

Content Articles in Economics

In this section, the *Journal of Economic Education* publishes articles concerned with substantive issues, new ideas, and research findings in economics that may influence or can be incorporated into the teaching of economics.

HIRSCHEL KASPER, Section Editor

Samuelson's *Economics* at Fifty: Remarks on the Occasion of the Anniversary of Publication

Paul A. Samuelson

Dr. Samuel Johnson went to see the revival of his earlier play, *Irene*, which had been a failure. When Boswell asked him what he thought of the performance, Johnson replied sadly, "I had thought it better."

My experience was a happier one in reviewing today's commemorative reissue of the first 1948 edition of Samuelson's *Economics*. With the objectivity that 50 years of perspective brings, I examined it minutely. To my surprise, it read much better than I could ever have suspected. No wonder it was an instant best-seller, which set a new pattern for all the late 20th-century economic textbooks. For, as I had almost forgotten, it was not merely the first text to bring effectively to beginners macroeconomic modeling along Keynesian and post-Keynesian lines. It was that. But in addition, this book brought into the basic economics course numerous innovations in microeconomics that are today taken for granted. Even a fond author forgets the merits of a favorite brainchild.

Before Stockholm gave Nobel Prizes for researches into *human capital*, the 1948 text introduced students to the theoretical and factual payoffs from additional years of schooling. I do not recall any previous texts that discussed the economics of *social security* and that included long ago a warning that the dynamics of demography would mandate an inevitable increase in the funding needed to provide for the foreseeable growth in the ratio of aged dependents to working-age numbers.

What sex is to the biology classroom, stocks and investment riskiness is to the sophomore economics lecture hall. That chapter on *personal finance*, put there to keep hard-boiled MIT electrical engineers awake, helped make introductory eco-

nomics the largest elective course at hundreds of colleges. My great predecessors—John Stuart Mill, Alfred Marshall, Frank Taussig and Irving Fisher—were writing for their times. I was writing for the last half of the 20th century—an epoch that surpassed even my youthful optimism. Those classic authors had dealt with essentially pure capitalism. I had to grapple with the tradeoffs and opportunities inherent in the mixed economy, a social pattern that by now spreads across the continents of the Americas, Europe, Asia, and Africa.

1948 was then. 1998 is now. Because mine was a text shaped to be in date at mid-century, the reviewing author has to wince at various nonoptimalities that are obvious from hindsight. Fiscal policy was given too much emphasis at the expense of monetary policy. Yes. Can this be excused by the fact that not until the 1951 Accord did the Federal Reserve get back its freedom to exercise an autonomous monetary policy? Admittedly, that is an excuse in part. But is it not a duty for the economics writer to pound on the table and nag against bad institutional policies?

Enough of self-congratulations and excuses. Let me try to describe how being a successful textbook author changed my career. Already at 30, I had been a recognized researcher at the frontier of mathematical economics and statistics. That trajectory went on little affected by my success as a textbook author.

Financially hitting the best-seller jackpot is of course luck like no other. Students do not buy books; they are captive slaves of their instructors. Fiction and nonfiction works usually have their single year of glory. A lucky textbook, however, can go on for a long, long time. And royalties that arrived in the form of 1940's dollars came at a time when stocks typically sold at 8-to-1 price/earnings ratios and not infrequently carried 6 percent or higher dividend yields.

I am not here to talk about personal finance. A McGraw-Hill vice president once said to me: "You can't buy happiness with money. You can't buy love with it, or buy good health. Of course, I mean *Confederate* money." He was not wrong. But I have found you are rich if you have a little more money than those around you. In consequence, for 50 years money has meant nothing in my life. I have always refused to testify in court for money. I do not criticize colleagues who do. I have not taught night school or summer school. I cheerfully paid 92 cents out of each marginal dollar to the IRS back in those days when U.S. GDP (gross domestic product) grew at a real rate of more than 4 percent per annum.

I never received one penny in the form of a publisher's book advance. Out of two dozen clamoring publishers—big and small—I selected McGraw-Hill solely for two reasons. Reason 1: Macmillan and Prentice-Hall, the other giants back then, already had best-selling textbooks; McGraw-Hill did not. Reason 2: What clinched the deal was that McGraw-Hill had published the scholarly 2-volume treatise on *Business Cycles* by my Harvard teacher Joseph Schumpeter and had also published the 15-volume compendium on what had been learned at the MIT Radiation Laboratory where I had spent the War. Besides, as a bonus, McGraw-Hill's representative, Basil Dandison, was a gentleman, and when the other publishers saw that he left his raincoat and galoshes in my office whenever he visited MIT, they gave up all hope.

I was able recently to reach Basil Dandison at his home in Lexington, Massachusetts. He is 97 years old but completely with it mentally. I explained McGraw-Hill's reissue of the 1948 edition. I asked him what message I could repeat on this occasion. Basil's modesty has not changed. Here is what he said: "It was a great thing for McGraw-Hill when Paul Samuelson decided to sign up with us." I say, "What a gentleman!"

At this point I must digress. At McGraw-Hill scores of names float in memory—Curtis Benjamin, Harold McGraw, the tax lawyer Bill Cady. It was Cady who asked me how often I was audited by the IRS. When I replied, "Never," he said, "You are definitely not living right." I knew better: Justice Oliver Wendell Holmes taught me that "Taxes are the price we pay for civilization." When I passed this wisdom on to my colleague Franco Modigliani, he said "That is a very non-Italian attitude."

Bob Locke, Jack Taylor, Betty Binns, Mary Griffin—the list of McGraw-Hill co-workers is endless. Between us, we pioneered the use of multiple colors in the textbook field. I advanced the cause of education by being the first McGraw-Hill author to accept lower royalty rates on special international English-language editions. My interest was not so much in dollars as in influencing minds.

A new layer of fame that I never dreamed of evolved. At annual American Economic Association meetings I was besieged by groupies reminiscent of Talmudic students crowding around famous rabbis. I never knew what to say when people would tell me: "We use your book." One day, I heard myself saying, "Mrs. Samuelson will be pleased," and that has solved my problem ever since.

The policeman at the door of the White House whispers, "I am using your book at Georgetown night school." The chap who sells me a newspaper at Harvard Square confides that at Northeastern he studied my book. No folks, alas, ever remember the name of their economic analysis instructor; at best they may recall that he was fat. But I can always tell a woman her age from the color of the edition she claims to have used.

Wherever I go in Europe, Asia, or Latin America, strangers greet me as an old friend or old tormenter. I have never been to India, Russia, or China, but in my MIT office, I am asked to autograph copies of translations. In one lifetime, while adhering to the same eclectic liberalism, I have been at first denounced as *avant garde* and later castigated as a running jackal of capitalism.

All this is pleasant enough, but in honest truth, the few hundred of scientific articles that have never earned back their editorial costs mean more to me than all the financial journalisms and congressional testimonies that overflow my MIT file drawers.

I tell no secret when I repeat that fame and reputation are much a matter of luck and chance. Yes, one capitalizes on one's luck, but without something to capitalize on, how far can mere talent and effort take you? I came into economics at a fortunate time—when the world was misbehaving in depression and inflation and just when academic opportunity was exploding at more than exponential rates. At Chicago, Harvard, and MIT, precisely when and where the action was heating up, I was there. The tide raises all ships, and once among the leaders, I had only to sail as fast as the fleet to retain lead position. Best of all

have been the hundreds of companions at arms acquired along the way. Always it is better to travel than to arrive. Remember where you heard that last.

Paul A. Samuelson is Institute Professor Emeritus at MIT.

Harold W. McGraw, Jr.

Few authors have achieved the level of success that Paul Samuelson has enjoyed, and 1998 marks the 50th anniversary and the 16th edition of The McGraw-Hill Companies' textbook, *Economics*, by Paul Samuelson and William Nordhaus. A number of us at The McGraw-Hill Companies have enjoyed a long relationship with Paul Samuelson: economist, scholar, author, and Nobel Prize winner. Our corporate history has matured as Paul Samuelson's career has evolved. It has been a time span that has witnessed the development of the original Samuelson textbook for elementary economics courses into a veritable educational institution.

It is hard to believe that so many years have passed since the publication of Paul's best selling first edition. In the years leading up to World War II, America was a very different place. Paul Samuelson was a graduate student at Harvard when he was discovered by Basil Dandison, one of our truly great college textbook representatives.

The day was December 8, 1941, the day after Pearl Harbor. Basil found only one department professor that day, Seymour Harris, who was willing to settle down and discuss a book. Professor Harris mentioned a young man named Samuelson who had come from the University of Chicago and was doing graduate work on the campus. Harris felt that Samuelson would be a good prospect if he would join in an economic symposium and write a couple of chapters for a book to be based on that symposium.

Basil recognized talent when he saw it and followed Paul Samuelson throughout his career from Cambridge right through Paul's move to MIT. It was during his MIT tenure that the first edition of this timeless book was conceived and developed. At its introduction, *Economics* was unique in its field because it was the first college textbook to emphasize Keynesian theory, a concept some considered radical. Paul Samuelson officially signed on with The McGraw-Hill Companies in 1948.

Why has this textbook had such a long-term impact on the field of economics? Because, as Paul Samuelson himself said, when the first edition was published shortly after World War II, the time was right for a new approach in elementary economics—one that stressed the Keynesian revolution. His text was the first to introduce the study of macroeconomics. It was the first to bring the then state-of-the-art Keynesian approach to economic analysis down to the level that college freshmen could understand. It was an era when foreign trade exerted modest influence on the overall economic activity of the United States.

Samuelson had created a common economic language that from then on would be used throughout the world. His influence spread well beyond the world of academia. In 1970, Paul Samuelson's work was honored with a Nobel Prize in Economic Science.

In 1985, a 12th edition of *Economics* featured a new co-author, William Nordhaus of Yale University. Bill Nordhaus brought a broad mixture of contemporary teaching, research, and policy expertise to this collaboration. Paul's *Economics* stands as a symbol of The McGraw-Hill Companies' preeminent commitment to quality education, and it also underscores continued leadership and strength of our company's higher education division. We have sold more than three and a half million copies throughout the world since the book was published 50 years ago. Samuelson's *Economics* has not only been the most recognized economics textbook, it has also defined the organization and the approach of virtually every other economics text that has appeared over the past 50 years.

On the brink of the new millennium, I am delighted to have the opportunity to join in this salute to Paul Samuelson and to honor the innovative thinking that formed this book. I also want to congratulate Bill Nordhaus, the primary author of this classic text since the 12th edition. Bill has continued in the Samuelson tradition of excellence. I am proud to say the textbook is not just getting older, it is getting better. Bravo to Paul; this achievement is nothing short of remarkable.

Harold W. McGraw, Jr., is chairman emeritus of The McGraw-Hill Companies.

William D. Nordhaus

A golden anniversary for *Economics*. What a wonderful celebration! I hope you have seen the new edition, with the golden sun rising on the last edition of the 20th century. Sixteen editions is quite a feat! Yet, like the human body, its constituent parts change constantly as economics evolves. Continuous quality change was invented in the United States, not in Japan.

What better preparation for our celebration than to page through edition one and compare that with the golden edition just published? The overwhelming impression from comparing the bookends to this half century is how little the central concerns of economics have changed. As one old alum complained, "In economics, it's not the questions that change, it's the answers." The core problems of the 1990s differ little from those of the 1940s or any decade in between. We worry today as we did then about growth, distribution, and stability.

Is our economic growth satisfactory? The first edition concluded by noting that productivity is the key to future welfare. Since that time, with turnpikes and capital theory and the not-so-new new-growth theory, economists have made enormous strides in understanding the sources of the growth of nations.

Are the fruits of economic growth distributed fairly among the populace? The first edition concluded that “progress means more than an increase in gadgets and luxury goods. It means that fewer and fewer of the population will fall below the poverty line.” That is the origin of the term, the *poverty line*. The next time Bill Buckley is railing against LBJ’s Great Society, you can remind him that the liberal madmen in authority were distilling their frenzy from the first edition of some academic scribbler who wrote about the poverty line two decades earlier.

Is the business cycle under control? The first edition told us that the primary concerns of modern economics were the causes of unemployment, overcapacity, and depression. Perhaps this example disproves my thesis of the invariance of economic concerns, for the trend among fashionable textbooks today is to concentrate on trend and ignore cycle. Keynes is down, some would say out, in modern macroeconomics. The National Bureau of Economic Research (NBER) business-cycle dating committee has not met in years. Fresh-water macroeconomics tells us that cyclical wiggles are cycles caused by real business cycles with their technological shocks. Stochastic dynamic general equilibrium models turn the monetarist dictum on its head, holding that money does not matter at all.

Although business-cycle theories are selling at a discount in many a graduate-course syllabus, it would be a tragic mistake to erase them from our collective memory. If you think they are irrelevant, visit Japan, Mexico, Germany, and France. Book a trip to Korea, Hong Kong, Thailand, and Indonesia next year.

With 16 vintages and 4 million volumes, can we not find a speck of cork in the claret? The emphasis on the liquidity trap in the first edition hardly fits today’s America. But it might make good reading in Japan, where short-term interest rates are $\frac{1}{2}$ percent. And no sooner had the ink dried on the 16th edition’s discussion of the East Asian miracle economies than the miracle had turned to debacle.

Interestingly, the most criticized part of the text was its rosy interpretation of the economic growth performance of the Soviet Union until the mid-1960s. The common wisdom today is that the Russian economy was a Potemkin village, with showcase industries growing rapidly and personal consumption lagging behind. On further reflection, however, I am not inclined to believe that we grossly overestimated Soviet growth, but we might well have underestimated U.S. growth. If modern Russia looks so backward relative to modern America, it may be, as Mike Boskin and his colleagues have argued, because we have been systematically underestimating quality change in U.S. price, output, and productivity statistics. Boskin and company would add more than 1 percentage point to United States economic growth in recent years, which would push the U.S. way ahead of quality laggards. Where can you find a good discussion of this question? Look no further than page 408 of the 16th edition.

In celebrating 50 years of *Economics*, I would add one personal word. Little did I dream when I studied the 6th edition that I would help write the 16th. Textbook writing is a special alloy of joy and drudgery. Proofreading something for the 20th time is a dog’s life that makes Chinese water torture sound tolerable. But having the chance to help Paul Samuelson define and redefine the world standard for elementary economics has been a thrill year after year.

The historian Barbara Tuchman said about books what seems particularly true of textbooks: “Books are the carriers of civilization. Without books, science is crippled, thought is at a standstill, and history is silent. They are engines of change, windows on the world, lighthouses erected in a sea of time.”

Actually, few textbooks live as long as a lighthouse. Fifty years may make the Guinness Book of Records, particularly in such a vibrant subject as economics. The book is alive. Long live the book!

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Orley Ashenfelter

I want to say a few things about Paul Samuelson as a teacher in a context that will be unfamiliar to most people. For many years, Paul and I have tried to do the impossible: teach basic economics to lawyers. Of course, these are very special lawyers because they have been elevated to lifetime tenure as federal judges. This has been a very satisfying teaching job and, on the whole, the program, organized for many years by Henry Manne (at various universities including George Mason, Emory, and Miami), has been very successful.

Paul began teaching in this program (with Armen Alchian) nearly two decades ago, when it was first started. By now, he has probably taught upward of 400 to 500 federal judges in the areas of finance and international trade. It is a part of the tradition in this program that professors sit in on each other's lectures, and I have often listened to Paul teach. I would like to give you a little of the flavor of Paul's lecture style in the elementary class to give you an idea of the man's continuing interest in the topics that he first wrote about in his textbook 50 years ago and to show you the difficulty that all of us encounter in teaching basic economics.

Paul teaches two sessions. One session, which is particularly well attended, and not just by judges but by their spouses too (including my own!), covers the principles of modern portfolio management as applied to the stock market. Paul teaches this topic pretty much from the point of view of one of the modern inventors of the efficient markets hypothesis. But underlying the basic message is a sort of “but maybe, just maybe, if you listen to me I might have a tip or two.” My wife's view of Paul's track record is that it has been phenomenal, especially when he recommended Berkshire Hathaway a decade ago. But either way, Paul packs them in.

Paul teaches about portfolio management in a way that is probably unfamiliar to many who are otherwise familiar with him. His approach is very down-to-earth in getting the message across, and I imagine it to be very appealing to judges and to people in a general audience. For graduate students, on the other

hand, I imagine Paul's approach would not be quite so appealing because there are no equations really, and the approach would not be what they would expect.

Paul teaches a second session, also three hours in length, which I have listened to many times and which I find especially interesting: he covers the basic principles of comparative advantage. Now here is a subject that most people really do not understand very well, and certainly most people have problems with the idea of comparative advantage. Paul teaches this subject very carefully and uses pretty much the same example that would be found in early editions of his textbook. The judges sit through this discussion quite attentively, much to my surprise, and they do seem to get the point.

One of the attractive features of teaching an intelligent group of judges over a couple of weeks is that they have an acute sense of when they are being misled. And, frankly, they will ask questions that, however politely they may be phrased, are designed to make sure they are not being misled. Paul often began his lecture on international trade by stating that he was going to prove that even if he, Paul, could type better than anybody else it was not necessarily true that he should really spend all his life in the typing profession because what mattered was his relative skill at typing. I well remember one of the judges, a very distinguished gentleman, popping up to explain, "That's impossible. It can't be true." Paul replied by saying something like, "Just listen," and at the end of the three hours, the same gentleman came up and said, "You're right!"

I have always thought this was a good example of successful teaching and that, indeed, economists really could change noneconomist's minds. It turns out that, at about the same time, this particular program was being criticized in the press for "brainwashing judges," which, I suppose, would be one interpretation of learning about the principle of comparative advantage. Well, not much later I happened to see this same judge and, without thinking much about it, I asked him what he thought about the idea that we professors were brainwashing federal judges. The judge looked at me and said, "Orley, with all due respect, I've been in the courtroom for over a decade and I can tell you that I've been brainwashed by the best—and you guys are just not in that league!"

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Robert M. Solow

I was not present at the creation of *Economics: An Introductory Analysis*. I do not suppose there is anybody commenting in this issue of the *Journal of Economic Education*, apart from Paul of course, who was there when the first edition was published in 1948. But I have some more or less antediluvian recollections that I want to talk about.

I do know that I remember the second edition. One of the ways that I know I remember the second edition is a story that Paul has heard many times before. He commissioned my wife, Bobby, to index the second edition, and she agreed. She prepared the index for the 1951 version of the book. She has two stories she likes to tell about that. The first is that when Paul saw the index, he said almost immediately, "That was a very good index." Bobby said, "How could you possibly know whether it was a good index or not?" And Paul replied, "Well, I looked under Q. In the first edition the index only mentioned the Quantity Theory of Money, but you've got Quasi-rents as well."

The second story Bobby likes to tell is that the deal was that she would get \$35 for indexing the second edition—and Paul never paid. Now, if you imagine \$35 in 1951 invested with Warren Buffett and Paul Samuelson, you can see that he owes her a small fortune right now. But I am authorized to say that Bobby would rather not be paid; she would just rather have Paul in her debt.

I remember a lunch at the Smith House. The Smith House was a restaurant on the Charles River, now long gone and replaced by a dormitory or two, where the members of the economics department would, occasionally, go to have lunch together. We liked our lunches. This one must have taken place in the spring or summer of 1950. I know that it must have been just then because I remember Paul saying that he had just reached the Serutan age. Now Paul and I are probably the only people here who know what Serutan was. Serutan, s-e-r-u-t-a-n, is nature spelled backwards. It was a patent medicine, a sort of mild laxative that was sold to people as a general tonic. The belief was that the time to start taking Serutan was at 35. The general idea, I guess, was that if nothing else moved, your bowels would. And so Paul must have been just about 35, and that would be May of 1950.

But what made the lunch at the Smith House memorable was a different statement. I believe that there were perhaps six or eight of the usual suspects sitting around the table: Doug Brown, Cary Brown, Bob Bishop, Charlie Myers, Paul, myself, and Morris Adelman; I cannot be sure. But I distinctly heard Paul say, and I quote after 47 and a fraction years, "The purpose of economic theory is to make good financial journalism possible."

I was shocked. He may have been 35. I was 26. I still had not finished my Ph.D. thesis. I thought I was doing pure science, making the world safe for democracy or something very serious. I am a lot less shocked now; but the point I want to make is that you can hear in that remark someone who had spent the previous years writing just that particular elementary textbook. This is a very important, substantive point so I am going to press it a little.

In the course of my career at MIT, I must have spent 15 years teaching the elementary course. Mostly I taught the macro half of the course, but a half dozen times the micro half as well, using the Samuelson textbook of course. Well, a year or so ago, for utterly irrelevant reasons, I had occasion to go back and look fairly carefully at the textbooks that I had studied as a freshman at Harvard College in 1940–41, when I took the elementary course in economics. One of those textbooks was Garver and Hansen's *Principles of Economics*; the Hansen in question was Alvin Hansen, at that time a professor at the University of Min-

nesota. The other book was Sumner Slichter's *Modern Economic Society*. These were books that I used—a mere 6 or 7 years before the first edition of Samuelson. The difference between those books and Paul's was like night and day. (I do not actually remember Lorie Tarshis's elementary textbook. I know I saw it, but I don't really remember anything about it, so I can not put it in this context.)

But the introduction of Keynesian ideas was not the major innovation, the major theme to remember about the first edition of Samuelson. Paul's was probably the first truly postwar textbook, in the sense that it represented economics as it was in the postwar period and as it became, largely because of Paul's other career as a writer of economics for economists.

Garver and Hansen and Slichter are interesting books. They are generally historical and institutional and classificatory. They classify consumer goods in various interesting ways. They classify industries in various interesting ways. They are ruminatory books rather than analytical books. There are almost no diagrams in those books, I mean analytical diagrams, and of course only one equation, the quantity equation.

You can learn a lot about a course and a textbook by asking yourself what kind of exam would the teacher of that course from that text be able to set. You cannot imagine, and I certainly do not remember, any exam questions based on Garver and Hansen or Slichter that would ask a freshman or sophomore to draw and shift supply and demand curves. No such student would be prepared to use the supply–demand apparatus to analyze the incidence of an excise tax or of a payroll tax or to analyze what the effect of an advertising campaign might be on price and quantity.

Those older books simply do not present economics as a practical subject. I am speaking now of microeconomics; macroeconomics had only just been invented when Garver and Hansen and Slichter wrote their texts. Those older books do not present microeconomics as a sort of handy-dandy set of socket wrenches that you can apply to the nut or the bolt that you want to tighten or loosen today, a set of tools to be adapted to the particular problems that you have.

You can see the connection between the Paul who did write that kind of book and the Paul who said he thought that the function of economic theory was to permit the writing of decent financial journalism. I think that the Samuelson textbook really made that transition. You can teach almost the whole course based on Samuelson as a connected series of exercises in problem solving.

One of the things I liked about the book was the feeling that the author knew a whole lot more than he had put down on the pages of the text itself. Everything was simplified for the beginning student, but the instructor in the course, reading between the lines, would realize that all the higher order terms in the Taylor series had been thought through by the author and checked to make sure that nothing was being said that was really unsafe to teach to the elementary student. When I was teaching from the book years ago, I found it to be a really remarkable combination of simplicity on the page and artfulness in the background that the serious scholar would understand.

I must have watched a dozen, or 15, I do not know how many, triennial revisions of that book. I would see the process of revision start in May and end in

October. I would see all those little green sticky slips that went on each page that required updating or changing. That was in the days before Post-It; you actually had to lick those slips to gum them to the page. I do not know how the Samuelson digestion lived through it. I watched people like Romney Robinson, Dan Rubinfeld, Joe Stiglitz, and Jon Hamilton work with Paul on those revisions. I never saw the middle of the process because I would always get out of Cambridge and go to our summer house. But I can tell you that watching all those revisions—I hate to say this to Bill Nordhaus—killed any minor tendency I might have had to write a textbook of any kind.

The last thing I want to say is this. I can remember, years ago, that people used to sidle up to me and say, “Come on, isn’t it really true that Marion Samuelson wrote the elementary textbook and Paul just put his name to it?” And I finally developed exactly the right answer. I would say, “No, no, no, Paul wrote the textbook. Marion wrote *Foundations of Economic Analysis*.” So here we have Paul Samuelson who clearly has an absolute advantage at everything, and if I had not read that textbook or taught from it, I would be tempted to say he has a comparative advantage at everything, too.

I conclude by repeating the famous words that Marion uttered, when Paul and Marion arrived at Niagara Falls on their honeymoon. She said, “Ok, let’s eat.”

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Stanley Fischer

I first met Paul Samuelson in 1961 in my last year of high school, when I decided that my interests were closer to economics than to physics and made the switch. We were assigned two good textbooks: Hicks’s *Social Framework* and Benham’s *Economics*. But I met somebody who had studied at the London School of Economics (LSE), and he said, “You should get this book by Samuelson. That will really teach you economics.” They did not have the book in the town in Zimbabwe where I was growing up, so I persuaded an aunt in Cape Town to buy it for me, and I duly received the fifth edition, this copy that I brought along tonight to have Paul sign. It cost 6.65 rand, which at the time was about \$11.00. That seems to mean that the real price of textbooks has not changed very much in the last 36 years.

I found the introductory quotes in each chapter fascinating. They led me to a whole range of books and articles that I had never looked at before and would have had no reason to search out until I read *Economics*. So for at least one student, *Economics* was a mind-broadening experience. And those quotes keep coming back to me. There is one in Chapter 15, Prices and Money, that says, “Only one fellow in ten thousand understands the Korean currency problem and we meet him every day.” Well, I’ve certainly had that feeling at these meetings.

It is hard to remember where and when you first learned what you know, but I know that the fifth edition of *Economics* helped launch me into a career that took me first to the LSE and then MIT, and then to a life of which I simply could not have dreamed when I first opened the book.

To read *Economics* is to have a glimpse of the extraordinary mind that created it: undogmatic, generous to predecessors and contemporaries, encyclopedic, of course brilliant, and, most remarkably, skeptical, not inclined to take itself too seriously. Those are not properties that come in that combination very often, least of all in a textbook.

Economics must be one of the great achievements of economics, and indeed I would guess of any field. At the session at which the Paul Samuelson TIAA-CREF awards were handed out today, Paul repeated something we have often heard him say: science progresses funeral to funeral. What he could also have said is that science progresses textbook by textbook. Because, as he has reminded us on other occasions, once something gets into a textbook it is very, very hard to get out. I once asked Paul at a time when I found revising a textbook hard work, "How did you manage to keep this going for so long?" And he said, "A bit of hard work, a lot of benign neglect." That did not show.

Now let me stray from the topic, Samuelson style, to give you some questions relating to remarkable things I have learned from Paul Samuelson. Who was Bertrand Russell's godfather? What is it that Gauss told his high school, or probably primary school teacher, when asked to sum a series from 1 to 100? What are the four reasons that Newton delayed publication of the *Principia*? And if you have the time, what is the real story about Cambridge, England, in the 1930s? And, of course, we have learned much, much more from the author of *Economics*.

Maintaining a textbook for 50 years is extraordinary. We in the International Monetary Fund (IMF) were told three years ago, on our 50th anniversary, that 50 years is enough. We say to Paul, 50 years is a miracle.

And beyond that, we can only repeat what Franco Modigliani told you on your 70th birthday: "You have enriched our lives"—and we all are profoundly grateful.

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