to becoming a public university president sixteen years ago I was a young assistant professor of higher education finance and policy at the University of Illinois, Urbana-Champaign. Professor Ron Ehrenberg and Professor Michael Olivas put together for a number of years a small conference at the University of Houston with the single goal of assisting young faculty members who shared similar interests in higher education finance, policy and law. This is when I first met Ron and where he became a lifelong mentor, colleague and friend of mine for the last two plus decades. Since that initial meeting in Houston I have been extremely fortunate to work with Ron as a faculty affiliate at CHERI where we have co-authored numerous higher education finance and policy-related books and publications as well as sharing a professional friendship whether my career took me to California, Kentucky, and now Louisiana. I am most grateful for the multitude of state and federal policy discussions that led to many new proposals which in numerous instances became higher education policy in many states and at the federal level. To this day Ron remains one of the most respected national voices in higher education. His love for the great value of our public colleges and universities has made him a tireless champion in the ongoing challenges to ensure that our higher education institutions place the public welfare and common good above that of the growing institutional desire to maximize prestige and wealth. I am indeed blessed to have had Professor Ron Ehrenberg as a mentor, colleague, and friend through the many state and federal battles we have been through together.

- F. King Alexander, President of Louisiana State University

A friend in need is a friend indeed, and we will always be grateful.

- Michael and Sarah Gold

Ron Ehrenberg and the Community College

Ron and I first met as members of an advisory team for the economics department at the State University of New York at Binghamton. I suppose it was not so strange that we should find ourselves in this role since we were both graduates of Binghamton, he as an undergraduate and me as a graduate student. Right from the start Ron treated me as an equal. Working at a community college, I had not always found this to be true when mixing with university types. Ron was genuinely interested in my ideas and encouraged my research into the community college, which he assured me was the most under-researched segment of higher education.

Community college faculty are not known for their research interests. After all, it is not part of our mission. But the offer to become associated with CHERI made me feel like a legitimate member of the research community. In 2002, when Ron asked me to write a paper for a Cornell conference on “The Complex Community College,” I was thrilled. I produced a 50- page paper on community college finance, which served as a jumping off point for much of my writing that followed. I remember that the overhead projector at ILR broke down during my presentation. Luckily Ron had reproduced and distributed a print version of all of the papers for the attendees. To this date CHERI continues to post my Working Papers, which provides me a vehicle for testing my ideas.

Not only has Ron encouraged my research but he has served as my mentor over the years as I struggled to apply basic economic principles to what I saw happening at the community college level. Ron was never too busy to critique what I was working on and to provide lengthy suggestions and references for me to chew on. At one point I complained to him that I had few people to bounce my ideas off of. His response was that I could always rely on him for that.

Thanks Ron, for your help and guidance over the years. You are a teacher/scholar extraordinaire.

- Richard M. Romano, Professor Emeritus and Director of the Institute for Community College Research, SUNY Broome Community College

The Balm of Reminiscence—CHERI Style

The thrust of this anecdote is to provide a window on the economies of scope involved in the joint production of research and teaching in higher education under Ron Ehrenberg's leadership of CHERI circa 2004-2007. By way of common ground, Ron made it possible for me to extend an empiric understanding of faculty performance in academic medicine to a structured analysis of the flaws that endanger the nation's commitment to health research.

The danger arises from the progressive downturn—four decades in the making—in the fraction of academic physicians that devote some or all of their professional effort to uncover new knowledge about health and disease. Countless ideas have been advanced to explain the progressive decline in the research commitments among clinically trained faculty. But, the structural impediments involved in the persistent erosion of this essential workforce are unexamined and unexplained. The gravity of this predicament drives the need to inform interventions—in policy and structure—for refitting the academic workforce needed to bridge the gap between what is known about disease and what is done to treat and prevent them. Closing this gap is a dire national priority occasioned by the growing prevalence of non-communicable diseases and conditions that provoke morbidity and mortality in 7 out of 10 individuals, and are the source of catastrophic health expenditures.

The model, developed in collaboration with Ron, provided a novel tool to learn as much as possible about the variables affecting research outcomes of academic physicians early in their careers. Application of the model provided important new insights for: i) enhancing the attractiveness of investigative careers among prospective physician-scientists, and ii) informing health stakeholders—with evidence and analysis—of gaps in the nation's portfolio for health research.

Published accounts of our work on the medical workforce for research paved the way to offering a new course focused on the labor economics of the health care professionals (physicians, dentists, nurses, pharmacists, physical therapists, etc.). The course attracts health

professionals, from across the US, because of the need to understand emerging policy and labor management issues that are reshaping the delivery of health care in the United States.

A snapshot of hot-button topics include: new workforce legislation, the incremental use of technology and electronic records, health care labor markets, new productivity expectations for volume and value, employment disparities in gender, race, compensation, and promotion, and the use of collective bargaining by health professionals. Students are prompted to think like policy makers and frame real-world solutions to accommodate the growing need for care and services imposed by the surge in "baby boomer" retirements, those newly insured via the Affordable Care Act, and brisk population growth.

My days in Ron's program provided a welcome transition to the world of independent investigation from that of research administration. The opportunities to take part in CHERI's conferences exposed me to "whose who" in higher education research. Likewise, the seminar program in labor economics prompted hard thinking about investigative approaches for assessing input and output relationships among clinically trained researchers. Most important, Ron's commitment to interdisciplinary research and his willingness to indulge me about the consequences of institutional variables provided the perfect environment to bridge the gap between my past academic experience and the opportunity to develop timely, high-quality, and systematic assessments of physician-directed research that had been overlooked for decades.

Lastly, highest of high-fives to Ron for being an outstanding mentor, and an unstinting supporter of a new line of research with important implications for physician workforce policy and the opportunity to educate health practitioners about labor costs that amount to about 70% of the nation's total health care expenditures—now approaching 20 % of GDP!

- Claude Desjardins, Department of Health Policy and Management, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD 21205

Inspiring a Career

I first met Ron when I was an undergraduate at the University of Massachusetts at Amherst in the Fall of 1989, my junior year. I was taking a class in Labor Economics at Amherst College and reading the 3rd edition of Ehrenberg and Smith. Deb Barbezat was teaching the course and she told me I should attend a seminar Ron was giving at Amherst called “Do Tournaments Have Incentive Effects”. This was about the paper with the same name that Ron published with Mike Bognanno in the *JPE* in December 1990.

I was *mesmerized* by the seminar and incredibly enthusiastic. I probably asked more questions during that talk than in any other talk I have ever attended. After the seminar, Ron cornered me and asked me if I wanted to get a Ph.D. in economics? I did and said “yes”. He handed me a business card (with a BITNET address!) and told me to call him if I was interested in Cornell. The next summer I called Ron and he invited me to Ithaca for a day and I had a great visit, including a lunch with John Abowd, George Boyer, and George Jakubson. I *really* liked that visit and have loved ILR and Cornell since.

Ron wrote me a nice hand-written letter and arranged for me to have a fellowship to attend Cornell for my Ph.D. When I called him in March of 1991 to tell him that I had decided to decline his generous offer to attend Princeton instead, he could not have been more gracious: “You are making the right decision. I hope we can attract you back here some day”. (I note that I also called someone at the University of Chicago that same day to tell them I was also turning down their fellowship in order to go to Princeton, the person on the other end of the phone said: “Good. I hope you’re happy there!” and then slammed the phone down). It did take me 14 years to eventually join Ron (four at Princeton and ten at Illinois but I finally did it in 2005).

I try to be a bit like Ron and whenever someone gives me news that they have decided to take another offer and not our’s (at Illinois or Cornell), I always try to be a bit like Ron and encourage them to continue to keep us in mind.

When I first joined the faculty at Cornell in 2005, Ron took me for a walk around campus and told me lots of stories about Cornell, including a great one about Ezra Cornell, Mary Ann Wood (Ezra’s wife) and Andrew Dickson White. Ron can be very funny.

One of my favorite professional honors was to work on a paper with Ron, Ron Seeber and our student Ken Whalen and on retirement decisions. It was great working with Ron and I’d love to write another paper with him at some point but I suppose it may have to be after I am done being dean. Ken died, unexpectedly, just as we were finishing the paper. Ron served as a mentor to me during that difficult time too.

I am also grateful to Ron (I guess) for giving me opportunities for service to Cornell. When I first arrived here he asked me about things that worried me about my move to Ithaca. I indicated that I was quite involved with the governance of the Labor Institute and Department of Economics at Illinois and worried I might be not so connected here. Ron almost immediately got me on to the Cornell University Financial Policy Committee, a role from which I learned a ton. I then co-chaired it with Ron and then chaired it alone (he is a genius).

Whenever I find myself at a professional fork in the road, I go straight to Ron. He has remarkably good judgement and, in my mind, cares about exactly the right things. He always has the best interests of the institution in mind. He is also incredibly wise. I have served on several university-level committees with Ron. There have been several meetings where a dozen or so faculty, staff and administrators are working on some issue for 60-90 minutes and Ron comes out with *precisely* the clearest and most important point of the day.

Beyond all the professional honors, citations, awards, whatever, Ron stands out to me as a kind and caring human being. He really cares about other people. He is exceptionally devoted to and proud of his sons, his grandchildren and, of course, Randy. I try to emulate Ron in a lot of what he does but his unending devotion to and love for Randy is wonderful and something I try to emulate in my own family.

On that walk around campus in 2005 Ron told me “Cornell has done a lot more for me than I have done for Cornell”. I feel the same way.

And I still have the business card and Ron’s hand-written letter from 1990.

- Kevin Hallock, Dean of the ILR School at Cornell University

Ronald Ehrenberg: An Unusual Student's Recollections

Since my student days, I knew Professor Ronald G. Ehrenberg as a distinguished labor economist holding a chaired professorship at a time when such distinctions were rare. During commencement, I got a glimpse of the family's epic struggle when President Frank Rhodes mentioned how his son Eric had contracted a malignant brain tumor but came back after a series of serious medical treatments to graduate magna cum laude from Cornell. In 2001, I introduced myself to Ron when Cornell Higher Education Research Institute (CHERI) piqued my curiosity.

I had a cursory knowledge of higher education. I knew that Asia's first modern university, the University of Calcutta, was transformed from a degree granting institution into a research university by a legendary vice chancellor who had hired Asia's first Nobel Prize winning scientist and supported a graduate student who achieved fame for Bose-Einstein statistics. I was aware that Indian universities and research institutes were in trouble. I would mentally compare good and bad institutions whenever I would see them. I wanted to learn more about improving Indian institutions of higher education and share my findings through writing.

I would interact with Ron while teaching summer school at Cornell and working on a book with another Cornell professor. He became my gentle and kindly mentor—he introduced me to articles and books on the topic, answered my queries, and provided me with critical support when it was greatly needed. He created a visiting fellowship for me at CHERI during 2004 to 2006 and since 2015. My first stint led to a CHERI working paper. It was developed into two articles, Academic Research (with S. P. Moulik) and Doctoral Education, which were published in *The Oxford Companion to Economics in India*. Ron's comments improved those articles. And, when I found that my work was being plagiarized, it was Ron's advice that led me to justice.

As I came to know Ron better over time, my respect and amazement grew—how can someone do so much in spite of challenges that would wreck lesser mortals? A Wikipedia entry that I created in his honor notes his tremendous productivity (it may be noted here that he was modest and thankful for the entry, but never boastful—it's always hard to get him to state his successes). Yet it was achieved in the backdrop of family tragedy and personal health problems. When I recently complained about my lack of progress in writing a book on challenges and issues facing Indian higher education, he gave me timeless advice: "I am sure I have told you that during my career I went through spells of time when I just sat at my desk and was unable to do anything and then there were times when I had tremendous spurts of productivity. It took me many years, possible until I was in my mid 50s to learn not to be totally depressed during the former periods and to wait calmly for the latter periods."

Ron gave much to the profession, to the institutions, to colleagues, and to the students. I shall continue to learn from Professor Ehrenberg.

- Arkadev Chatterjea

A True Role Model

I first met Ron while I was an undergraduate economics major at the University of Massachusetts. During the spring semester of my junior year, Ron taught an introductory course in econometrics. As luck would have it, back in 1975, this course was required of all economics majors, and in many ways, this course and Ron Ehrenberg introduced me to my future. Of course, I had no way of knowing that at the time.

During that spring, Ron covered research topics and empirical methods that opened up a whole new world for me. He would always introduce new methods by framing research questions that motivated the approach. In truth, I can now only recall a few of those topics, but I fondly remember the discussions we had relating to the power and shortcomings of econometrics. I learned not just to investigate questions like how much, how many, and how often, but also that there existed objective methods of statistical inference that could help address much more complicated and interesting questions.

Now I'd like to say that our interaction in this course was the sole reason for my following Ron to the ILR School. As with most important outcomes, however, there are multiple overlapping events. Again, as luck would have it, during the summer of 1975, I served as a work-study research assistant in the Economics Department. One afternoon, I was working at an IBM typewriter (there no monitors), remotely submitting commands to the Time Series Processor software that was resident on the mainframe computer. Apparently Ron did not know this was possible, and he was fairly astounded that no bulky punch cards were required. From your cozy office, you would simply type out all the regression commands you might want and later retrieve your prize from the line printer across campus. I distinctly remember Ron's reaction to this new technology. It was like introducing him to the drive-thru lane of a fast-food restaurant!

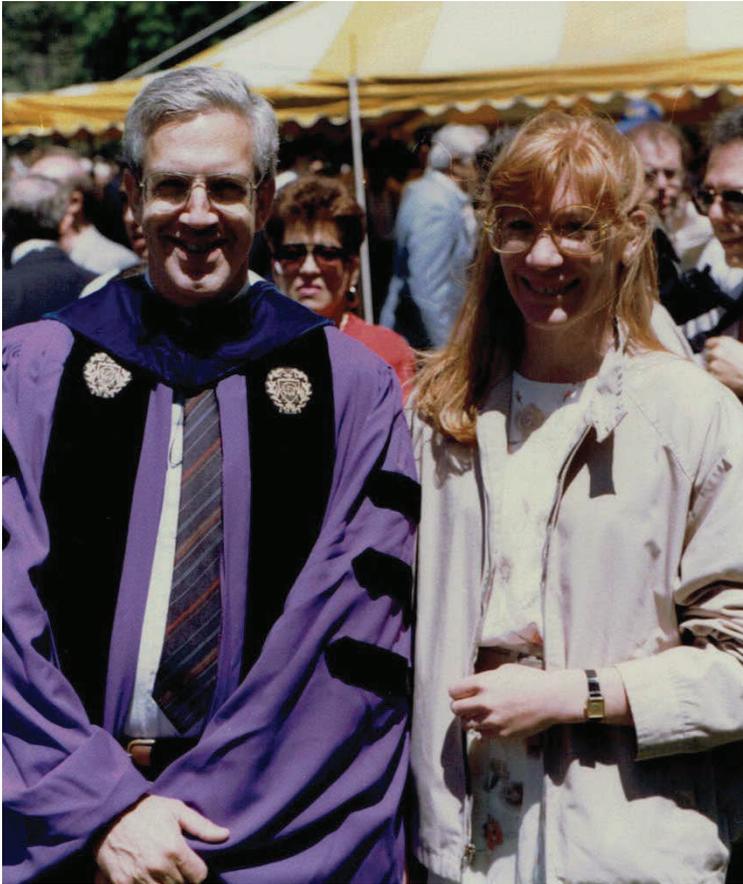
Now I will NEVER doubt that Ron's career advice for me or any student was ever anything but completely altruistic. However, it was at that moment that Ron asked me if I had any interest in Labor Economics. He was headed to the ILR School at Cornell and said he could use a guy like

me. Since Ron was leaving my senior year, he recommended that I enroll in Ron Oaxaca's labor economics course offered that fall. I did, I loved it, and the rest is history. A personal history and journey for which I am very thankful.

It is truly remarkable just how many of us can trace an important pathway in our lives to some individual, who shared their passion for a project, a cause, or a field of study. For me, Ron Ehrenberg is that person. He introduced me to a world of inquiry that relates mostly to questions of higher education and labor market outcomes. That introduction, which always affirmed the importance of probing and questioning, has served me well during my career, and especially now as President of SUNY Morrisville.

Ron has certainly offered his skills and insights as a researcher to address important topics during his remarkable career. The breadth and depth of his scholarship has received well-deserved praise and awards from peers across the globe. And I consider myself lucky to have been a close witness to his energy and intellect at work. But there are thousands of students who have benefitted from his passion for instruction, sharing his knowledge and insights so that they can learn more about themselves and the world around them. And that small army of students, who do so much good in so many different ways, also serve as testament to a career and a life well-lived. On behalf of us all, Ron, we thank you.

- David Rogers, 1982



Dear Ron,
I'm sure I've had opportunities to thank you for specific kindness, advice, or guidance I've received from you over the years. But I wanted to take this opportunity to mention one thing that is a bit more nebulous, but has been of great help to me and upon which I have drawn while guiding graduate and undergraduate students of my own. In short, you let me be me. I never felt in the whole process of writing my dissertation that it was anything other than my own accomplishment. You provided invaluable guidance, offered suggestions, provided encouragement, and otherwise kept me on the straight and narrow.

You probably don't remember, but at the time when my first dissertation idea completely fell apart, your reaction helped to put things into perspective for me and to remind me that these things happen and that I have to pick myself up and get back to work. This faith that you showed in my ability to carry on and succeed helped me to do so. And it taught me that perseverance is truly the single most important ingredient for a successful publishing career.

I also often draw on another sage observation you made to me once which has guided my choice of research topics. You said that there are two types of labor economists, those who have a great data set (or tool) and search for questions to which it can be applied, and those who have a great research question and search for the appropriate data set and tools to get the best answers. I have strived to be the second type of economist and at least am able to identify when I slip into the first kind.

Anyway, I consider myself lucky that you agreed to be my advisor one day in June 1985 (before I even matriculated). I explained that having you as my advisor would save me 50% tuition costs – you agreed, as long as you could change your mind if it didn't work out. I'm glad it didn't come to that!

Best wishes and warmest regards,

Julie Hotchkiss, 1989

Some of my strongest impressions of Ron from my days at Cornell revolved around his level of efficiency and organization and the personal concern he had for his students. I would come to his office to get my research assistant assignments for the week and I'd get a page or two of fully specified instructions that we'd go over together. The entire meeting would last ten minutes. Despite the brevity, he'd always ask about how I was doing. He cared about how I was doing personally. On one occasion, he let me delay taking an exam because my girlfriend had just broken up with me and I couldn't concentrate. It was the only time in my life that I ever made that kind of request for personal reasons. To make matters worse, it was a sealed take-home exam that I'd already opened. Nevertheless, he was understanding on the phone, wrote a new exam for me and allowed me to take it a week or so later. I have the utmost respect for Ron in how he conducts himself as an academic and as a person.

- Mike Bognanno, 1990

Dear Ron,

It will be a great pleasure and honor to attend the conference celebrating your illustrious career and your many professional achievements over the course of it. Some 30 years ago in 1986, I took your Graduate Labor Economics class and by the end of it you had inspired me to pick Labor Economics as my major field, occupational segregation as the topic of my dissertation and yourself as my Ph.D. advisor! Luckily for me, you agreed to this plan! As my advisor and guide, you were ever-helpful, supportive and encouraging and I remember returning from every discussion a whole lot wiser, imbued with confidence and many references richer! When I was looking for my first job out of graduate school, you wrote a very generous and positive letter for me, which opened many a door at the start of my career. From start to finish, you were very supportive!

At that time, I also read a number of your classic papers, which dealt with topics as diverse as internal labor markets, public sector labor markets, unemployment and job search, compensating wage differentials, economics of retirement, personnel economics and even the economics of religion. I was struck by the breadth and scope of your work but more so by the depth of each of these papers, that for the first time, suggested a tractable framework within which these questions could be analyzed by empirical labor economists. What was equally fascinating was your ability to identify new and exciting areas of research. The economics of the university emerged at that time as an area that you more or less started up!

Over the course of the years we kept in touch. I followed with great interest the many milestones of your career and the founding of the CHERI center in 1998 and the many excellent publications generated from it. In 1999 you and Randy visited Aarhus and together with Ian Walker you gave lectures at a Ph.D. course on The Economics of Education and Higher Education and presented at a workshop following the course. This course and conference was the major impetus for the study of education economics at Aarhus, which since then has blossomed with more and more researchers tapping the wealth of the Danish registers to reliably analyze issues within economics of education and higher education.

It was also a lot of fun touring Denmark with you and Randy. The picture shows us making a stop at Jelling, Denmark, the site of some of the earliest runic stones laid by King Gorm the Old and his son Harald Bluetooth!

We have also been privileged to receive news about the family from time to time, and we've shared both your immense joys and your deepest sorrows, as you have always made your former graduate students feel as though we were part of the extended Ehrenberg family. In a piece you wrote entitled "To Retire or Not? Retirement Policy and Practice in Higher Education", you wrote how Cornell faculty were unique, being "motivated mainly by the love of what they do, not the money". You were, without doubt, describing yourself. We know that as long as you

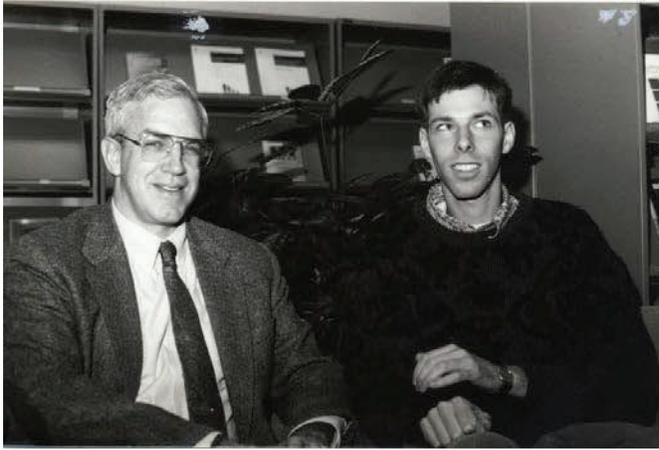
can, you will continue being a vigorous and active member of the college and community that mean so much to you.

With heartiest congratulations on a well-deserved retirement from a shining career in which you made your mark not only as a brilliant scholar but also a dedicated and inspiring teacher, advisor, administrator and colleague. Very best wishes for a wonderful future to you and Randy from my family and myself,

Nabanita Datta Gupta, 1992



Ron and Randy at Jelling, Denmark, together with Mark An, Donna Rothstein, Nabanita Datta Gupta and Nabanita's son Esben, Summer 1999



Ron,

Do you remember these pictures? They were taken during my one-year stint at Queen's University. Rick and I invited you out for a seminar, and the university arranged to have a professional photographer record the moment for posterity. At the time I thought the university's insistence on photos a little odd, but in retrospect it strikes me as very

thoughtful.

Ron, it's hard to imagine the trajectory of my life if you hadn't taken me under your wing. I feel privileged to have been your student, and now I am proud to count you as a friend. Thank you for everything.

-Dan Rees, 1992



Ron:

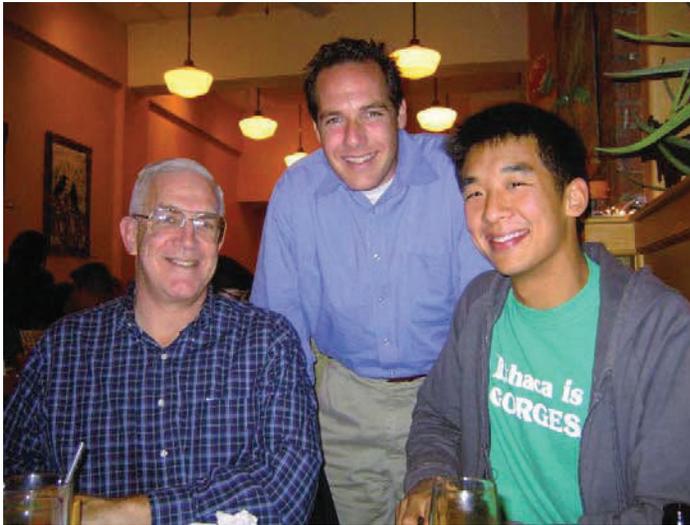
I hated the excruciating cold. I hated the pointless theory. I hated the intellectual doubt and uncertainty. I only made it through because of you. Today, when my own graduate students come to me, I always tell them about you, the model advisor. You were always there for me, through good times and bad, a famous academic who was never too busy for his students, and who kept school in perspective. You were, and continue to be, an inspiration.

- Dominic Brewer, 1994



Ron:

I want to express my deepest gratitude for the role you have played in my life. I'm sure it's not universal, but my impression is that most people who have gone through an econ Ph.D. program, when forced to pick a word to describe their experience, would pick something akin to "brutal." That was not my experience in graduate school in Cornell (other than the winters, which certainly could be described as brutal!), and I attribute that in no small part to the fact that I was lucky enough to work with you as my dissertation chair and as your RA.



I learned more about the nitty gritty of data analysis working with you than in all of my econometrics courses, and when it came time to write a dissertation you were an enthusiastic supporter, despite the fact that I opted for a topic other than what you had suggested. It was also kind in your final read through of my dissertation to gently note that I might want to double check for spelling errors instead of directly pointing out that "public schools" are different from "pubic schools." The e-mail you wrote about

my dissertation is one of my most prized professional commendations, and I've kept it in a scrapbook and pinned to my bulletin board since.

Beyond your impact on my career, you set a wonderful example of what it means to be a mentor. It might be a small N, but my experience with you suggests that role models in education are indeed important. I hope to live up to the example that you have set, and I am so glad that life came full circle enough that Albert, my former RA, had the opportunity to work with you.

Your enthusiasm for studying policy relevant labor issues and willingness to adjust your views (sometimes in major ways) about public policies, after hearing the data speak, are qualities that all analysts should aspire to possess. But more than anything else, you are a role model as a colleague and supervisor. You treated me, as I've observed you treat so many other students, as a colleague who had important ideas to contribute. I think it's this quality that has led so many of us to supply notes, pictures and other Ron-related memorabilia, and to be here in Ithaca to celebrate you. It's the real RGE effect!

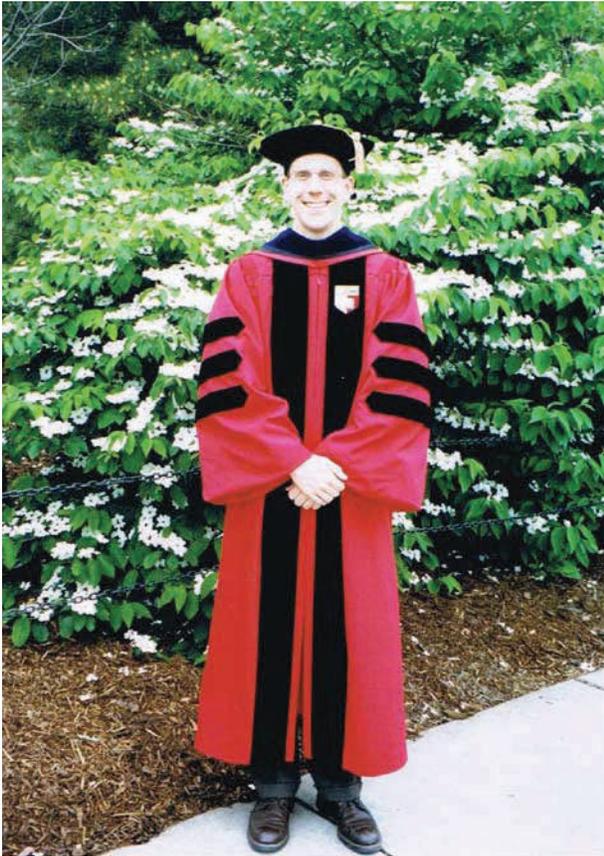
Thanks so much for all that you have done!

- Dan Goldhaber, 1994

Ron,

The support and instruction you provided during the years you were actively my teacher were enough to ensure that you would forever be among my most important intellectual influences. When to them are added the interest you have taken in my life since that time, your presence as a source of sage advice about matters large and small and, most of all, the example you have set by the way you live and work, your influence and impact go far beyond that of “great teacher” or “mentor.” My gratitude to and admiration for you are both boundless, and you are who I want to be when I grow up,

Love, Kerwin Charles, 1996



Ron became my advisor in 1998 when he was transitioning between roles at Cornell. He just completed his term as Vice President for Academic Programs, Planning, and Budgeting and was starting the Cornell Higher Education Research Institute. His time as an administrator had sparked his interest in a range of research questions relating to administrative practice, and he started to examine those questions using both academic rigor and a deep understanding of the institutional details associated with higher education institutions. I was able to observe his craftsmanship up-close, and the lessons I learned during those years have been of great benefit to me.

Several years after Ron became my advisor, I faced choices in my life that required me to balance the personal and the professional. In addition, several tragic events occurred within my family. During those difficult decisions and moments, Ron offered counsel and support that provided both help and comfort and reflected his concern for me as a human being as well as a student. I am appreciative of his contributions and hope to possess a similar orientation when engaging my own advisees.

- John Cheslock, 2001

After starting my PhD in 1991, I quit it in 1996 – I did not think the ivory tower research was for me and I wanted to become a pediatrician after my backpacking trips in Africa. To be able to afford pre-med classes, I got an internship at the World Bank, which had me working on an evaluation of a school autonomy intervention in Nicaragua.

By 1998, I had co-authored a couple of papers from that project, describing the effects of the intervention on student performance, etc. Unbeknownst to me, Randy, Ron's wife, was a NY school superintendent at the time and the state was considering (or implementing?) similar reforms, giving schools more autonomy in hiring and firing decisions, parent teacher associations, etc. So, Ron was interested because, according to him, at the time, there was no causal evidence on the effectiveness of such interventions.

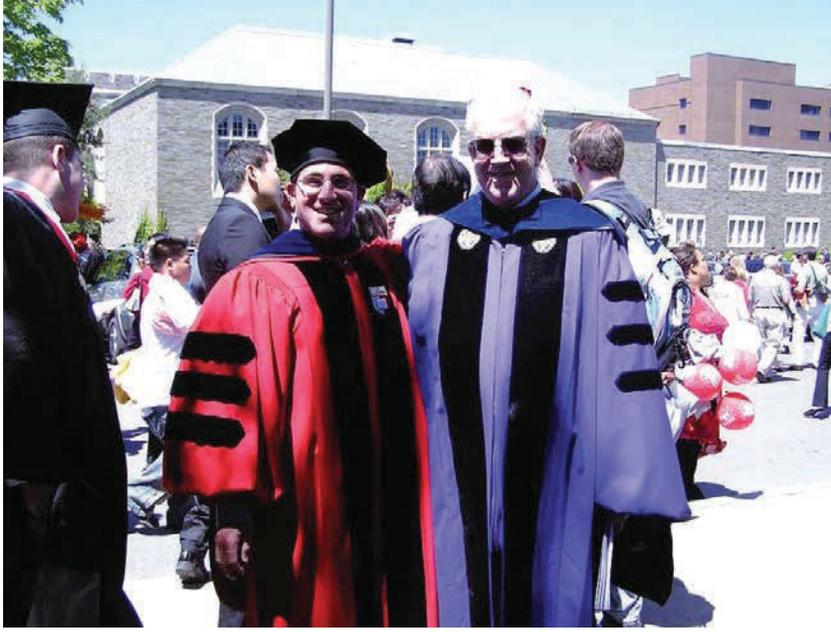
He emailed me and asked me for a meeting. We talked and he practically told me that if I wrote a third solo paper on the topic, my three papers could constitute a dissertation, which would allow me to obtain my PhD. At this point, I was starting to like my job at the Bank and having second thoughts about going to med school after the age of 30. So, the prospect of getting my PhD after all was attractive. I quit my position at the Bank, which allowed me to sit in my office nonetheless, and worked on finishing my dissertation for about 6-9 months. By March 2001 (approximately 10 years after I started my PhD), I drove up to Ithaca one morning, defended my thesis, and drove back the same day. Around the same time, I was offered a permanent staff position at the WB's research department, which I accepted and returned to the same office as a junior researcher with a PhD.

If it was not for Ron, I might never have this rewarding and satisfying career I had in development economics for the past 15 years. I owe him immense gratitude for having seen the potential in my work.

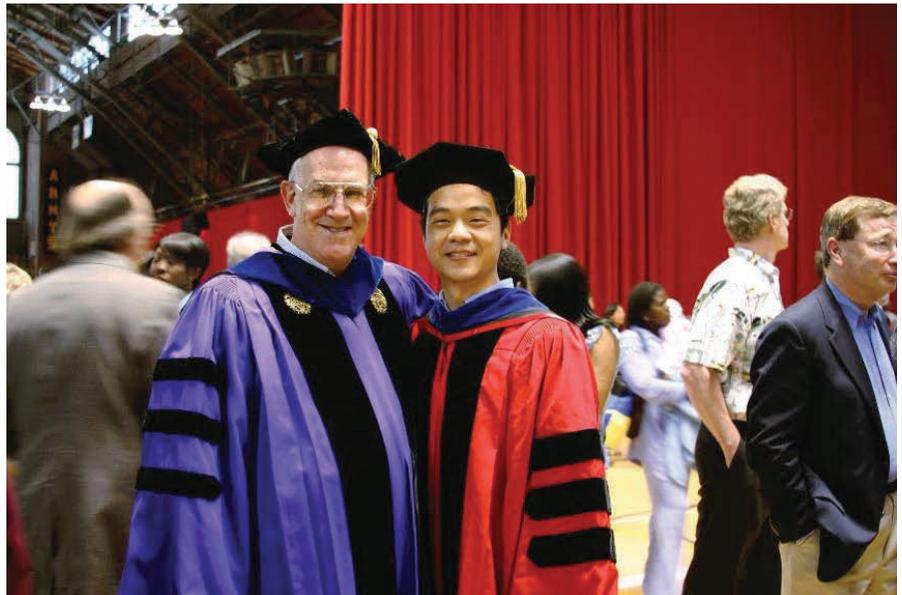
- Berk Ozler, 2001

I still remember the day when I went to talk to Ron to see if he might be willing to serve on my dissertation committee. I was somewhat apprehensive as I had never taken Ron's classes. Few minutes into the meeting, he made me feel completely at ease and I realized that my fear was unfounded! He generously agreed to be on my committee!! From that day forward, I have benefited so much from Ron's invaluable advice, guidance and support all through the years (not just during my Cornell days)! I have always been amazed by Ron's unbound enthusiasm for understanding of important educational issues, particularly in higher education, his commitment to advancement and dissemination of knowledge, and his encouragement of new ideas and young researchers. Thank you so much for everything, Ron!!

- Raji Chakrabarti, 2004



- Mike Rizzo, 2004



- Liang Zhang, 2005

The first time I ever spoke with Ron Ehrenberg was in January 2001 after a Labor Economics seminar in Ives Hall. We didn't discuss the seminar, though. We talked about the basketball game which we had both attended the previous weekend. Cornell had hit only 40% of its free throws(!) and an even worse percentage from the field. Fortunately the Columbia Lions had done even worse than that, hitting less than 30% of their shots, and the Big Red won 41-35. My assessment was that it was the worst college basketball game I'd ever seen. Ron had more years of basketball-watching under his belt, but may have agreed.

Four-and-a-half years later, when my family arrived for graduation weekend to see me receive my Ph.D., Ron told my parents that he'd never seen a graduate student improve the way I had at Cornell. The labor economists among us know that such improvement may represent an improvement occurring from a noticeably low-productivity place rather than to a noticeably high-productivity place, but either way the comment indicates the exceptional level of support Ron gave me, and has spent his entire career giving to all of his graduate students. Ron was patient with me in my early days with him, when I was a third-year who came to grad school directly from an outdated undergraduate program and had never done anything close to serious empirical research. He remained supportive in the initial stages of my conversion to the dissertation process, when I did little-to-nothing for a substantial amount of time, probably because I was thinking and talking about things like basketball games rather than economics papers. And during an overlong time period when I literally *couldn't* do anything substantial related to my dissertation—the restricted-use SUNY enrollment data that I had spent six months in Albany downloading from old cassette tapes hadn't yet been shipped to me in digital format—Ron maintained more enthusiasm for my impending research projects than I did.

When I finally started putting together preliminary summary statistics and estimations from my original research, Ron articulated the importance of what I was finding. His interest in my work hasn't subsided since, even though it's been over 11 years since I left Cornell. Before landing my current tenure-track job at Bryn Mawr in 2014—akin to my dream job—I was on the job market seven out of ten years, and Ron was fully supportive for all of them, even when I was leaving my tenured position at the University of Idaho. I owe him my career. And when we meet at his celebratory conference in June, I'm sure he'll be able to tell me why the Big Red basketball team had such a lousy 2017 season.

Andy Nutting, 2005



Double Gratitude for Ron

Ron is the reason that I came to Cornell. When I got accepted to Cornell he sent me an email about how I would be able to work with him right from the start and this was followed up with a phone call. I really felt the love from both the personal letter and phone call and this was the key determining factor to go to Cornell. It turned out to be the best possible decision for me.

Ron was an amazing mentor and set up so many opportunities and connections for me that shaped the direction of my career. I appreciated

so much the weekly meetings with Ron's group and how it let us see the whole research process. Ron also made graduate school a pleasant experience and was always mindful of my family. I was also so grateful of the calls that Ron made on my behalf on the job market and the people that he had already introduced me to at conferences even before that point.

I am doubly grateful to Ron because he also reached out to my brother, Josh, and encouraged him to come to Cornell as well. As a result, Josh and I were able to overlap two years at Cornell and I really appreciate that time we got to spend in the same place helping each other with research and attending conferences together. This picture is our graduation at Cornell where both us got degrees at the same time.

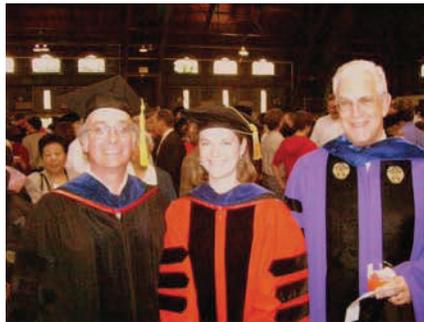
- Joe Price, 2007

As soon as I was accepted to Cornell, Ron contacted me to invite me to the annual CHERI dinner at the art museum, so that I could begin to meet the people of Cornell. To Ron, this type of gesture is natural as he welcomed each new graduate student into his “family.” To me, this was just the first of many amazing things that Ron did for me both while I was a graduate student, and since.

Perhaps the most important thing that Ron does for his students is to support them in their endeavors, rather than push all students to positions at research universities. I made it clear from the start that I wanted to work at a liberal arts institution, and Ron set out to help me make that happen. Ron’s advice has always been priceless.

Ron has always been there for me as a great mentor and resource. If I have a question, I know that I can email him and quickly have a well thought-out answer. And Ron’s caring has always extended well beyond his students’ academic work, to their personal lives. Ron educates the whole person, not just the economist. I am grateful for my time at Cornell with Ron, and that I was lucky enough to work with him.

- Amanda Griffith, 2009



My relationship with Ron was one of the best parts of my time at Cornell. Simply put, Ron was a constant breath of fresh air. Every conversation I had with Ron included his encouraging, warm reminders that I was lucky to be able to carve years out of my life to study and learn, that I should be having fun, and that my life was about more than my work. Ron's office was an oasis. I treasure those memories, as I treasure him.

- Mike Strain, 2012

Chapter 2: Introduction to Included Essays - Ronald G. Ehrenberg

Reflective Essays

During my career I have written 5 reflective essays. Writing each of them has been a labor of love because each helped me to understand who I really am, what the things are that I value, why I have done what I have done, and what I hoped to do in the future. I feel that writing these essay has been such a valuable experience to me that I regularly encourage my faculty colleagues and graduate students to think about writing similar pieces during their careers.

The conference organizers and I decided that it would be useful to include my essays here because there are messages in them that may prove useful to conference participants as they go forward in their careers and their lives. In what follows I briefly indicate how I came to write each and the major messages that are in it.

1. “My Life and Economics”, *American Economist* (1999)

The *American Economist* is a refereed journal that is a publication of Omicron Delta Epsilon, the international undergraduate student honor society in economics. It encourages submissions from students, young scholars, and those who are teaching the next generation of economists. It also publishes papers from prominent economists whose influence has shaped the discipline.

One of the ways it accomplishes the latter is to invite prominent economists to write a paper on the topic “My Life and Economics”. Much to my surprise in 1997 when I was 51 years old I was invited to contribute to the series. This invitation came as a surprise to me because I felt age 51 was pretty early to be summing up a career and, perhaps being modest, I did not think of myself in the class of earlier economists, many of whom were Nobel Prize winners, who had written on the topic for the journal. However, because the invitation came at a time that I was a Cornell Vice President and pondering whether to go back to my faculty position or to pursue a career as a senior academic administrator, I decided it would be very useful for me to write such a paper.

The paper provides a summary of my research contributions as of the late 90s, most of which predated my shift to becoming a higher education economist. However, much more important is that a number of messages about life come through in the paper. They include that we are all products of our environment and experiences, that family, friends and students mean much more in the long-run than all of the publications on one’s vita, that committing yourself to a single institution can be overwhelmingly satisfying, and that famous economists are not spared from adversity and must learn to cope with life’s problems just as everyone else does.

2. “Last Lecture” (originally written in February 2004 with an addendum added in June 2009 –available on my web page, but a summary appears in Meg Newhouse, *Living a Life That Matters* (2015) , which can be purchased at Amazon.com)¹

My “Last Lecture” may be the best thing I have ever written. It was written for Mortarboard, a national undergraduate honor society at many campuses around the nation. Each year, the Cornell chapter sponsors a lecture series in which one or two professors are asked the following: “If you were retiring tomorrow and had a half an hour to give a last lecture to your students what would you say?”

As the lecture will indicate to you, I took the charge quite seriously. Our son Eric was then 30 years old and 12 years past the end of his treatments for a malignant brain tumor that had left him with a number of disabilities. Because we had passed the ten year mark, it was an optimistic time for our family. The essay is largely about why I felt then, and feel even more now, how lucky I am to have spent almost my whole career at Cornell, and most important the lessons about life that Randy and I learned from Eric’s battle with his illness.

In August 2004 Eric’s brain tumor began to grow again and once again it was very trying time for our family. I gave the lecture to my class on the “Economics of the University” to read that fall to explain to them why during the semester they would see me primarily on the screen in the classroom in which our conference is being held; I was going down to Washington DC to be with my son and his wife, while he was being treated and would be teaching them from the Cornell-in-Washington Center making use of the distance learning capabilities of the classroom. Eric’s hospital stay lasted almost two months and when I returned to Cornell a number of students told me that my lecture was the most important thing that they had read during their years at Cornell. So I now share it with all of my students at the end of each semester, as I am doing now with you, in the hope that the messages in it will be of use to readers during their lifetimes.

Eric’s second bout with his brain tumor left him with additional disabilities. However, he remained optimistic about life until May 2008 when complications resulting from his original treatment struck. After a three month battle, he died in August 2008. At the time of his death, he had a three year old daughter named Talia who he loved very much and who brought him great joy and his wife Pam was pregnant. Eric’s son, Nathan Eric, was born in November three months after he died.

The essay has been left exactly as it was written in February 2004. However, some additional remarks that were delivered at a June 2009 Cornell alumni reunion event when I delivered the lecture a second time have been added. The remarks deal largely with how Randy and I were trying to move forward in life after the loss of our son. They also include a discussion of a message I received from a female student after she read my lecture. Her message reinforced my belief that it is important for me to share my “Last

¹ Meg is the mother of David Newhouse, Cornell PhD economist who is now a senior economist at the World Bank and who is one of the best teaching assistants I have known at Cornell.

Lecture” widely. That she became the first winner of the Eric L. Ehrenberg Memorial Prize that with the help of friends my family endowed at ILR-Cornell. I am happy to report that seven years later she is doing much better health wise than the fear she expressed in her message to me.

3. “Involving Undergraduate Students in Research to Encourage Them to Undertake Ph.D. Study in Economics”, *American Economic Association Papers and Proceeding (2005)*

I was asked to write a paper about teaching undergraduates economics for the annual American Economic Association meetings. While I had produced many PhD students at Cornell during my first 30 years here very few of my undergraduate students went on to receive PhDs. So when I returned to the faculty after being a Cornell Vice President around the turn of the century, I decided that I wanted to involve our undergraduate students in research to encourage them to undertake PhD study. The Andrew W. Mellon Foundation had provided me with some support for the Cornell Higher Education Research Institute and I used some of their funds to hire undergraduate research assistants.

This paper discusses how I did this and I am happy to report that 8 of my former undergraduate research assistants have now received PhDs, or are currently enrolled in PhD programs, in economics, the economics of education, and public policy. Once I started working with undergraduate RAs I decided that I should also more generally involve our undergraduate students in research and the paper also talks about how in all of my undergraduate classes I have my students working on empirical research papers.

Involving undergraduate students in research is very time-consuming and I doubt that as a young faculty member I would have had time to do this. But the benefits to me personally have been enormous. I have gotten to know many undergraduate students much better than I would have if they had not repeatedly come to my office to talk about the progress they were making on their papers. Many of the relationships that I have developed with these students are very long-lasting in nature, regardless of whether they go on for a Ph.D. and I follow their careers and personal lives with great interest and pride. I am delighted that several of these former undergraduate students plan to attend the conference.

4. “Being a Quadruple Threat Keeps it Interesting” in G. Bataille and B. Brown eds. *Faculty Career Paths: Multiple Routes to Academic Success and Satisfaction (2006)*

This brief essay appeared in a book about faculty careers at different stages of the life cycle. Written as I was turning age 60, it stressed that being a quadruple threat was the secret of my career success. Throughout my career I have cared about, and hopefully done well, in all aspects of academic life- undergraduate teaching, graduate teaching and advising, university and professional service, and administration. The key to my success

has been how each of these aspects fed upon the others enabling me to remain fresh and excited about what I was doing.

Although it is not discussed in the essay, each year at Cornell faculty members fill out annual reports that they submit to the dean documenting all of their accomplishments in the area of teaching, research and service. While many faculty members intensely dislike having to do this, I have always enjoyed doing so because these reports help me to understand how my professional life has been evolving over time. Now age 70, I have long said that if a report in one year doesn't seem very different from the previous year's, or if it seems "thinner", then I will know that it is getting close to the time to pack things in.

5. "Coauthors and Collaborations", *American Economist* (2017)

Michael Szenberg, editor-in-chief of the *American Economist* from 1972 to 2011 invited me to contribute a paper on this topic to a volume, he was putting together. Earlier papers he had commissioned on the topic had been published in his journal by Nobel Prize winning economists and were going to be reprinted in the volume. How could I turn down the opportunity to have my name associated with those of Nobel Prize winners? So I quickly agreed. While the volume has been delayed, Michael gave me permission to submit my piece to the *American Economist* for publication and his successor as editor-in-chief quickly reviewed it and agreed to publish it.

This essay showed that my coauthors and collaboration have arisen for many reasons. To enumerate just a few, these include conversations with faculty colleagues and colleagues elsewhere about research by others or policy issues, sharing of data both as a donor and a recipient, invitations to participate in larger projects, the division of labor and working with people who have complementary skills and personalities, educating graduate students and undergraduate students and the desire to give the former a leg up in the job market and to encourage the latter to consider PhD study, discussions with my wife Randy about issues she faced as a teacher and administrator in public education, and efforts to magnify my impact on an area of study by convening conferences, commissioning papers, and then seeing them through to publication.

Writing this piece was a special pleasure because it provided me with the opportunity to think back on all of the coauthors I have worked with who have had such important impacts on my career and life. Many of these coauthors have become lifelong friends and I am delighted that so many of them are planning to be at the conference. So add to the reasons that I enumerate in the article for being a coauthor, what is probably the most important one: the friends you make.

Chapter 3: My Life and Economics

Ronald G. Ehrenberg

My life and economics

Ronald G Ehrenberg

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MY LIFE AND ECONOMICS

by Ronald G. Ehrenberg*

I. Introduction

Age 51 is a bit early to be writing a retrospective about one's career as an economist and one's life. This is especially true for me since I am not on track to win a Nobel Prize, to be admitted to the National Academy of Science, or even to be elected a Fellow of the Econometric Society. Nonetheless, as I write this essay during the fall of 1997, I look back on the 28 years I have spent as a PhD economist and see a record of accomplishment of which I am proud and a number of messages worth conveying to budding economists. Moreover, because I became the Vice-President for Academic Programs, Planning and Budgeting at Cornell in the spring of 1995 and am unsure when, or if, I will return to the faculty, taking the time to sum up my career to date may well help me to decide the directions in which I want it to go in the future.

I hope that a number of messages come through to you in this essay. They are that we all are products of our environment and experiences, that family, friends, and students mean much more in the long-run than all of the publications on one's vita, that committing oneself to a single institution can be overwhelmingly satisfying, and that famous economists are not spared from adversity and must learn to cope with life's problems just as everyone else does. However, I am getting ahead of myself, so let's start at the beginning.

II. My Early Years

I was born in New York City in April of 1946. The defining event of my early life occurred around age four when an uncle and aunt took me upstate to a lake for a weekend vacation. Without going into the details, which I vividly remember to this day, I almost drowned. When I regained consciousness after being saved, someone told me I had almost died.

Out of this experience I developed a fear of death (which I fortunately later outgrew) and, since as a four-year-old I viewed death as the ultimate failure, a fear of failure. I became driven to avoid failure, and since unexpected events could always occur that might frustrate my efforts, everything I did had to be completed as soon as possible. This drive to quickly achieve things, was a major motivating force for the first 40 years of my life. This drive was re-enforced by my being a first child and the only grandchild for five years on my mother's side of the family. The hopes and aspirations of my grandparents, parents, and four uncles and aunts all rested with me during those early years.

III. My School and College Years

I grew up in a Jewish family in which my parents were both secondary school teachers. Their choice of occupation, made during the depression years, was motivated by a desire for financial security as well as by the belief in the fundamental importance of education. They were hard-working people whose life revolved around work and family; however, there was little discussion in our house of the social values that Judaism teaches that have shaped the careers of many other economists from Jewish backgrounds.

I benefited from what at the time may have well been the best public school system in the country, the New York City public schools. Public school teachers during the 1950s and early 1960s were drawn predominantly from the upper tail of the female talent distribution. They loved learning and they conveyed this love to their students. Education was also seen as a vehicle for upward mobility. Bright students were not held back in the name of "equity." I remember one teacher giving me a present of a book written in French after I achieved a ninth grade reading level while in fourth grade—she clearly felt I needed an additional challenge. Sadly, I never achieved any facility in foreign lan-

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guage and this lack of language talent would, in large part, as we shall see, explain where I went to graduate school.

Junior high school went rather quickly for me because at that time the way the New York City schools coped with bright students was to group them together and compress three years of work into two. Given my need to achieve things quickly, this suited me perfectly.

I attended high school at Stuyvesant High School, one of the preeminent public high schools in the nation. Specializing in math and science, it drew students from all over New York City and these students were admitted based on scores on a competitive examination that was very much akin to an SAT examination. My high school years were probably the most intellectually challenging and competitive ones of my life, and I ultimately graduated in the top fifth of the class with a love of mathematics. Calculus thrilled me because it had so many applications to real world problems and I wanted to major in mathematics in college.

Which college would I attend? Finishing in the top fifth of a class in which 99% of the students went on to college was an achievement to be proud of, but it was not an outstanding enough accomplishment for Harvard or Yale. While I was admitted to Cornell's College of Arts and Sciences for the class of 1966, this was prior to the compact between the federal government and the selective private institutions that led these institutions to adopt needs-blind admission and need-based financial aid policies. Public school teachers' salaries were still relatively low in the early 1960s and, with two sisters at home, my parents could not afford to send me to Cornell. So, off to Harpur College (which later became SUNY-Binghamton) I went.

Harpur College in the early 1960s was a truly elite public liberal arts college. It was the sole liberal arts college in the SUNY system at the time, and with only 400 students in each class, could be highly selective. Its motto was "Let Each Achieve All That He Is Capable of Being" and we surely did that. My rough count from my alumni directory is that over 50 of my classmates received PhDs (I ignore here all of the classmates who went into "lesser" occupations such as medicine, law, or business). My experiences at Harpur, which included meeting the woman who became my wife in 1967, have tied me closely to that institution and made

me a strong supporter of high quality public higher education.

I wish I could say that I was destined to be an economist, but in truth I "fell" into it.¹ I started as a mathematics major in college, but when calculus turned to advanced calculus (now called "real analysis"), math became proving theorems rather than a tool to solve real world problems. Furthermore, I found it quite unsettling to be given five questions on an exam, to be able to answer only one and parts of a few others correctly, but still to be awarded an A in the class.² A change of course was called for and I switched to physics.

Physics made extensive use of calculus and I enjoyed studying it until I came to a concept that I didn't understand in a fourth semester course. I asked the professor to re-explain the concept; he replied that he didn't understand my question, and then he also gave me an A in the class. I was devastated; how could I be doing A work if I didn't understand something? So I quit the study of physics and looked for another major.

If there was an engineering major at Harpur, I might well have become an engineer. However, there wasn't. The only other disciplines that I perceived made extensive use of mathematics were accounting and economics. I looked at the introductory accounting text and then the introductory economics text. The latter was an edition of Paul Samuelson's famous text. The decision was easy; I switched to economics.

My first three courses in economics with Robert Melville, Al Carlip, and John LaTourette (later a college president) made me feel like I was in heaven. The Kennedy/Johnson tax cut of the early 1960s had just taken place and the economy was growing. Economists believed they could "control" the macroeconomy. Microeconomics was logical and easy to understand for anyone, such as myself, who understood calculus, and could be used to figure out the solution to virtually any resource allocation program. I became an economics major.³ Only years later did I learn how imprecise our discipline actually is and how limited is our ability to "control" anything.

The most important influence on me at Harpur was Gene Silberberg, who at the time was a new assistant professor from Purdue, and who is now a professor at the University of Washington and author of a leading mathematical economics text. Plagued with a fear of failing if I went on for a

PhD, my response was to think of becoming a high school mathematics teacher instead. Gene threatened to “kick me in the face” if I did. I was a coward, and off to PhD study I went.

Gene also gave me a valuable piece of advice. He told me that during my career I would meet people like Hugo Sonnenshein and that if I used them as my comparison group I would never be happy. I had no idea at the time who Hugo was. After graduate school, he turned out to be the person who attracted me to the faculty of the University of Massachusetts and was my colleague there for two years. Hugo, of course, was a leading economic theorist and editor of *Econometrica* and now is the president of the University of Chicago. Gene’s advice has served me well, however, because no matter how good one is at what one does, invariably there is always someone better. If you make your comparison group that one person, rather than all the people you are better than, you are dooming yourself to be unhappy.

IV. Graduate School Years

Harpur College was not a household word in the mid 1960s and, given my basic insecurity about my abilities, I was not sure that I could “hack it” at the very best graduate programs in economics. So I crossed the top 5 off of my list and applied to the next 10. Fellowship money was readily available at all top institutions, thanks to the National Defense Education Act Fellowship program, which provided funding for three years, including summers, of PhD study. Many graduate programs in economics still required proficiency in one or two foreign languages to receive a PhD, but some had eliminated all language requirements and instead required proficiency in mathematics. Given my lack of language ability, my decision rule for which graduate school to attend was simple: Choose the highest rated program among the set of programs that provided the most years of fellowship support and had no language requirement. On that basis, which had nothing to do with the economists on the faculty, I enrolled at Northwestern University.

Having made my decision based on absolutely no relevant information, I am happy to report that Northwestern was ex post a wonderful place to study economics. The faculty emphasized rigorous analytical training. Economic models were to be

used to derive testable empirical implications and then the theory tested.

My dissertation addressed whether an increase in the overtime premium would be an effective way to reduce employers’ usage of overtime hours and expand employment. It was, very much, a typical Northwestern dissertation for that time and had the following properties. First, a dynamic model of optimizing behavior was developed and equilibrium obtained using either the calculus of variations or optimal control theory. Next, comparative static or comparative dynamic analyses were conducted to derive testable propositions and careful econometric estimation undertaken using “frontier” econometric methods to test the implications of the theory. Finally, the resulting estimates were used to analyze a policy issue and the implications for public policy drawn. To this day, I try to impress upon my graduate students the need to demonstrate modeling and econometric skills, as well as substantive interest in policy problems, in their dissertations.

I learned several other things during my graduate school years, which influenced both how I treated my students and the lessons that I conveyed to them. First, much of what I absorbed in graduate school in theory and econometrics classes later showed up in various strands of my applied research throughout the years. I repeatedly stress to students that individuals who apply lessons from one area of economics to problems in another area often can make major contributions to the latter.

Second, while searching for a dissertation topic, Dale Mortensen suggested to me that I write to Robert Solow at MIT and ask for a copy of an unpublished paper of Solow’s that Dale thought that I would find interesting. I did; Solow wrote back that he didn’t have any spare copies (this was during the “stone age” and pre-copiers), but he suggested that I might look at another topic that he thought would be interesting to think about. I followed his advice and my dissertation resulted. More importantly, I was touched that such a distinguished economist (later a Nobel Prize winner) would respond to a letter from a mere graduate student at a much lesser institution. As a result, throughout my career I have tried to emulate Bob’s behavior and I promptly respond to letters (and now email messages) from faculty and students from around the world, regardless of the stature of the institutions at which they are located.

Third, after I thought about Solow's topic for a while, which led me to a paper by Sherwin Rosen, perhaps the leading labor theorist of his generation, I developed an idea for a dissertation based on Rosen's paper and took it to one of the faculty members in the Northwestern department. He told me it wouldn't work. I was crushed, but since I had no other ideas, I continued to pursue the topic. My efforts led to an article in the *American Economic Review*, while I was still a graduate student, a dissertation that I completed in four years, and ultimately three other articles and two books. This experience taught me never to tell a student "it won't work" and I encourage students to pursue their interests regardless of my priors about their likely success.

Fourth, Robert Eisner arranged for me to spend the summer after graduate school at the Council of Economic Advisors. My experiences at the Council transformed my career as I learned that economics is much more than an intellectual exercise and that economists really do have a lot to say about public policy. It was my good luck to work there with Michael Moskow (now President of the Chicago Fed) and Marvin Kosters (now a senior fellow at the American Enterprise Institute). They taught me, by example, that "high-priced" senior economists should shelter their "low-priced" junior colleagues from the pressures that the senior people face. Their example has made life a lot more pleasant for all of the graduate research assistants who worked with me during my career.

Finally, my success in graduate school, coupled with a booming academic market meant there were many faculty positions that awaited me after my graduate career. Northwestern was an up and coming department and the faculty saw in me a potential placement at a better department, that would enhance the Northwestern department's reputation. My pleas that I would prefer to go to a less competitive and more teaching-oriented environment were not heard, and they made contacts for me at the very best departments. I wound up having to choose among positions at more than 10 different major research universities.

Graduate students today faced with a weak job market probably would think me very lucky. In fact, contrary to what we teach our students, more alternatives are not always better than fewer, especially if none of them are the type of job one really wanted. I hit an information overload and could not

make a rational choice. Ultimately, I accepted a position at Berkeley but concluded several months later that I needed to take a year off to regroup and decide what I really wanted to do. I spent that year teaching at Loyola University of Chicago and wrote the equivalent of a second dissertation (without any faculty advisors this time), which ultimately led to a second *American Economic Review* paper and another book.

Objectively, the faculty at Northwestern were trying to help me to get a position that, in their view, would be the best place for me to start my career. Their evaluation of what would be "best", however, was based on the assumption that the "track" that they were on was the best one for me. While I have wound up on that "track" myself, I never assume that my career path is best for all my graduate students and I never push them towards jobs that they don't really want. Many of them are now happily situated in the nonacademic sector and at "lesser" institutions. While their career choices have not necessarily maximized my "prestige" in the profession, most are very happy doing what they are doing.

V. My Life At Cornell

I moved from Loyola University to the University of Massachusetts after a year, and four years later, in 1975, moved to Cornell University. I have spent the last 23 years teaching undergraduates and graduates at Cornell, conducting research on labor market and educational issues, and now serving as an academic administrator. I have been fortunate enough to be associated with the National Bureau of Economic Research during much of this time, which means that when I was young I was regularly exposed to the very best senior people in my field and now that I am older, I get to meet all the upcoming young stars. I have interacted regularly with people in Washington but, save for 6 months in the early 1970s, I never was able to spend any extended period of time there in a policy position. I had many opportunities to do so, but these conflicted with my wife's career or my sons' schooling. I have never regretted doing what I perceived was best for my family as a whole.

My career at Cornell has been a wonderful one. I have had the freedom to address a wide range of interesting policy-related problems at the federal,

state and institutional levels and to think and write about fundamental issues that our society confronts. I've been lucky to have a large number of wonderful colleagues and one, Bob Smith, and I wrote the first modern labor economics text book in the early 1980s. It is now in its 6th edition and is still the best-seller in its field. This book, which was designed specifically for our students at Cornell and stresses the usefulness of labor market economics for social policy analysis, has influenced the way that a generation of students think about labor market issues. This influence is the real reward for "nonprinciples" text book writers.

I am now marking my 28th year as a publishing economist. Throughout the years my graduate students have had a hard time believing the early insecurities that I claim I felt, the dry periods that I claim I experienced when nothing seemed to go right, and the fears I claim I often felt during much of my career that I never would generate another research idea. They look at my long publication record and question if I am lying. But I repeatedly tell them these stories anyway to emphasize to them that their "heroes" are mortals and that the fears that they are feeling are not unique. Most of my research has been co-authored with my students and my contacts with these students, and the other students whose dissertations I have supervised, have been among the most rewarding parts of my professional life. Many of these students have been female and I've learned from them (and they from me) that mentors do not have to be of the same gender.

The love and foundation of my life has been my wife, Randy, and our marriage has now passed the 30-year mark. In addition to love and support, I also get research ideas from her descriptions of the issues that she has faced as a teacher, a school principal, and now an assistant superintendent of schools. We have co-authored three papers together and I have also co-authored a paper with our older son. He is still angry at me because I put my name first on that paper and only first authors get the citations in the Social Science Citation Index.

My family's life has not been without its trials. Most recently, our oldest son was diagnosed with a malignant brain tumor in 1990, while he was a junior at Cornell. For over a year, his younger brother, my wife and I helped him cope with multiple surgeries, chemotherapy and radiation therapy, as he battled an illness whose prognosis was high-

ly uncertain. Cornell and my colleagues were wonderful to us all during that period and I became an ardent supporter of the Family and Medical Leave Act and of legislation that prevents insurance companies from denying anyone health insurance coverage. Happily we are now over 6 years post-treatment and the 1996 Memorial Day weekend marked the simultaneous graduation of my older son from Georgetown Law School and his younger brother from Cornell. My older son is currently employed in Washington, DC and my younger son is a second year law student at Michigan.

In 1987, Cornell made me the first Irving M. Ives Professor at the University. Ives was a United States Senator, the founder of Cornell's School of Industrial and Labor Relations, and the co-author of the first state employment discrimination law in the United States, New York's Ives-Quinn Act, which predated the Civil Rights Act by 20 years. Since I have devoted a good deal of my career to analyzing the effects of social legislation, I have always felt an affinity to Ives and I was greatly honored that Cornell chose, to associate my name with his.

As I neared age 50 in 1995, the age at which my close friend Dan Hamermesh's research suggested that any economist's chance of continuing to publish in major economic journals is close to zero, it was natural for me to question the direction that my career would go.⁴ I had been teaching classes in, and doing research on, university behavior and the economics of higher education for over a decade. I had been active on Cornell University faculty/administrative committees dealing with economic issues, feeling that this was a way that I could use my professional expertise to repay Cornell for all that it had done for both me and my family. When I was asked to serve as Vice-President for Academic Programs, Planning and Budgeting at the University, I felt that I really had no choice but to accept. While I miss having the freedom to allocate my time that comes with being a Professor, I am enjoying the opportunity to help guide this great institution through very difficult financial times.

VI. My Contributions to Economics⁵

Some labor economists have developed theoretical models that now bear their names. Others have similarly derived econometric specifications that

carry their names. Still others have developed important econometric methods that subsequently have been named after them. Examples that come quickly to mind here are the “Lazear” model of mandatory retirement, the “Mincer” earnings equation, and Jim Heckman’s “Heckit” procedure to deal with sample selection bias. I, however, have neither a theoretical model, an empirical specification, nor an econometric procedure named after me. Rather, my claim to “fame” is that I have spent a career conducting empirical analyses that have been designed to influence the public policy debate in a wide variety of labor market and educational areas. I also have devoted substantial effort to analyzing whether compensation policies are designed in a way that provides agents with incentives to perform in “desirable” manners and have been especially interested in whether such incentives exist in the public, nonprofit and regulated sectors of our economy.

My earliest strand of research, which continues up to this date, focused on analyzing the impact of social insurance programs and protective labor legislation. As noted above, my dissertation dealt with whether raising the overtime premium from time and a half to double time would be an effective way of stimulating employment growth. This was quickly followed by the first study to analyze, in the context of a formal job search model, the labor market effects of varying unemployment insurance (UI) benefit levels. The study, conducted jointly with Ron Oaxaca, took a model of job search that had been developed by one of my dissertation advisors, Dale Mortensen, to explain the unemployment-inflation tradeoff and used this model to provide an econometric structure to analyze the effects of changing UI benefit levels on unemployed workers’ durations of unemployment and post-unemployment wages. One can view longer spells of unemployment as a social cost of higher benefit levels and higher post-unemployment wages as a social benefit of higher UI benefit levels. Hence, analyses of the magnitude of both relationships is important.

During my career, I have analyzed a variety of other labor market programs and legislation. These include studies of the effects of minimum wages on the educational attainment of children from different family income classes, whether mandated social benefits, such as unemployment insurance or retirement benefits are paid for by workers in the

form of lower wages, how the (now abolished) social security student benefit program influenced college-going and labor market behavior of children of social security recipients, whether comparable worth programs in the public sector would lead to a decline in female employment in the public sector, and whether advance notice requirements when workers are about to be replaced, such as those mandated under the WARN legislation, influence displaced workers’ probabilities of unemployment, duration of unemployment if unemployment occurs, and post-unemployment earnings. In perhaps my major work to date on labor market policies, I wrote a book for the Brookings Institution in 1994 that addressed how free trade agreements, such as NAFTA and the European Economic Community, influence, and are influenced by, social insurance programs and protective labor legislation.

A second strand of my research has focused on public sector, nonprofit and regulated labor markets. Using models of consumer demand, including those that allowed for habit-formation (which I had learned about in graduate economic theory courses), in 1973 I was the first economist to estimate systems of demand equations for employees in the public sector. The estimated wage elasticities that were derived from these equations provided estimates of the “market constraints” that limit the wage demands of unionized public employees and thus provided support for allowing public employees the right to bargain over their wages.

The estimated responsiveness of public employment levels to grants from other levels of government that I obtained from these models provided estimates of what has become known as the “displacement” or “fiscal substitution” effects of federal “public employment” programs—programs that provide funding to state and local governments to expand their employment levels. Twenty years later, I used similar analytic frameworks to estimate how research universities react to changes in the number of graduate students for which the federal government provides financial support and how local school districts react to changes in state aid for education. In each of these cases, my interest was in showing that institutional responses to changes in external funding are often quite different than the funders may have anticipated.

My interest in public sector, regulated and nonprofit labor markets led me to conduct studies of

how institutions in the public sector influence labor market outcomes. In particular, I have analyzed whether having a professional city manager led to lower public sector wages and whether the effects of public sector unions on wages and productivity depended upon the structure of public sector bargaining in the area. I also analyzed whether the substitution of different types of nurses in hospitals in response to changes in their relative wages depended upon whether the hospitals were public, private non-profits or private for-profits and, in a book written at the end of the 1970s, I analyzed how the structure of regulated industries influences the wages of workers in these industries. This latter study grew out of my participation in a regulatory case before the New York State Public Service Commission, and from this case I learned that the standards of "refereeing" in the "real world" when "big" dollars are at stake are often much stricter than those used by academic journals.

Economists tend to believe that "actors" in economic systems respond to incentives. However, I have always wanted to know if incentives actually are structured in ways to encourage actors to perform in ways that "principals" consider desirable and, if they are, whether such incentives have desired effects on behavior. As a result, I have looked local governments and analyzed whether incentives for "performance" could be inferred from the structure of compensation for city managers, police chiefs and fire chiefs. Similarly, I analyzed whether the compensation of local building trade union leaders was related to the compensation gains that they won for their members. This latter study required me (actually a student of mine) to collect considerable data from union records, and throughout my career I have stressed to my students that the best research often arises from people putting considerable effort into generating new data, or combining existing data from a wide variety of sources.

Since both my parents and my wife were involved in elementary and secondary education, it was natural that I should be interested in issues that arise in this sector. I have studied the compensation and mobility of school superintendents to see if there are incentives operating to encourage them to maximize the amount students learn and to serve as responsible fiscal managers. I have also studied how sick leave provisions in teacher contracts influence teachers' absenteeism, students' absen-

teeism and students' test score performance. Both of these studies involved major data collection efforts and included surveys of local school districts in New York State.

Concern for enhancing the public debate about affirmative action policies in teacher hiring recently led me to conduct several studies that analyzed whether the match of teachers and students by race, gender, and ethnicity had any effect on how much students learned or on teachers' attitudes towards their students.⁶ While others have often shied away from addressing such socially sensitive issues, I have appreciated the freedom that tenured faculty at major research universities have to dispassionately address controversial important social issues and continually have exercised this freedom.

As I began to get involved with faculty governance at Cornell, it was also natural for me to think about how my skills as an economist could enhance my participation on faculty committees. When Cornell's financial aid costs began to rise at a rapid rate in the early 1980s, I developed a model of how a selective university should allocate a limited financial aid budget across different categories of accepted applicants, given a specified objective function, and then showed how one could estimate the parameters necessary to actually implement such a model. The model, which was nothing more than a simple discriminating monopsonist model, provided the intellectual underpinnings for what has since become known as "preferential packaging" in the undergraduate financial aid community. Many universities now regularly estimate, for different groups of their accepted applicants, how sensitive the decisions of admitted applicants to enroll are to the levels of financial aid provided and vary the package of grant and loan aid that they offer to individuals with identical levels of financial need. My research on this subject was followed by studies of how colleges students' grades and graduation probabilities are influenced by their employment while in college, whether the high tuitions charged by selective private colleges and law schools are warranted in terms of the post graduate educational and labor market outcomes that they yield for their graduates, and whether African-American students are better off if they attend Historically Black Colleges or Universities (HBCUs) instead of other institutions of higher education.

My evolving interest in higher education led me to analyses of the academic labor market and how

the types of financial support doctoral students receive for graduate school influences their completion probabilities and times to degree. I have also studied whether reductions in tenure probabilities influence the salaries that universities must pay for faculty and analogously, how faculty salary levels affect their turnover probabilities. The latter study grew out of my service on the AAUP committee that annually collects data on faculty salaries from American colleges and universities and was another example of how I have combined service (this time to the profession) and research during my career. More recently, I have analyzed the determinants of doctoral program rankings and have also written about the future of higher education, from the perspective of an economist.

It is worth emphasizing that my research has often been fun to conduct and to lecture about, as well as intellectually stimulating. Two specific examples illustrate this point. First, my interest in compensation policies led me to try to test the theory of tournaments that had been developed by Ed Lazear and Sherwin Rosen, among others, in the early 1980s. To do so, I needed to find an environment in which the prizes for winning were specified a priori, measures of individual output were available and estimates of the relationship between output and input could be inferred. After bemoaning the fact that such data were not available for any "real world" situation, I realized that professional golf tournaments provided a perfect natural experiment. I wrote two papers on the incentive effects of the prize structure in professional golf and when I lectured about these papers in various venues, the audience was always very attentive.

Second, after Gary Becker's household allocation of time models had been used to analyze the determinants of an individual's investments in health, which in turn imply the determinants of an individual's expected length of life, as well as to analyze the determinants of an individual's decision to commit suicide, which in turn imply the determinants of the individual's actual length of life, I joked with a colleague at a party that the next extension would be to analyze a multi-lifetime utility function (which permitted utility after death) to derive implications about the life-cycle pattern of participation in religious activities. As my Catholic colleague and I began to think about this topic, we discovered that there was a considerable serious research by sociologists and psychologists that

addressed religious behavior. We then set out to develop a simple household allocation of time model that could explain all of the observed empirical regularities about religious behavior that other social scientists had found, as well as to provide new testable implications. What began as a joke wound up as two very serious papers in the *Journal of Political Economy* and the start of what twenty years later is now a growing subfield of research on the economics of religion.

While I have always considered the research I have produced to be of great interest, I realized after a while that it is difficult for one's own research to have a major impact on either the profession or public policy. So I began organizing conferences in which I would bring together groups of researchers working on similar topics and then published the proceedings of these conferences as symposia in journals or as books. Among the conferences that I organized and saw through to publication have been ones dealing with whether compensation policies mattered, whether raising the minimum wage would be desirable, contemporary policy issues in education, gender and family issues in the workplace, and the role of race and gender in American education. I believe that the impact of each of these collections has been far greater than anything I could have done individually.

As I look back with considerable pride at my long publication record and at the wide variety of interesting issues on which I have worked, I am almost ashamed to admit that I never had a "research program," or long-term research plan, as many of my colleagues did. Rather, the topics on which I have worked typically arose from discussions with family members or colleagues, and from ideas for research that I got from reading the *New York Times*, *Business Week* and the *Chronicle of Higher Education*. I was also fortunate enough to attain a sufficient level of stature in the profession so that after a while, people often asked me to write review papers on particular topics. A number of such "commissioned papers" often led me to develop the ideas for new independent research and a series of subsequent papers.

VII. Economists Who Have Made a Difference in My Career and Life

A number of economists have played important roles in my career and my life. I have already mentioned some. In this concluding section, at the risk of alienating people who I inadvertently have left out, I want to mention a few more.

While I was a graduate student, one of my dissertation advisors, Frank Brechling, introduced me to Dan Hamermesh who was then a graduate student at Yale working on a similar topic. Over a 30-year period Dan and I became close colleagues and friends, although we have never been at the same institution and have written only one short paper together. For years, until my research productivity declined when I moved into academic administration, we regularly exchanged drafts and commented on each other's work. We have shared each other's happiness and family hardships. Every economist needs to have a professional friend like Dan.

When I was in graduate school, everything I learned about unions came from a book written by Albert Rees titled *The Economics of Trade Unions*. I was introduced to Al, who was then a Professor at Princeton, when he came to Northwestern to give a seminar. Al, who later was Provost at Princeton and then President of the Sloan Foundation, invited me to Princeton where I met Orley Ashenfelter, and some 15 years later, Al also funded a major research project/conference of mine. His son Dan was one of my PhD students and I am delighted that I could repay Al for what he meant to my career by serving as a mentor for Dan.

Orley Ashenfelter is "my" Hugo Sonnenshein (see section III). Once I realized that I could never be as prominent as Orley, rather than feeling bad about myself I relaxed and learned everything that I could from him. Orley showed me that one can model the determinants of labor market institutions, as well as their impacts, in rigorous analytical frameworks. He also hired me as a consultant to work with him in Washington for six months at the U.S. Department of Labor, which solidified my interest in policy-related research and led me to teach courses at Cornell for a decade on evaluation research methods.

I have already mentioned how Bob Eisner obtained a position for me at the Council of Economic Advisors after I completed graduate school. If this was not enough, Bob always praised me

when, after graduate school, he would hear a paper of mine at a professional meeting. I cannot even begin to express how much such praise from an economist, who later became President of the American Economic Association, meant to me. I try to remember to always behave in a similar manner to my former students. I have also unabashedly adopted the externality framework that Bob has used for years when he explains the rationale for wage subsidy programs in my own writings on government interventions in labor markets.⁷ Bob spent virtually his whole career at Northwestern University and, by example, taught me the importance of committing oneself to a single institution.

I once went up to Sherwin Rosen, after listening to a seminar of his, and commented that any one of his papers was deeper than the sum of everything that I had written in my life.

Sherwin replied that I had it all wrong. He said that he and I pursued different types of research, that the research that I pursued was equally as important as what he was doing and that what I did, I did exceedingly well. His words of praise were very important to me and encouraged me to keep on my chosen path, even though the economics profession often seemed to value theory and economic innovations more than empirical research.

A best unnamed noted economist once told me that I would never have a major effect on public policy because I always sought to understand how policies are actually working rather than to pursue a political agenda. As such, he told me that liberals consider me conservative, conservatives consider me liberal and neither group trusts me. When I told this story to Henry Aaron, for many years head of the Brookings Institution Economic Studies Program, Hank replied that the noted economist had it all backwards. He said that the profession understood that I had no "axe to grind" and thus my research was taken very seriously. I appreciated Hank's words very much, as well as his efforts to involve me more closely in Brookings activities.

In the mid 1980s I ruptured a disk in my back and had back surgery, but the pain persisted. For a number of years I was preoccupied with pain and my professional productivity suffered. The fear of failure which had dominated my early life came back and I was convinced that my career was over. Out of the blue came a call from Dan Newlon, the Director of the National Science Foundation Economics Program, inviting me to become a member

of the NSF Panel on Economics. Dan's invitation was the push that I needed to stop feeling sorry for myself and I was able to redirect myself back to my work and my life. When my son's illness, which I have described above, struck my family several years later, I was in a much better emotional position to cope with it.

Walter Oi's accomplishments as an economist are extraordinary, all the more so because he has been blind throughout most of his career. Walter has been a friend and mentor to many labor economists of my generation. When my son permanently lost three-quarters of his vision as a result of his illness, I took him to Rochester to meet Walter. This visit helped him to understand that physical limitations need not limit one's intellectual accomplishments.

Finally, about a decade ago, Charles Clotfelter of Duke invited me to join him to work on a book on the economics of higher education. His invitation is what firmly set me on the professional course that I am on today. We have also become close friends. The best part of being an academic economist is meeting people like Charlie. For as I said in the introduction, family, friends and students mean much more in the long-run than all the publications on one's vita.

VIII. Postscript

I loved being a senior central administrator at Cornell. To paraphrase the words of James Freedman, one of the best parts of my job was that I was able to raise very fundamental issues with my colleagues in the administration and on the faculty and to force them to think about these issues. They did not always respond to these issues in the way that I personally would have preferred, but I had the satisfaction of knowing that the University was seriously thinking about these issues.⁸

I had agreed that I would serve in my administrative position for either three or five years. By the third year I had accomplished many things in my role and all of my faculty and administrative colleagues were appreciative of my contributions to the University. However, I found myself getting increasingly frustrated about the nature of my position because I did not always have access to the resources that I needed to finalize projects upon which I had been working, and because my position in the administrative hierarchy excluded me

from discussions on some major issues that faced the University in which I felt my input would have been useful. As a result, in July of 1998, at the end of my third year as a vice president at Cornell, I returned to my faculty position and established and became first Director of the Cornell Higher Education Research Institute.⁹

Notes

1. However, I was born the week that John Maynard Keynes died.
2. To this day, some math professors persist in giving impossible exams in similar courses and then grading on curves.
3. Albert Einstein is reputed to have found economics more difficult than physics. This difference in our perceptions may be best understood as a difference in comparative advantage. My guess is that Einstein had a big absolute advantage over me in both subjects.
4. See Sharon Oster and Daniel Hamermesh, "Age and Productivity Among Economists," *Review of Economics and Statistics* (February 1998).
5. Readers interested in citations to my writings can check my web page, <www.ipr.cornell.edu/RGEspace/RonsHome.HTML>. My publications are grouped there both chronologically and by subject.
6. In an effort to get something named after me, throughout one of these papers I used the abbreviation RGE to refer to race, gender and ethnicity effects. Sadly, to date, no one has caught on that these are my initials and the abbreviation is not yet widely used.
7. Another rationale for government was provided to me long ago by Chicago labor economist Arnold Weber (who was later president of both the University of Colorado and of Northwestern), who remarked that "the invisible hand is all thumbs in the labor market."
8. See James O. Freedman, *Idealism and Liberal Education* (Ann Arbor, MI, University of Michigan Press, 1996).
9. For a description of what my years as an administrator taught me about the use, and uselessness of economic analysis in academic administration, see Ronald G. Ehrenberg, "Adam Smith Goes to College: An Economist Becomes An Academic Administrator," *Journal of Economic Perspectives* 13 (Winter 1999).

June 2009

Chapter 4: LAST LECTURE

by

Ronald G. Ehrenberg

The “Last Lecture” was written in February 2004 for presentation at Mortarboard’s March 2004 annual “Last Lecture” series. Mortarboard is a national undergraduate honor society and each year it sponsors a last lecture series at Cornell in which two professors are asked the following: “If you were retiring tomorrow and had a half an hour to give a last lecture to your students, what would you say?”

As the attached should indicate to you, I took the charge quite seriously. The lecture was written before we learned in August 2004 that our son’s brain tumor had begun to grow again and, that as a family, we would once again be facing a very trying time. I gave the lecture to my class to read that fall to explain to them why they would only see me on the screen in the classroom; I was going down to Washington, DC to be with my son and his wife while he was treated and would be teaching them from the Cornell-in-Washington Center. His hospital stay lasted almost two months and when I returned to Cornell a number of students told me that this lecture was the most important thing that they had read during their years at Cornell. So I now share it with my undergraduate students each year in the hope that the messages in it will be of use to them during their lifetimes.

Our son’s second bout with his brain tumor left him with additional disabilities. However, he remained optimistic about life until May of 2008 when complications resulting from his original treatment struck. After a three month battle, he died in August 2008. At the time of his death he had a 3 year old daughter who he loved very much and who brought him great joy.

The essay that follows has been left exactly as it was written in February 2004. However, I have added some additional remarks that were delivered at a June 2009 Cornell alumni reunion event when I delivered the lecture again.

THE LAST LECTURE

I. Introduction

Age 57 is a bit early to be delivering the last lecture of one's career, especially since January 1, 1994 when Congress and the President saw fit to eliminate mandatory retirement for tenured faculty members. Like many other prolific Cornell faculty members, I cannot conceive of doing anything other than what I am currently doing. However, I became a first-time grandfather in late January and becoming a grandparent is a natural transition point in life. So the timing of this lecture is actually very appropriate for me.

Six years ago I was asked to write an essay titled "My Life and Economics" for the *American Economist*, the journal of the national undergraduate economics honor society. While age 51 was even an earlier time to be writing a retrospective about one's career, that essay was written at another important point in my career, when I was contemplating whether to continue as a Cornell Vice President or to return to my faculty role. The messages that ultimately came through in that essay were that we are all products of our environment and experiences, that families, friends and students mean much more in the long-run than all of the publications on one's vita, that committing oneself to a single institution during a career can be overwhelmingly satisfying (although sadly many of you will never have the opportunity to do so) and that famous economists are not spared from adversity and must learn to cope with the problems that present

themselves during life, just like anyone else. Several of these themes will reappear in today's lecture.

II. My Years at Cornell University

I received my PhD in Economics from Northwestern University in 1970 at the age of 24 and, after brief stays at Loyola University of Chicago and the University of Massachusetts, I moved to Cornell in 1975. I have spent the last 29 years here teaching undergraduates and graduates, conducting research on labor market and educational issues, serving as a Cornell Vice President, and most recently founding and directing the Cornell Higher Education Research Institute (CHERI).

My career at Cornell has been a wonderful one. A tenured professor at a major university has the freedom to address whatever issues he feels are important and I have focused on policy related issues at the federal, state and institutional level and thought and wrote about fundamental issues that our society confronts. I have authored or coauthored about 120 articles and 18 books. I have won an undergraduate teaching award and coauthored a leading labor economics textbook. These things have led to a level of professional recognition that the son of two New York City public school physical education teachers never dreamed would be possible.

In 1987, Cornell made me the first Irving M. Ives Professor at the University. Ives was a U.S Senator, the founder of the ILR School and its first dean, and, when he was a member of the NY State Senate, coauthor of the first state employment discrimination statute in the United States, New York's Ives-Quinn Act. This act predated the Civil Rights Act by 20 years and because I spent a good deal of time during my career

analyzing the effects of social legislation, I have always felt a close affinity to Ives and was greatly honored when Cornell chose to associate my name with his.

I am now marking my 34th year as a publishing economist. Throughout the years, the 35 PhD students whose committees I have chaired and the countless other PhD students that I have worked with have a hard time believing the early insecurities that I tell them I felt, the dry periods I tell them that I experienced when nothing seemed to go right, and the fears that I had early in my career that I would never generate another idea. They look at my long publication record and question whether I am lying to them. But I repeatedly tell them these stories anyway to emphasize that their “heroes” are mortals and that the fears that they are themselves are feeling are not unique. In academia, as in many other professions, individuals are never supposed to display their weaknesses and insecurities to colleagues. However, I believe that those of us who have achieved great success have an obligation to discuss these matters with our students to facilitate their embarking upon their careers.

Most of my research has been coauthored with my graduate students and my contacts with them have been among the most rewarding parts of my professional life. I have often joked to my two sons, that these students are the sons and daughters that I never had, and many of my graduate students have become life long friends. At this stage of my career, the joy I feel from seeing their professional successes far outweighs the joy I feel from my own successes. Many of these graduate students have been female and I have learned from them (and they from me) that mentors do not have to be of the same gender. Mentors also do not have to be of the same/race ethnicity of their students and I was

elated this year when an African-American PhD student of mine received tenure at the University of Michigan.

Since my return to the faculty in 1998, I have also made a concerted effort to involve undergraduate students in research and during the last few years have coauthored papers with five or six different Cornell undergraduates. One of my students – who I published three papers with while he was at Cornell - is now a first year PhD student in the MIT economics department – the number one economics department in the country. At graduation last year he thanked me for all that I had done for him – I told him that he had it backwards and that I should be thanking him for all that he had done for me. Working with students like him is a treat that few faculty members in this nation ever get.

The true love and foundation of my life has been my wife Randy and in June we will have been married 37 years. She graduated from college in 3 years so that we could get married when she was 19. In addition to love and support, I also get research ideas from her description of the issues she has faced as a teacher, school principal, deputy superintendent of schools and, since July 2001, superintendent of schools of a large high-performing suburban school district in the Albany area. Adjusting to a commuting marriage after 34 years of marriage was not easy for me to do, especially since I am the one who does virtually all of the commuting. However my Road Runner connection in our home in the Albany area has made life much easier and my students are in constant contact with me regardless of whether I am in Ithaca or Albany. While I deeply regret missing Cornell basketball and lacrosse games – my two big passions in Cornell sports- the happiness that comes from seeing one's spouse achieve her professional ambition is also extraordinary.

III. Coping with Trials and Tribulations and Life's Lessons Learned

No one ever said that life would be easy or is fair. My wife lost her father when she was 23 (and he was 49) and he never got to see our first son, who was born three months later. The loss of a father is something that one never fully gets over, however, our having experienced this early loss made it a lot easier for me to counsel one of my freshman students this fall when her father was dying. What goes on outside the workplace often influences how we behave within it.

A mediocre cross-country and track athlete when I was in college, I took up jogging when I was in my early 30s and it became my life's passion. While training for a marathon at the age of 37, I ruptured a disk in my back and even after an operation I was unable to ever run again. I was depressed for 5 years because of what I had lost. I did not realize then what I know now – namely that throughout life we inevitably suffer losses and that those people who are the happiest are the ones who can gently let go of what they have lost and develop new passions to replace their losses. Put in the jargon of an economist, we all should have a portfolio of interests in life rather than a single interest so that if we lose the ability to pursue one interest, we can still enjoy the others and also invest in new interests. I am much happier today now that I realize this, although I also am 50 pounds heavier.

Perhaps the period of greatest stress in my family's lives occurred in 1990 when our oldest son was diagnosed with a malignant brain tumor, while he was a junior at Cornell. For over a year, his younger brother, my wife and I put our lives on hold to help him cope with multiple surgeries, chemotherapy and radiation therapy as he battled an illness whose prognosis was highly uncertain. At one point, after he had permanently lost

$\frac{3}{4}$ of his vision as the result of several operations, the tumor had grown back and he was totally blind. The doctors said to us that he would never see again, that the chemotherapy that they were going to give him would probably leave him totally deaf, and that the real question was whether he would still be alive in three months.

Happily, last October marked the 12th anniversary of the end of all my son's treatments. He no longer has a pituitary gland and thus he is on complete hormone replacements. However, he regained sight in the inner half of his left eye and that is enough vision for him to read with and to navigate around Washington DC. He wears hearing aids in both ears, but is not totally deaf. After a year away from school, he was able to return complete his studies at Cornell, to attend and graduate from Georgetown Law School and to obtain a position, with the help of an ILR-Cornell alumnus, as an attorney with the Civil Rights Division of the Solicitor's Office of the U.S. Department of Labor. He also met a woman (who sadly is a graduate of the University of Pennsylvania), who saw through beyond all of his disabilities, could live with the constant fear of the recurrence of his illness, and fell in love with him. They now have been married for almost 4 years. I often joke that if she were not Jewish, she clearly would be a saint.

Our son's experience has taught me many profound messages. First probabilities that doctors give you when you are suffering from an illness are only probabilities. Either you beat the illness or you don't. Even when the odds are very low, as they were in his case, there are some winners and you should not lose the hope that you will be a winner. Stephen Jay Gould, the noted Harvard evolutionary biologist, who died in May of 2002, some 20 years after being told that he had a rare form of cancer and less than a year to live, has conveyed this message more eloquently than I could ever hope to in an article

titled “The Median isn’t the Message” that appeared in *Discovery* magazine. This article is widely available on the web and if any of you or a friend or family member ever faces a situation like my son did, I encourage you to download a copy of this wonderful piece.

Second, my son’s experiences have taught me that life is all about changing expectations. All of a father’s hope and expectations, or at least this father’s hope and expectations, are tied up in his first son. When in high school, my son decided that he wanted to be a Supreme Court Justice because during Robert Bork’s confirmation hearings, or rather I should say non confirmation hearings, Bork said, he wanted to be on the Supreme Court because it would be an intellectual feast. Although my son graduated from Cornell Arts and Sciences magna cum laude, the disabilities he had developed and his illness had a profound effect on his ability to do well in law school and, as a result, the position he was finally able to attain, is far below what he and we had aspired for him.

I was fortunate, however, to have a colleague in ILR, Professor Robert Stern, who was the most remarkable person I have ever met. Bob, who died two years ago, had a severe case of childhood diabetes. This led him to have several eye operations, to have his kidneys fail and go on dialysis, to have a heart attack, to have a kidney transplant, to develop stomach cancer as a result of the rejection drugs from the transplant and to have multiple parts of his body progressively amputated. When Bob died at age 51, he had two artificial legs and the use of a total of three fingers on one hand. However, until the final few months of his life, he remained an optimistic happy person.

Bob visited my son when he was first in the hospital and conveyed a very simple message to him. “Don’t compare yourself to what you were (because this will not bring you happiness). Don’t compare yourself to the people around you (because again this will

not make you happy). Rather simply ask what can you do to make yourself and the people you care about, feel as fulfilled and happy as possible?” Translated into the language of an economist, Bob was saying that our goal in life should be to maximize our utility functions subject to the constraints that we face – constraints which in his case were always shifting in. While it has taken my son over 10 years to begin to internalize this message, my wife and I “got it” very quickly. It does one absolutely no good to be envious of others who seem to have gotten a better draw in life and all we now hope for our son is that he has as many days of happiness as possible.

Perhaps still another way of saying the same thing is that inevitably in life, one’s problems increase, rather than decrease as you age. The rate of increase is different for different people. Some people, like Bob Stern and my son, suffer serious losses at early ages, while others seem to get free passes throughout most of their lives. The secret of happiness is one’s ability to cope and those people who are happy are the ones whose ability to cope increases at a faster rate than their problems do.

Third, my son’s experiences also reemphasized what I have long known – if you can’t find humor in practically any situation you are not going to be a happy person. I vividly remember the neurosurgeon coming into my son’s hospital room at 6am the morning before his third brain surgery with three large coffee cups perched on top of each other and telling my son that “he was really hung over after going drinking last night”. While I turned completely white, my son burst out laughing because he understood much faster than I did that the doctor was simply trying to reduce his tension and relax him. Laughter has always been an important part of my family’s lives and my wife and I are still best friends in large part because we always find something to laugh

about at otherwise serious and solemn events. Humor has also always been an important part of my teaching style, because my students remain attentive to what I am saying because they don't want to miss the next joke.

Finally, my son's experiences have reemphasized to me the importance of friends and community. Life is with people and having a community that you can turn to in times of need and can contribute to throughout your life is very important. In spite of our busy professional schedules, my wife and I have always been integral parts of the communities in which we lived and, although I am only in Ithaca three and a half days many weeks, I still find time to serve on the board of the Tompkins County Public Library

IV. Concluding Remarks

When I was 32 years old I spent three months agonizing over whether I should get a non malignant brown spot removed from my face for cosmetic reasons. I often look back on that experience and ponder whether I would have behaved differently if I knew then all the lessons that I subsequently learned. I've concluded that half the fun in life is making mistakes and that it is better to learn from experience than to know everything at the start. Besides, you get a second chance at life through your children and then a third chance if you are lucky enough to have grandchildren.

Within a few years, my wife can retire from her school superintendent position and we can once again live together all week in one house. The typical "retirement position" for school superintendents is to teach part-time in a college of education. However, Cornell does not have an education college and there are few other employment opportunities for my wife in the Ithaca area. So we are both pondering what

the future will bring for us. Should we move to Washington DC to be near our grandson and both try to find employment there? Should I accept a senior administrative position at another university (hopefully in a warmer climate), with it hiring my wife as a part-time faculty member as part of the deal? Should she continue in her school superintendent position indefinitely and should I move to an academic institution in the Albany area? Or should we stay in the community that we love and I continue at the institution that has been much more than an employer for me, with her fully retired? Perhaps my final message to you is that the trite phrase that “nothing is certain in life other than death and taxes” is a fairly accurate landmark of what your lives will be like. By all means make plans, but be prepared to regularly revise them.

Postscript – June 2009

My “Last Lecture” was obviously written at a much more optimistic point in my wife and my lives than we are at now. However, I am struck, even in the face of the loss that we have suffered, how important some of the messages in it are to us as we try to continue with our lives.

During the fall of 2008, with the assistance of almost 200 family members, friends and colleagues, we established two endowments to help perpetuate our son’s memory. The first supports the Eric L. Ehrenberg Memorial Prize that is given each year to a graduating ILR-Cornell student who has overcome health related issues to persist through to graduation. The second supports the Cornell Union for Disability Awareness, a student group that promotes understanding at Cornell of the issues faced by students with disabilities

I did not know how I would be able to face a class of 70 Cornell undergraduates two weeks after my son's death, but I knew that I had to try. I also knew that I could not tell the class about my son at the start of the semester; if I had done so I would never have gotten through the first lecture. While one or two of the students who had worked as research assistants for me and were close to me knew what had transpired, most students were oblivious to what our family had gone through until the last week of the semester when an announcement of the endowments we had established to honor Eric's memory appeared in the *Cornell Sun* and I distributed this lecture to the class as I always do at the end of each semester.

A week later I received an email from a student in the class who I knew was coping with some disabilities because she received extra time on exams. She told me that since she enrolled at Cornell, she had developed a neurological disease that was causing her to progressively lose cognitive function and that the doctors had told her that within ten years she would have no memory at all. She said the my description of how both Stephen J. Gould and my son Eric had beaten the odds had given her hope for the first time in years and allowed her to look forward to the next stage of her life. So you should easily understand why I will continue to give my students this lecture to read as long as I am at Cornell.

Chapter 5: “Being a Quadruple Threat Keeps it Interesting”

by

Ronald G. Ehrenberg

I received my PhD in economics in 1970 at the age of 24 and I am now in the 35th year of my academic career. All but my first five years were spent at Cornell University and I find myself happier today and more interested in my work than I ever have been. The secret to my success is that I am the proverbial quadruple threat, who cares about and does well in all aspects of an academics life- undergraduate teaching, graduate teaching, research, and service and administration. Throughout my career, each aspect has fed upon the others and this enables me to remain fresh and excited about what I am doing.

I spent the first 15 years of my career as a labor economist evaluating labor market programs and legislation, studying public sector labor markets and evaluating the incentive effects of compensation policies. A term spent on a faculty senate budget committee in the early 1980s, when we realized we did not have enough financial aid resources, led me to write a paper on optimal financial aid policies for a selective university, which laid the groundwork for what is now know in the financial aid business as “preferential packaging”. This paper was the first of many papers that I have written that use institutional databases to provide answer to questions that aid in institutional decision-making. Through my faculty committee work, I learned more about the economics of higher education than anyone should want to learn, began conducting more

research on the topic and decided that I should teach a class to undergraduates on the “Economics of the University”.

My teaching of this class and all the research that I conducted on the economics of higher education led me to naturally to a term as Vice President of Cornell for Academic Programs, Planning and Budgeting during the mid 1990s. Temporarily devoid of graduate students, I wrote papers with the staff on Cornell’s Office of Institutional Research and Planning (which reported to me) on issues of relevance to decision making at the university. I have often said that I learned more during this administrative term than I did during any other period of my career (including graduate school) and when I returned to the faculty, I wrote perhaps the most important book of my career, *Tuition Rising: Why College Costs So Much* (Harvard University Press, 2002).

A former provost at another research university heavily influenced this book, and indeed everything that I have done during the last decade. When I asked him how his transition back to the faculty was, he said its great, but when you go back remember that your administrative experience has fundamentally changed you, you are a different person and you have to do different things. I decided that I wanted to write for more popular audiences as well as for academics, to influence the way that people think about higher education. This both led to *Tuition Rising* and my founding of the Cornell Higher Education Research Institute (CHERI).

Prior to my administrative term, I had always taught a class in our PhD labor economics sequence. However, when I returned to the faculty, I decided that I had gotten stale doing this and that as a past president of the Society of Labor Economists I did not need to formally teach graduate labor economics classes to feed my ego. While I continue

to work with PhD students on joint research and dissertation supervision, I now devote a good deal of my time to involving undergraduate students in research early in their careers, in the hope that this will encourage them to pursue PhD study in economics. Giving the declining numbers of American students going on for PhDs, I believe that faculty at major research universities have an obligation to try to contribute to the flow of students into PhD programs, as well as train them once they get to our institutions.

I also decided that I wanted to take advantage of our new distance learning facilities to extend the reach of my Economics of the University class. One year, I taught six sessions of the class jointly with a colleague at the University of Virginia to students at both of our institutions using two-way compressed video technology operated over the internet and phone lines, to illustrate how faculty at different institutions could collaborate to enhance learning at both places. The next year I taught the class simultaneously to students at Harpur College (Binghamton University), my undergraduate institution, and Cornell to illustrate how faculty members in specialized areas can teach students from multiple institutions simultaneously. This past year, I taught the class to both Cornell students in Ithaca and in our Cornell-in-Washington program, to make the point that students in off-campus programs should still be able to take advantage of the academic resources on campus.

So my message to administrators and senior colleagues around the nation is that an aging senior faculty does not have to mean stagnation at the university. I hold my career, which is still far from over, up to them as an example of how to stay fresh and excited and to make major contributions to the university.

Chapter 6: Coauthors and Collaborations

Ronald G. Ehrenberg

Coauthors and Collaborations

The American Economist

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Ronald G. Ehrenberg¹

Abstract

This personal reflective essay summarizes and explains why the frequency with which I have coauthored research has varied over my career and discusses the reasons that my coauthored publications and collaborations have arisen. The reasons include research that arises from casual conversations with colleagues, the sharing of data both as a donor and as a recipient, invitations to participate in large-scale projects, the division of labor and working with people with complementary skills and personalities, educating graduate and undergraduate students and the desire to give the former a leg up in the job market and to encourage the latter to pursue doctoral study, discussions with my wife about issues she faced as a teacher and administrator in public K12 education, and efforts to magnify my impact on an area of study by convening conferences, commissioning papers, and seeing conference volumes through to publication.

JEL Classifications: I21, I23, J01, A14

Keywords

coauthors, collaborations, academic publications, personal reflections, research careers

Introduction and Patterns to Explain

It is hard for me to believe that I am now 70 years old and in my 46th year as a publishing economist and more recently a higher education scholar. It is even harder for me to believe, as I scan my vita, the number of things I have written and the number of different people with whom I have coauthored pieces.

Table 1 is a summary of my publishing career and my coauthors as of May 2016. My publication counts include articles in academic journals (including proceedings volumes and comments); chapters in books; articles in science, economics, and higher education magazines and newspapers (*Scientific American*, *Regulation*, *Academe*, *Trusteeship*, and *Change* are examples); and books that I authored or coauthored. In the first column, for my career to date (as of May 2016), and in subsequent columns, for each 5-year interval,¹ I indicate the number of publications, the number and share of these that were coauthored, and the number that were coauthored by faculty (including visiting faculty and postdocs) at my own institution, my graduate students and former graduate students, my undergraduate students, faculty at other institutions, my wife and one of my sons, and other individuals.²

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Table 1. Numbers of Publications With Coauthors (Share With coauthors).

Year	1970-2016	1970-1974	1975-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2016
Number of publications	173	9	15	21	17	14	18	32	24	23
Number of publications with coauthors	103 (.60)	0 (0)	13 (.87)	16 (.76)	13 (.76)	12 (.86)	11 (.61)	14 (.44)	13 (.54)	11 (.48)
Number of publications with graduate coauthors	57	0	2	10	7	8	7	7	9	7
Number of publications with undergraduate coauthors	13	0	1	0	0	0	0	7	3	2
Number of publications with own institution faculty coauthors	29	0	3	8	6	2	0	0	5	5
Number of publications with own institution other coauthors	6	0	0	0	1	2	1	2	0	0
Number of publications with other faculty coauthors	16	0	5	1	1	1	4	2	0	2
Number of publications with other coauthors	8	0	0	0	0	0	0	1	2	5

Table 2. Does the Pattern of Publications Change Over Time?

Number of publications	Period	Journal articles	Chapters	Magazines	Books
173	1970-2016	94 (.54)	38 (.22)	29 (.17)	12 (.07)
9	1970-1974	7 (.78)	0 (0)	0 (0)	2 (.22)
15	1975-1979	11 (.73)	2 (.13)	0 (0)	2 (.13)
21	1980-1984	14 (.67)	4 (.19)	0 (0)	3 (.14)
17	1985-1989	7 (.41)	8 (.47)	0 (0)	2 (.12)
14	1990-1994	7 (.50)	4 (.29)	2 (.14)	1 (.07)
18	1995-1999	11 (.61)	2 (.11)	5 (.28)	0 (0)
32	2000-2004	12 (.38)	8 (.25)	11 (.34)	1 (.03)
24	2005-2009	12 (.50)	7 (.29)	5 (.21)	0 (.00)
23	2010-2016	13 (.57)	3 (.13)	6 (.26)	1 (.04)

Note: Numbers in parentheses are the share of publications in the period that were published in the category.

About 60% of my publications have been coauthored. But contrary to the pattern observed by Dan Hamermesh (2015) for a set of 79 prominent labor economists, my propensity to coauthor has not increased monotonically with age. During the first 5 years of my career, all my publications were sole authored because, while on the faculty at the University of Massachusetts, I had few colleagues with similar interests and very few graduate students.³ After I moved to Cornell in 1975, my access to colleagues with similar interests and to graduate students dramatically increased. As a result, during the next 25 years, more than 74% of my publications were coauthored. However, after 1999, my share of coauthored publications fell to about 49%.

Fifty-seven of the coauthored publications have at least one current or former graduate student as a coauthor, 13 have at least one undergraduate student as a coauthor, 29 have at least one faculty member at my own institution as a coauthor, and 16 have at least one faculty member at another institution as a coauthor. I have also coauthored papers with administrators and staff at my own institution, with my wife and one of my sons, and with individuals at other institutions who are not faculty members, including colleagues at the Andrew W. Mellon Foundation.

The number of different individuals with whom I have worked is large. The 81 different coauthors of the 173 publications include 35 different graduate students, 11 different undergraduate students, 18 different faculty and administrative colleagues at Cornell, and 15 different individuals at other institutions.⁴

The pattern of where my publications appear has changed over time. Table 2 shows the shares of my publications, each period and in total, that were in articles in academic journals, chapters in books, books, and articles in science, economics, and higher education magazines. As I was returning to my faculty position after serving as a Cornell vice president from 1995 to 1998, I received some advice from a former provost at another university, who told me that life after administration is great but the experience makes you a different person and you have to do different things. I decided that, in addition to conducting econometric research on higher education issues, I wanted to write more policy-related pieces and publish them in places where I could influence how people think about higher education. During the past 22 years, I have written 27 articles that have appeared in more popular higher education outlets.

Does where a publication appears influence whether a coauthor was involved? A logit analysis reported in the first column of Table 3 shows that when the probability that a publication has a coauthor is assumed to depend only on a time trend and the type of publication (publications in journals are the omitted category), my publications in magazines are less likely to have coauthors. However, once one controls in the second column for whether the publication includes econometric research or the development of a formal theoretical model, where the publication appeared ceases to matter. The only variable which proves to be a predictor of having a coauthor

Table 3. Logit Equations for the Probability of a Publication Being Coauthored.

Independent variable	Coefficient (SE)	Coefficient (SE)
CHAP	-0.419 (.394)	0.441 (.576)
MAG	-0.880 (.455)**	0.449 (.662)
BOOK	-0.074 (.661)	0.744 (.935)
YEAR	-0.013 (.014)	0.015 (.020)
ECONO		3.617 (.506)*
THEORY		0.314 (.875)
Pseudo R ² /N	.030/173	.367/173

Note. CHAP = 1 if chapter, = 0 otherwise; MAG = 1 if magazine article, = 0 otherwise; BOOK = 1 if book, = 0 otherwise; the omitted category is journal articles; ECONO = 1 if an econometric study, = 0 otherwise; THEORY = 1 if the publication develops a theoretical model, = 0 otherwise; YEAR = time trend.

*Coefficient is statistically significantly different from zero at the .05 level of significance. **Coefficient is statistically significantly different from zero at the .10 level of significance.

Table 4. Number of Coauthors Per Coauthored Paper.

Period	Mean number of coauthors
Entire career to date	1.635
1975-1979	1.308
1980-1984	1.25
1985-1989	1.385
1990-1994	1.583
1995-1999	1.455
2000-2004	1.714
2005-2009	2.000
2010-2016	2.545

Note. No coauthored papers were written during the 1970-1974 period.

is if the publication involved an econometric study. Therefore, the decline in the share of my publications that were coauthored after 1999 reflects my authoring more policy-related and thought pieces (regardless of where they were published) and fewer econometric studies.

Dan Hamermesh found in his sample that the number of coauthors on each coauthored publication trended upward over time. As Table 4 indicates, this is true also in my personal case. I attribute the growth in the number of my coauthors per coauthored piece to the growing number of graduate research assistants to whom I had access, to my more recent involvement of undergraduate students in research, and to the increased ease of simultaneously collaborating with multiple people in different places that changes in technology, most recently the development of the Internet, have facilitated.

The Why's and Who's of Coauthors

During 1971 to 1972, my first year at the University of Massachusetts, I was invited to give a seminar at Princeton by Al Rees (then Director of the Industrial Relations Section at Princeton) and met Orley Ashenfelter, one of the true giants in the field of labor economics. Although we discussed my paper prior to the seminar, Orley pointed out an error in it. The paper presented the first empirical estimates of the wage elasticities of demand for state and local government employees, with a view toward making policy statements about whether there were any market

forces that might limit the ability of emerging public sector unions to win large wage increases for their members. Its underlying theoretical model was based on a variant of the Stone-Geary utility function (Stone, 1954) that allowed public decision makers' utility to be a function only of increments in public sector employment levels above multiples (less than one) of previous employment levels (to capture incremental budgeting). Orley quietly explained to me that if I really believed that a Stone-Geary utility function was the correct specification, there was nothing for me to estimate because this utility function implied that all the own wage elasticities of demand were minus one.

We then went into the seminar, where Orley remained absolutely silent and allowed me to explain that the model was meant only to heuristically motivate the empirical research and that the empirical specifications should not be interpreted as being derived directly from the model. My paper was ultimately published in the *American Economic Review* (R. Ehrenberg, 1973). Using my data and a more flexible system of demand equations that could be explicitly derived from another form of utility function, Orley and I went on to write my first coauthored paper and it was published in a volume edited by Dan Hamermesh (Ashenfelter & Ehrenberg, 1975). Orley also invited me to work with him as a consultant in Washington, DC, in 1972-1973, where he was heading up the Office of Evaluation of the U.S. Department of Labor. My experiences working with him led me to focus much of my early research on analyzing the effects of labor market legislation and policies.

Dan, whom I first met in 1968 and who became a lifelong friend, was directly responsible for my second coauthored paper. Following in the tradition of Gary Becker's household allocation of time model and Michael Grossman's paper on the allocation of time and money to investments in health capital over the life cycle (Grossman, 1972), Dan coauthored the first paper by an economist on the economics of suicide (Hamermesh & Soss, 1974). Being a relatively competitive person in my youth, even with friends, I wondered what I could do to "top" Dan's paper. While talking at a party to Corry Azzi, who was visiting the University of Massachusetts, we decided as a joke to work on a model in which individuals make decisions on allocating time each period to the labor market and to religious activities, with the goal of maximizing consumption during both their lifetimes and in the afterlife.⁵

What started out as a joke soon became a serious research effort, as we found there were a variety of empirical observations about participation in religious activities that psychologists and sociologists had made, with different explanations provided for each observed regularity. Shortly thereafter, we had developed a life cycle household allocation of time model that could explain all of these observations plus others and then empirically tested the model. Our resulting paper (Azzi & Ehrenberg, 1975), which is still one of my most highly cited works, led ultimately to the development of a new, now thriving, subfield that addresses the economics of religion.

Other coauthored work quickly followed as a result of my relationship with Orley. While in DC, I learned about Ron Oaxaca, a recent Princeton PhD student of Orley and Al, who was teaching at a Canadian university. We quickly hired Ron at the University of Massachusetts and together he and I wrote the first theoretical and empirical paper that applied my dissertation advisor Dale Mortensen's theory of job search to estimate the impact of unemployment insurance benefits on unemployed workers' durations of unemployment and post unemployment earnings (R. Ehrenberg & Oaxaca, 1976). We both soon left the university, Ron going to the University of Arizona and me to Cornell, and sadly we never worked on other issues together.

I also met Bob Smith, a Stanford PhD, who, on leave from the University of Connecticut, was also working with Orley. Orley and Al had been appointed a two-person visiting committee to advise the Dean of the ILR School at Cornell on how to move its then institutional labor economics group toward the new breed of empirical micro labor economists. They recommended a list of people to hire. After Dan, who was first on the list, turned Cornell down, the next two offers were made to Bob Smith and me. Although Dan and I have only coauthored one short piece

during our careers, his impact on my career by his not accepting the Cornell offer was extraordinary (R. Ehrenberg, Hamermesh, & Johnson, 1977).

Bob and I have now been Cornell colleagues for more than 40 years. Although we coauthored five empirical papers together early in our careers, our most enduring collaboration was the writing of our textbook, *Modern Labor Economics*, whose first edition appeared in 1982 (R. Ehrenberg & Smith, 1982). Our students at Cornell back then were not very interested in formal mathematics and so our goal was to write a text that explained theories heuristically (without lots of math) and then concentrated on applying the theories to illustrate the usefulness of labor market models in understanding proposed policy changes and the evolution of labor market institutions.

Writing a textbook in any field is a daunting challenge because one's interests may only be in subsections of the field. Our collaboration was facilitated by our different interests. For example, I wrote the first draft of our chapters on labor demand, and Bob wrote the first draft of chapters on labor supply. I wrote about the economics of collective bargaining in the private and public sectors, and Bob wrote about compensating wage differentials and contract models. But more than differences in our topical interests, our collaboration was facilitated by the differences in our personalities. Throughout my career, I have had days of extreme productivity and other days in which I sit around my office and accomplish nothing. Bob is a very steady person and, by working together, he "evened" out my fluctuations in productivity. So differences in personality types may also facilitate collaboration.

Our textbook is now in its 12th edition and it remains the leader in the field. But the last edition that I had anything to do with was published in the mid-1990s. From 1995 to 1998, I served as Cornell's vice president for Academic Programs, Planning, and Budgeting, and when I returned to the faculty, my interests were focused much more narrowly on the economics of higher education. Since then, Bob has revised the book every 3 years on his own and kept my name on it for "branding" purposes. *Modern Labor Economics* is by far "my" most highly cited work, and it is only fair that I publicly thank Bob for the impact his revisions have had on my reputation.

During the first 12 years of my career, I worked hard at staying at the frontier of econometrics and tried to use a new (to me) econometric technique in each paper that I wrote. But I had a revelation (unrelated to my work on the economics of religion) when I attended a week-long course on longitudinal data models taught at NORC at the University of Chicago during the summer of 1982. As I sat through the lecture presented by distinguished scholars, including economist Gary Chamberlain (then at Wisconsin), I realized that I did not have the time or energy both to focus on economic issues that interested me and to stay at the frontier of econometrics methods. Gary had brought a PhD student from Wisconsin named George Jakubson with him to serve as the teaching assistant in the class, and I realized it made sense for us to try to hire at Cornell younger colleagues who had skills such as George had to help train our PhD students and to work with me on empirical projects.

The next year, we actually hired George and he is the Cornell colleague with whom I have coauthored the largest number of research publications. These have included a book on the impact of advance notice provisions for layoffs in union contracts on displaced workers labor market outcomes (which was cited in the debate that led to the enactment of the Work Adjustment and Retraining Notification [WARN] Act), a paper on who bears the cost of university expenditures out of institutional funds on research, two papers on PhD students' times to degree and completion probabilities, a paper on whether the gender mix of academic leaders influences the rate at which academic institutions diversify their faculty across gender lines, and a paper evaluating the Mellon Mays Undergraduate Fellowship Program of the Andrew W. Mellon Foundation.⁶

During the late 1980s, William Bowen, then president of the Andrew W. Mellon Foundation, began the Foundation's support for the economics of education by making a grant to the

National Bureau of Economic Research (NBER) for a volume on the economic challenges facing higher education. Charles Clotfelter from Duke was asked by the NBER to head up the project and Charlie, who had read some of my early papers on higher education but had never met me, invited me to join him on the project. Together with Malcolm Getz and John Siegfried from Vanderbilt, we produced what became my first coauthored book on the economics of higher education (Clotfelter, Ehrenberg, Getz, & Siegfried, 1991). Although Charlie and I never coauthored another piece, he went on to direct, and I to participate in, a working group on the economics of higher education that met regularly at the NBER for almost 20 years. Many members of this group were current or former higher education administrators including Charlie and Gordon Winston from Williams; both Charlie and Gordon became very close friends of mine. My discussions with members of the group helped to shape much of my subsequent research agenda, even though these discussions only occasionally led to coauthored work.

The financial support that I have received for the Cornell Higher Education Research Institute (CHERI) from the Andrew W. Mellon Foundation was for many years unrestricted; this allowed me to address whatever research issues I felt were important. However, around 2002 Bowen called and told me that the Foundation was in the process of evaluating a major 10-year program of theirs to improve doctoral education in the humanities called the Graduate Education Initiative, which had cost the Foundation more than US\$85 million.

They had been collecting administrative data for about 100 treatment and comparison departments involved in the program for 10 years before the program began and for each year of the program's duration on students' characteristics and their annual sources of support and progress toward their degree. The Foundation was now going to collect retrospective data on students' views of their doctoral program characteristics and their early career outcomes after they left or completed their programs. Bowen asked whether I would be interested in helping to design the retrospective survey and then to conduct an evaluation of what the impact of the program had been on times to degree and completion rates and on what had been learned about the characteristics of doctoral programs that facilitated student success, if they provided me with supplementary funds for several years for a postdoctoral fellow.

I jumped at the opportunity and embarked on 8-year collaboration with Harriet Zuckerman, a very distinguished sociologist who was the senior vice president of the Foundation, Sharon Brucker, the researcher at the Foundation who was in charge of the databases, and Jeff Groen, a new University of Michigan PhD in economics who assumed the postdoc position with me. Many preliminary publications and econometric papers later, we published our book summarizing what we had learned in 2010 (R. Ehrenberg, Zuckerman, Groen, & Brucker, 2010). Sometimes coauthorship arises because you get the rare opportunity to participate in a major data collection effort and evaluate an important program.

One of the true pleasures of my life has been my interactions with PhD students in economics and education, many of whom have become lifelong friends. To date, I have chaired the dissertation committees of 45 completed PhDs and served on the committees of numerous other PhD students. I have worked with these students on research to enhance their graduate education, to hopefully give them a leg up in the job market by coauthoring with them, and to increase my own research productivity. During the early years, I taught them econometric research methods; now I depend upon many younger colleagues at Cornell, including George, to do this for me.

For the first 25 years of my career, I had a self-imposed rule that I would not coauthor with any graduate student after he or she had received a PhD. In retrospect, my publication record might have been much longer if I had continued to take advantage of all the human capital that I had helped to create. But I felt that it was important for former students to create their own research programs and to make clear to the world that they were separated from their former advisors and "flying" on their own.

The rule was bent while I was a Cornell vice president. I had previously written a paper with Dominic Brewer, while he was a PhD student, on the early career labor market returns to attending a selective private academic institution (R. Ehrenberg & Brewer, 1996). That paper was based on longitudinal data from students graduating from high school in the 1970s. Dominic and Eric Eide, a colleague he had met after receiving his degree, decided to extend the analysis to include a later cohort of students to see whether the earnings advantage to going to a selective institution had persisted or grown over time and, in a second paper, to see whether attendance at a selective private institution also enhanced the probability that college graduates enroll in graduate and professional degree programs.

Knowing that I was busy administering, Dom invited me to be a coauthor with the understanding that my role would only be to comment on drafts that Eric and he wrote (Brewer, Eide, & Ehrenberg, 1999; Eide, Brewer, & Ehrenberg, 1998). Put simply, Dom wanted to help me maintain my research productivity during my administrative hiatus. Since that time, I have occasionally broken my rule, coauthoring two additional papers with him, and two papers with three other former PhD students. Dom, who is now the Dean of the Steinhardt School of Culture, Education, and Human Development at New York University, is the individual with whom I have coauthored the largest number of papers (10) during my career.

The two later papers that I wrote with Dom came about when I was invited by a Cornell colleague, psychologist Steve Ceci, to chair a team of scholars with diverse disciplinary backgrounds to write a review paper for a psychology journal surveying what we know about the impact of class size on student performance. An incentive to do this was the commitment that a popular version of the paper would be published in *Scientific American*, which has a monthly circulation of more than 450,000.

Realizing that more people would read that version than the sum of everything else that I had written during my career, I immediately agreed and suggested that Dom, who then was then a vice president and Director of Education Research at the RAND Corporation, be added to the team. He was added and the committee of editors choosing the team also selected a sociologist, Adam Gamoran from the University of Wisconsin, and a Canadian statistician, J. Douglas Willms. I had never previously met either Adam or Doug. Over about a year, via email and conference calls, we developed an outline for the papers, took turns writing sections, and then revised and finished the work (R. Ehrenberg, Brewer, Gamoran, & Willms, 2001a, 2001b). Although subsequently I met and served on a National Research Council committee with Adam, to this day I still have not met Doug. Sometimes coauthors can be strangers.

In actuality, while I was a Cornell vice president, I was able to continue my research because I supervised the office of institutional research and I figured out ways to conduct research that was both relevant for decision making at Cornell and had academic value. I wrote papers with colleagues in the office on how Cornell was responding to the elimination of mandatory retirement for tenured faculty and on the 1990s National Research Council ratings of PhD programs (R. Ehrenberg & Hurst, 1996, 1998; R. Ehrenberg, Matier, & Fontanella, 2000). Earlier in my career, having served on many faculty committees relating to the economics of higher education and developing close relations with many university administrators, I also wrote a paper with Cornell's Dean of Admissions and Financial Aid on the "death" of need-based financial aid policies (R. Ehrenberg & Murphy, 1993).

Sometimes collaborations arise because of who has the data. I met James Monks, now a faculty member at the University of Richmond but then a researcher at the Consortium of Financing Higher Education (COFHE), at a NBER Higher Education Working group meeting in the mid-90s. We began to talk about whether the U.S. News & World Report (USNWR) rankings of colleges might influence institutions' admissions outcomes. COFHE is a consortium of more than 30 selective private colleges and universities, and Jim had access to confidential longitudinal data on admissions outcomes that COFHE collected. A collaboration quickly developed between us;

he and I specified estimating equations, he did all the empirical analyses at COFHE preserving the confidentiality of the data, and we wrote the first empirical paper on how the USNWR rankings influence admissions outcomes (Monks & Ehrenberg, 1999).

To take another example relating to who has the data, as a labor economist, I believe that in competitive labor markets, compensating wage differentials exist for favorable and unfavorable job characteristics. If an academic institution offered its assistant professors a high probability of ultimately receiving tenure, which is a favorable job characteristic, it should, according to labor market theory, be able to pay its assistant professors lower starting salaries than otherwise comparable institutions that offered lower probabilities of being granted tenure. But no one had ever empirically tested this proposition.

I knew that two former Northwestern economics PhD students of more recent vintage than me, Rachel Willis (University of North Carolina) and Paul Pieper (University of Illinois at Chicago), had collected data on the careers of all economists who had received PhDs in economics from U.S. universities during the decade of the 1970s. With their data, I would be able to compute the probability that new PhDs who had taken first jobs as assistant professors at an economics department during the 1970s received tenure at either that department or a department of equal or better quality. I invited them to work with me on a project. We coupled their data with data on starting salaries of new assistant professors at each doctoral-level economics department during the 1970s, which the American Economic Association provided to us under conditions of strict confidentiality, and estimated equations that showed that compensating wage differentials for tenure probabilities exist in academia, at least for economics faculty. Other factors held constant, higher probabilities of receiving tenure were associated with lower starting salaries for assistant professor in economics (R. Ehrenberg, Pieper, & Willis, 1998).

Sometimes my coauthors were family members. As the son of two New York City public school teachers and the husband of a woman whose career in public K12 education spanned teaching, school administrative, and district-wide administrative positions, culminating in her serving for 9 years as a superintendent of a large high-performing suburban school district in the Albany, NY area, I have always been interested in K12 education and have a stream of publications on K12 topics.

Several issues that my wife Randy brought home from her work led directly to coauthored publications with her. When she was a middle school vice principal, her school district offered an early retirement incentive program but did not allow teachers to “buy out” their unused sick leave days at retirement. She observed that an unusually large number of older teachers were frequently absent on Fridays and Mondays that year, and she was concerned about the impact of their absences on students.

Her concern led us to collect district-level data for school districts in New York State and conduct an econometric study on how teacher absenteeism depends upon provisions in districts’ collective bargaining agreements, on how teachers’ absenteeism influences students’ absenteeism, and on how teachers’ and students’ absenteeism influence students’ test score performance. We were aided in our research by our older son Eric, then a high school senior, who helped me to code school district contracts, which were on file in Albany, for which he was added as a coauthor. Another coauthor, who did most of the econometric work, was graduate student Dan Rees, son of Al Rees.⁷ Dan, I am proud to report, is now the editor of the *Economics of Education Review*.

Another time, back in the mid-1980s, when the debate over merit pay for teachers was just beginning, my wife wondered why there was no discussion of merit pay for school administrators. As a researcher who was aware of the literature on the incentive effects of compensation agreements for corporate CEOs, it immediately struck me that we could do a study to see if school superintendents in New York State were rewarded for performance. This study required us to econometrically define performance measures (such as keeping test scores higher than predicted and keeping expenditures per student lower than predicted given the characteristics of the

district) and to see how such measures impacted upon school superintendents' compensation in their current positions and their mobility to higher paying and/or larger districts. Because we had longitudinal data, we were also able to observe, from knowledge of which superintendents were moving, whether knowing who the superintendent was in a district appeared to influence the school district's performance. Again our empirical research was conducted primarily by a PhD student, Richard Chaykowski, who is now a professor at Queens University in Canada (R. Ehrenberg, Chaykowski, & Ehrenberg, 1988a, 1988b).

Still, a third joint project with my wife resulted from when she was being interviewed for her school superintendent position in the spring of 2001. Five school board members from the district came to Ithaca, where she was then the Deputy Superintendent of Schools, to interview practically everyone in the community and to also meet with me. At dinner that evening, one of the board members mentioned that the district had never lost a school budget vote; in New York State taxpayers vote on school budgets each spring. That immediately led us to wonder if there was a literature on school budget vote success and ultimately, my wife and I, along with Cornell undergraduate student Chris Smith and PhD student Liang Zhang, wrote an empirical paper on the determinants of school budget vote success (R. Ehrenberg, Ehrenberg, Smith, & Zhang, 2004). As an experienced administrator, my wife understood division of labor and delegation; she and I developed the ideas and the students did the work. Other papers I wrote on K12 education issues arose from topics we had talked about but, due to constraints on her time, on which she chose not to work on with me.

Without access to many graduate assistants at the University of Massachusetts, I began my first paper with an undergraduate coauthor while I was there. I was interested in whether local union building trade leaders called chief business agents were rewarded for their performance. They perform many functions, but negotiating labor contracts is an important role. Data on the wages scales of different building trade unions (carpenters, painters, etc.) by city were published regularly, and I wondered whether these business agents' salaries were tied to how high their members' wage scales were as compared with the same trade's wage scales in other cities and the wage scales of other trades in the same city.

Data on the salaries of the chief business agents were available in the 1970s only in paper form at the Labor-Management Services Administration offices at the U.S. Department of Labor in Washington, DC. A bright undergraduate student was going down to DC for a semester on an internship, and with the promise of being a coauthor, he spent his lunch hours for several months copying this information for us. He and I worked on the econometric analyses when he returned. Our paper was published in 1977, after I arrived at Cornell; by then he was a graduate student at Northwestern (R. Ehrenberg & Goldberg, 1977).

Over the next 20 years, flush with graduate research assistants, I produced many PhD students, but very few of our ILR undergraduate students went on for PhDs in economics.⁸ When I returned to the faculty after my stint as a Cornell vice president, I also decided that if I cared about the flow of future PhDs in economics and related fields it was important for me to involve undergraduate students in research early in their academic careers. I have described how I do this elsewhere, but partially it involves my being able to hire undergraduate students as research assistants through the funding for CHERI that I have received from the Andrew W. Mellon Foundation and other sources (R. Ehrenberg, 2005). Since 1998, I have employed more than 50 Cornell undergraduate students as research assistants and written 12 papers that have had at least one undergraduate coauthor, with 10 different undergraduate students being coauthors of these papers. My most frequent undergraduate coauthor is Chris Smith, who went on to receive a PhD in economics at Massachusetts Institute of Technology (MIT) and is now an economist at the Board of Governors of the Federal Reserve System in Washington, DC. Eight of my other undergraduate CHERI research assistants have either received PhDs in economics or public policy, or are currently enrolled in PhD programs in these fields.

Table 5. Edited Conference Volumes and Symposia.

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- Ehrenberg, R. G. (Ed.). (1990). *Do compensation policies matter?* Ithaca, NY: ILR Press.
- Ehrenberg, R. G. (Ed.). (1994). *Choice or consequences: Contemporary policy issues in education.* Ithaca, NY: ILR Press.
- Ehrenberg, R. G. (Ed.). (1997). *The American University: National treasure or endangered species.* Ithaca, NY: Cornell University Press.
- Blau, F. D., & Ehrenberg, R. G. (Eds.). (1997). *Gender and family issues in the workplace.* New York, NY: Russell Sage.
- Alexander, F. K., & Ehrenberg, R. G. (Eds.). (2003). *Maximizing resources: Universities, public policy and revenue production.* San Francisco, CA: Jossey Bass.
- Ehrenberg, R. G. (Ed.). (2005). *Governing academia.* Ithaca, NY: Cornell University Press.
- Ehrenberg, R. G. (Ed.). (2007). *What's happening to public higher education?* Baltimore, MD: Johns Hopkins University Press.
- Stephan, P. E., & Ehrenberg, R. G. (Eds.). (2007). *Science and the university.* Madison: University of Wisconsin Press.
- d'Ambrosio, M. D., & Ehrenberg, R. G. (Eds.). (2008). *Transformational change in higher education: Positioning colleges and universities for success.* New York, NY: TIAA-CREF Series on Higher Education.
- Ehrenberg, R. G., & Kuh, C. V. (Eds.). (2009). *Doctoral education and the faculty of the future.* New York, NY: Cornell University Press.
- Ehrenberg, R. G. (Ed.). (2010). Symposium: Persistence rates in STEM field majors. *Economics of Education Review*, 29, 888-946.
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The count of my coauthored papers with undergraduate students is smaller than it should be because I “gave away” one coauthored paper to the two undergraduate students working on it. I had obtained data from Cornell on the number of PhD students that each Cornell faculty member had supervised over a 7-year period and planned to conduct analyses of how and why the Gini coefficient for the inequality of faculty workloads in supervising PhD students varied across disciplines at Cornell and why faculty productivity in supervising PhD students within a discipline varied across individual faculty members.

The students working on the paper got so excited about doing the research that I realized, especially since the marginal value of an additional publication or citation was so low to me at that stage of my career, that they really did not need me to be a coauthor. They completed the project on their own, working on responding to referees’ comments, even after they had graduated, that included implementing econometric methods with which I was unfamiliar. The paper was accepted for publication (Crosta & Packman, 2005) and although I cannot list it on my vita, I am very proud of it. Based at least partially on that paper, one of the coauthors, Peter Crosta, was accepted at, and went on to receive a PhD in the economics of education from Columbia Teachers College.

Collaboration Without Being a Coauthor

About 20 years into my career, I realized that one’s impact on an area of study can be magnified if one serves as a convener of a conference with a set of commissioned papers on an important topic, and then sees the conference through to publication. Over the years, I have edited or coedited 11 conference volumes or journal symposia. Sometimes, I have had a sole authored or coauthored paper within the volume, but the impact of each of these volumes has been much greater than the impact of my own paper.

Table 5 contains a listing of the 11 volumes and symposia, which are not included in the publication counts found in Table 1. Several of these publications had a coeditor who helped me to organize the underlying conference and edit the volume. These coeditors include a Cornell

faculty colleague (Fran Blau), a faculty member at another university (Paula Stephan), a university president (F. King Alexander), the director of the TIAA-CREF Institute (Madeleine d'Ambrosio), and a colleague from the National Research Council (Charlotte Kuh). Six of the last seven resulted from conferences that I organized at the CHERI.

The last, the symposium on “Persistence Rates in STEM Field Majors” consisted of five papers; three of them were authored by PhD students of mine who were graduate research assistants at CHERI. I helped to design each of the studies and initially planned to be listed as the second coauthor of each of the papers. But as the students got into the research, I realized that they did not need my help in finalizing the design of the studies and conducting the empirical research. I also made the judgment that a sole authored publication might mean more to them than being the first author of a joint publication with me. So, again given that the marginal value to me of additional publications and citations clearly was approaching zero, I removed my name from those papers and thus have three fewer coauthored papers with my graduate students listed on my vita than I could have had. Some colleagues have suggested to me that having a joint paper with a distinguished senior faculty member might be worth more to a PhD student in the job market than having a sole authored paper on their own; however, all three of these PhD students wound up with jobs at universities.

Collaborations are not limited to publications. Every other year, since 2000, my dear friend Michael Olivas, distinguished chair of law at the University of Houston Law Center and director of the Institute for Higher Education Law and Governance, has hosted a Higher Education Finance Round Table at which six to eight young scholars in the fields of college economics and higher education finance are invited to spend an intense 3 day mentoring session with Michael in Houston. It was my great pleasure to serve as a faculty member in that program from 2000 to 2014 and through that experience I met and helped to mentor a large number of young scholars, many of whom have gone on to become leaders in their fields.⁹

Concluding Remarks

As this essay has shown, my coauthors and collaborations have arisen for many reasons. To enumerate just a few, these include conversations with faculty colleagues and colleague elsewhere about research by others or policy issues, sharing of data both as a donor and as a recipient, invitations to participate in larger projects, the division of labor and working with people who have complementary skills and personalities, educating graduate and undergraduate students and the desire to give the former a leg up in the job market to encourage the latter to consider PhD study, discussions with my wife about issues she faced as a teacher and an administrator in public education, and efforts to magnify my impact on an area of study by convening conferences, commissioning papers, and seeing them through to publication.

Writing reflective essays is a labor of love. I have written a number of previous reflective pieces and have found that they help me to understand what I have done, why I have done these things, where I am today, and what I want to do in the future. I regularly encourage my faculty colleagues and my graduate students to think about doing similar pieces during their careers (R. Ehrenberg, 1999, 2005, 2006, 2009).

Writing this piece was a special pleasure because it provided me the opportunity to think back on all of the coauthors I have worked with who have had such important impacts on my career and life. Many of these coauthors—colleagues from Cornell and around the country, and former graduate and undergraduate students—have become lifelong friends. So add to the reasons that I have enumerated in this article for being a coauthor what is perhaps the most important one: the friends you make.

Appendix

Coauthors.

Name	Type	Name	Type
Deborah Anderson	G	Jared Levin	U
Orley Ashenfelter	OF	Jean Li	G
Corry Azzi	F	Albert Liu	G
Jean Baderschneider	G	Rebecca Luzadis	G
Burt Barnow	OF	Joyce Main	G
Michael Bognanno	G	Alan Marcus	G
Dominic Brewer	G	Mirinda Martin	G
Sharon Brucker	OF	Michael Matier	IO
Richard Butler	F	Pangiatos Mavros	G
Richard Chaykowski	G	Marquise McGraw	U
John Cheslock	G	George Milkovich	F
Charles Clotfelter	OF	Mordechai Mironi	G
Gary Cohen	G	James Monks	OF
Scott Condie	G	Jesenka Mrdjenovic	IO
Leif Danzinger	F	Susan Murphy	U
Claude Desjardins	OF	Mathew Nagowski	F
Eric Ehrenberg	E	Ronald Oaxaca	U
Randy Ehrenberg	E	Robert Olsen	G
Eric Eide	OF	Richard Patterson	G
Thomas Eisenberg	U	Paul Pieper	OF
Julia Epfantseva	G	Sarah Prenovitz	G
Robert Flanagan	OF	Joseph Price	G
Peter Fontanella	IO	Pamela Rosenberg	IO
Malcom Getz	OF	Daniel Rees	G
Gary Goldberg	G	Michael Rizzo	G
Steven Goldberg	U	Donna Rothstein	G
Gerald Goldstein	OF	Gee San	G
Dan Goldhaber	G	Paul Schumann	G
Jeff Groen	F	Ronald Seeber	F
Kevin Hallock	F	Dan Sherman	G
James Hewlet	G	John Siegfried	OF
Peter Hurst	IO	Chris Smith	U
George Jakobson	F	Robert Smith	F
Todd Jick	G	Eric So	G
Lawrence Kahn	F	Doug Webber	G
Herschel Kasper	F	Kenneth Whelan	G
Andrew Key	U	Rachel Willis	OF
Adam Kezbom	U	J. Douglas Willms	OF
Dan Klaff	U	Liang Zhang	G
Thomas Kochan	F	Harriet Zuckerman	OF
Dmitry Kotlyarenko	U		

Note. G = graduate students; U = undergraduate students; OF = faculty and staff at other universities and organizations; F = faculty, visiting faculty and postdocs at my own institution; IO = administrators and staff at my own institution; E = Ehrenberg family (wife and son).

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Notes

1. The final interval is 7 years long.
2. The publication count does not include working papers that have not yet been published, many of which were coauthored with graduate students. My curriculum vita, which includes these, is available at <http://faculty.cit.cornell.edu/rge2>.
3. However, several coauthored papers written with an undergraduate student and other UMass faculty were published in later years.
4. These individuals are listed in the Appendix.
5. Recently, Dan told me that his suicide paper also started as a joke.
6. The book was R. Ehrenberg and Jakubson (1988).
7. R. Ehrenberg, Ehrenberg, Rees, and Ehrenberg (1991). My son Eric went on to publish his own paper on K12 education while enrolled at Georgetown Law School (E. Ehrenberg, 1996). My younger son Jason rejected the opportunity to coauthor with me on research while he was a high school student, but the publication bug bit him while he was at Michigan Law School (J. Ehrenberg, 1998).
8. But those that did become extraordinarily successful academics included David Bloom (Harvard), Alan Krueger (Princeton), Phil Levin (Wellesley), Peter Capelli (Pennsylvania), and Jan Svejnar (Columbia).
9. One notable star student of ours was F. King Alexander, who is now the president of Louisiana State University (LSU).

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Author Biography

Ronald G. Ehrenberg has served more than 40 years as a professor and academic administrator for Cornell University. He is currently the Irving M. Ives Professor of Industrial and Labor Relations and Economics, Stephen H. Weiss Presidential Fellow, and director of the Cornell Higher Education Research Institute (CHERI) at Cornell University.

**Chapter 7: Involving Undergraduates in Research to
Encourage Them to Undertake Ph.D. Study in Economics**

Ronald G. Ehrenberg

Involving Undergraduates in Research To Encourage Them To Undertake Ph.D. Study in Economics

By RONALD G. EHRENBERG*

The number of Ph.D.s granted in economics annually by American universities has fluctuated between 900 and 1,100 since the early 1970s (Ehrenberg, 2004 fig. 1). However, increasingly these Ph.D. degrees are granted to temporary residents of the United States; while temporary residents earned less than 20 percent of the Ph.D.s in economics in 1970 by 2002 they earned over 55 percent (Ehrenberg, 2004 fig. 2). The declining interest of American students in pursuing Ph.D. study in economics is due to a number of factors, including much better earnings opportunities in related fields, such as law and business, and the declining attractiveness of academic careers in economics that has been caused by the declining shares of faculty positions in economics departments that are full-time tenured and tenure-track ones. For example, a survey of economics department chairs undertaken by the Cornell Higher Education Research Institute (CHERI) in 2003 found that nationwide the percentage of economics department faculty members at surveyed institutions in full-time tenured and tenure-track positions fell from about 75 percent in 1982–1983 to about 58 percent in 2002–2003 (Ehrenberg, 2004 table 1).

Recent evidence suggests that the growing use of part-time and full-time non-tenure-track faculty nationwide adversely influences American college students' graduation rates (Ehrenberg and Liang Zhang, 2005). I have become concerned that the increased usage of non-tenure-track faculty members also likely adversely influences the propensity of undergraduate students to go on for Ph.D.s in economics for two reasons.

First, many students enter college with the expressed intent of becoming doctors or lawyers, getting an MBA, or going on for advanced de-

grees in the sciences or humanities. However, with the exception perhaps of the small number of high-school students who have taken advanced-placement classes in economics, very few entering freshman have any idea what Ph.D.s in economics do.¹ The son of two secondary-school health-education teachers, when I entered college, my ambition was to become a high-school mathematics teacher. But one young faculty member turned me on to economics; I wanted to be just like him, and that was my motivation for going on for a Ph.D. Many colleagues have similarly told me of a key professor who motivated them to want to become a professor. Role models are important, and if the faculty members teaching principles of economics classes are not involved in research and are not in tenured or tenure-track positions, they will be less likely to serve as role models and to motivate and encourage their students to go on for Ph.D. study.²

Second, most top graduate programs in economics now require four semesters of calculus and linear algebra, as well as real analysis. Only by getting to undergraduate students early in their college careers can faculty members explain how students need to structure their undergraduate studies if they are to have any hope of pursuing Ph.D. study in economics. Part-time

¹ The College Board reports that of the 1,101,802 high-school students who took Advanced Placement exams in 2004, 41,265 took the macroeconomics exam, 27,674 took the microeconomics exam, and 17,398 took both exams (see http://www.collegeboard.com/student/testing/ap/exgrd_sum/2004.html). In contrast, the biology exam was taken by 111,104 students, the chemistry exam by 71,070 students, the two calculus exams by over 276,000 students, the statistics exam by 65,878 students, the U.S. History exam by 262,906 students, and the English Literature and Composition exam by 239,493 students.

² The CHERI survey indicated that over 80 percent of principles of economics students at liberal-arts colleges in 2002–2003 were taught by tenured or tenure-track faculty, so the problem I am describing is not as pressing for these colleges (see www.ilr.cornell.edu/cheri) for details of the survey). Whether faculty involvement in research is important in generating future Ph.D.s at these institutions has been addressed by Robert J. Lemke et al. (2004).

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and full-time non-tenure-track faculty members are unlikely to see this as part of their responsibilities.

I. Encouraging Students to Consider Ph.D. Study in Economics

During the first 25 years that I spent at Cornell University I chaired the Ph.D. committees of over 35 graduate students, but very few undergraduate students from my college went on for Ph.D.s in economics.³ I decided about five years ago that if I cared about the flow of future Ph.D.s in economics it was important for me to produce future Ph.D. students, as well as Ph.D.s, and that involving undergraduate students in research early in their academic careers was the best way to try to accomplish this.

One strategy that I pursue is to recruit undergraduate research assistants prior to their arrival at Cornell. I read through the folders of the students who have accepted offers of admissions to my college (approximately 160) and search for students with strong mathematics, statistics, or economics backgrounds. This usually means students who have taken calculus and/or either advanced-placement economics or advanced-placement statistics in high school.⁴ I write several of these students prior to their arriving at Cornell and offer them positions as research assistants at CHERI. Given the large fraction of our students who must take out loans or work as part of their financial-aid packages, the take-up rate on these offers is high.⁵

³ But those that did were superb—for example, Alan Krueger (Princeton), David Bloom (Harvard), and Phil Levine (Wellesley).

⁴ All the students admitted to ILR-Cornell are interested in careers in law, human resources, collective bargaining, union organization and administration, or applied social sciences. Thus, it is easy for me to quickly go through the application files and pick out the few top students who may prove to be interested in economics. Economists teaching in liberal-arts colleges would need to focus their attention on applicants who express interest in mathematics or social science. Economists at large universities would need to establish good relationships with admissions staff at their institutions, explain to the admissions officers the types of students that they are looking for, and ask them to make referrals of student names to them.

⁵ Of course one needs money to pay the students, and I am deeply indebted to the Andrew W. Mellon Foundation and the Atlantic Philanthropies (USA), Inc. for providing the funding to CHERI that makes this possible. The sums of money involved here are not large, and Cornell University's

The current generation of entering first-year students is so computer-literate that they rapidly learn how to use spreadsheet and statistical software programs, such as EXCEL, Stat/Transfer, and STATA. I heuristically explain the econometric models we are using to them, and even if they have not had classes in statistics, they quickly understand the research that I am conducting. Within a short time, we are working together on empirical research projects. These students also mention our work to their friends, and I often link up with other bright students through these referrals.

Typically the type of research I do with my undergraduate students is not as sophisticated as the research I do with my graduate students or postdoctoral fellows. However, the research is of sufficiently high quality that since 2000 I have published six papers that had at least one undergraduate coauthor, and I have supervised the preparation of another two published papers in which undergraduates were the only authors (Dmitry Kotlyarenko and Ehrenberg, 2000; Ehrenberg and Christopher L. Smith, 2003, 2004; Daniel B. Klaff and Ehrenberg, 2003; Ehrenberg et al., 2004a, b; Peter M. Crosta and Iris G. Packman, 2005; Matthew P. Nagowski, 2005). Seven different undergraduate students were associated with these papers.

One of these students, who came to Cornell wanting to be a lawyer, is now a second-year Ph.D. student in economics at MIT, and another would-be lawyer is a first-year Ph.D. student in the Economics of Education program at Columbia Teachers College. A third student is applying to economics Ph.D. programs this year. A number of papers are in progress with other undergraduates, and I anticipate at least two more applications to Ph.D. programs will come from my group within the next two years, including one from an underrepresented minority student.

My students' decisions to pursue Ph.D. study is due partially to the enjoyment that they see I have working with them, partially to the fun that they have doing the research, and more generally from their learning what the life of an

experience is that alumni are very willing to contribute funds to enhance undergraduates' research experiences. I encourage economics departments to raise funds for this purpose.

academic economist is like. To be honest, I emphasize to them the uncertain nature of the academic job market and discuss the types of positions for Ph.D. economists that are available outside of academia. They know, for example, about former Ph.D. students of mine who have been employed at the Rand Corporation, the Urban Institute, Mathematica Policy Research, the Center for Naval Analysis, the World Bank, the OECD, the Congressional Budget Office, the Bureau of Labor Statistics, Merrill Lynch, the Federal Trade Commission, and Merck Pharmaceuticals. I also encourage them to have an experience as a junior economist in a nonacademic setting before they apply to graduate school, so that they can see firsthand what nonacademic Ph.D. economists do. The three I mentioned above spent time, respectively, at the Center on Budget and Policy Priorities, Mathematica, and the Brookings Institution during or after their undergraduate studies.

II. Involving More Undergraduate Students in Research

Once I began worrying about attracting more students into Ph.D. study, it was a natural extension to think more broadly about how to involve more undergraduate students in research. After all, if what is unique about research universities is the extent to which the faculty is involved in research, shouldn't our students, who bear some of the costs of the research, also derive some of the benefits in terms of being exposed to the research process?⁶ I decided to require group econometric research papers in my two undergraduate classes: a sophomore-level labor-economics class (with an enrollment of about 35–40) and a junior/senior-level class on the economics of the university (with an enrollment of about 65). The papers are group projects (students may work in groups of up to four; on average they tend to work in groups of two) to allow me time to meet with each group multiple times during the semester to check on their progress and to help guide their work.

⁶ A forthcoming paper (Ehrenberg et al., 2005) presents evidence that undergraduate students bear part of the cost of increased faculty research in the forms of increased student/faculty ratios, increased exposure to non-tenure-track faculty, and somewhat increased tuition payments.

I provide each class with a list of suggested research topics. Given that my current research interest is the economics of higher education, the topics relate to that area. Table 1 provides examples of some of the topics that I share with students in the labor-economics class (in parentheses I indicate to what section of the course each topic corresponds). I emphasize to the students that they are not restricted to these topics and that they can discuss other topics with me (and many do), but that these are topics for which I know data are readily available.

Student responses to these projects have been overwhelmingly positive. The projects allow them to make use of statistical methods that they have learned to confront "real world" issues. They allow them to test economic theories and to understand better, the *ceteris paribus* nature of the predictions of these theories. The projects give them experience in conducting empirical research and, for some, this experience leads them to consider future study in economics, or careers as economists. Many of these students will not have the mathematical background necessary to go on directly on for an economics Ph.D.; however, some pursue degrees in public policy, and others go on to Ph.D. programs in other applied social-science fields. Given the nature of my college, a number of the students go on to law school, but some of these students now think about careers as law professors, in which they can blend legal and economic analyses.

III. Concluding Remarks

Involving undergraduate students in research, both within and outside of the classroom, is a very time-consuming activity. However, the benefits I receive from doing this have been enormous. In addition to these students having helped to pad my *vita* and to my sense of the importance of helping to contribute to the pool of potential Ph.D. students in economics and engaging undergraduates in the major activity of a research university, I have gotten to know many undergraduate students much better than I would have if I were not engaged in these activities. Many of the relationships that I have established with these students will be very long-lasting in nature, and I will follow their careers and personal lives with great interest and pride.

TABLE 1—EXAMPLES OF UNDERGRADUATE EMPIRICAL RESEARCH PROJECTS (SECTION OF THE LABOR-ECONOMICS CLASS TO WHICH THE PROJECT RELATES)

- 1) Each year average faculty salary data is published in *Academe* for male and female faculty, at each rank, by institution. The ratio of female to male salaries varies widely across institutions, as does the ratio of female to male faculty members. What factors other than differences in gender discrimination across institutions are responsible for these differences? (Gender, Race and Ethnicity in the Labor Market)
- 2) There are many ways to measure the research productivity of faculty—two are the number of citations to an individual's published work and the number of his or her publications. Human-capital theory predicts that the productivity of an individual should vary over the life cycle. What do the life cycle productivity profiles actually look like for Cornell economists? Why should Cornell economists' research productivity vary across individuals at a point in time? (Human Capital Theory)
- 3) In the *Yeshiva* decision, the Supreme Court effectively barred collective bargaining for tenured and tenure-track faculty members at private colleges and universities. However, state laws permit faculty at public institutions to bargain in a number of states. What determines whether faculty members at a public institution are covered by a bargaining contract, and do unionized faculty members at public higher-education institutions earn more than their otherwise comparable nonunion faculty colleagues? (Unions and the Labor Market)
- 4) Faculty/student ratios vary widely across colleges and universities in the United States. According to the theory of labor demand, when faculty salaries are high, one should expect to observe, *ceteris paribus*, lower faculty/student ratios. However, those institutions with the highest faculty salaries also tend to have the highest faculty/student ratios. Does this observation mean that the theory of labor demand is irrelevant or incorrect for nonprofit and public institutions? (Labor Demand)
- 5) Average faculty salary levels vary widely across academic institutions, even if one confines one's self to universities that produce Ph.D. degrees. Every decade or so, the National Research Council (NRC) conducts a study that subjectively rates the quality of Ph.D. programs in different fields. As part of the NRC's 1995 study, information on objective measures of faculty research productivity was also collected. How should average faculty salaries vary with average faculty research productivity? What other variables might be associated with differences in faculty salaries across institutions? (Pay and Productivity, Labor Mobility)

My goal in writing this essay is to encourage senior economists in academia to emulate my behavior. In particular, economists at major re-

search universities, many of which attract our nation's best undergraduate students, should realize that they have an obligation to the profession to enhance the flow of undergraduate students into Ph.D. study, as well as to train those students who show up in their Ph.D. programs.

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- Nagowski, Matthew P.** “Associate Professor Turnover at America’s Public and Private Institutions of Higher Education.” *American Economist*, 2005 (forthcoming).

Chapter 8: List of Completed Articles & Books by Ronald G. Ehrenberg

I. *Articles and Chapters in Books*

"Absenteeism and the Overtime Decision," *American Economic Review*, June 1970.

"Heterogeneous Labor, the Internal Labor Market, and the Dynamics of the Employment-Hours Decision," *Journal of Economic Theory*, March 1971.

"The Impact of the Overtime Premium on Employment and Hours in U.S. Industry," *Western Economic Journal*, June 1971.

"The Demand for State and Local Government Employees," *American Economic Review*, June 1973.

"Organizational Control and the Economic Efficiency of Hospitals: The Production of Nursing Services," *Journal of Human Resources*, Winter, 1974

"Municipal Government Structure, Unionization, and the Wages of Fire Fighters," *Industrial and Labor Relations Review*, October 1973.

"Heterogeneous Labor, Minimum Hiring Standards and Job Vacancies in Public Employment," *Journal of Political Economy*, November-December 1973.

"The Demand for Labor in the Public Sector" (with Orley Ashenfelter). In D. Hamermesh, ed., Labor in the Public and Non-Profit Sectors, Princeton University Press), 1975.

"Household Allocation of Time and Church Attendance" (with C. Azzi), *Journal of Political Economy*, February 1975.

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