Lives of the Laureates

Seven Nobel Economists

edited by William Breit and Roger W. Spencer

The MIT Press
Cambridge, Massachusetts
London, England

Lives of the Laureates
Seven Nobel Economists

edited by William Breit and Roger W. Spencer

The MIT Press
Cambridge, Massachusetts
London, England

This book was set in Baskerville by The MIT Press Computergraphics Department and printed and bound by Halliday Lithograph in the United States of America.

Library of Congress Cataloging-in-Publication Data

Lives of the laureates.

Bibliography: p.
1. Economists—Biography. 2. Nobel prizes—Biography. I. Breit, William. II. Spencer, Roger W.
HB76.L58 1986 330'.092'2 [B] 86-2919
ISBN 0-262-02255-9

Acknowledgments

As scarcely needs saying, an enterprise of this kind requires the cooperation of many people. My thanks, first and foremost, to Ronald Calgaard, president of Trinity University, who not only provided generous funding but threw in a large measure of encouragement from the moment the idea for the lecture series was broached. The dinners given by Ronald and Genie Calgaard in their charming home on the edge of the Trinity University campus were perfect prologues to each Nobel economist's public lecture.

Colleagues in the Department of Economics were unstinting in their enthusiasm. Special mention should be made of Joe Ashby, Richard Butler, Joe Davis, Pedro Fraile, and John Huston, who provided logistical support when needed. David Zorn, a graduate of Trinity University, was of enormous help in checking on the lighting and sound systems prior to each lecture and in providing yeoman's service generally. My secretary, Rita Miller, took care of a myriad of small details and never lost her composure or good cheer.

Finally, thanks are due to the Nobel economists themselves, who not only accepted the challenge of trying to make their chief contributions intelligible to a lay audience but did so in the demanding context of an autobiographical format. Their insights deepened my perspectives and broadened my understanding of the relationship between autobiography and creativity. For that, and for their kind patience and cooperation at all stages of the project, I am grateful.

William Breit

Introduction

This book consists of autobiographical accounts of the careers of seven people who have three qualities in common. First, they are all economists. Second, each of them has been awarded the Alfred Nobel Memorial Prize in Economic Science. Third, each traveled to San Antonio, Texas, to deliver his story in person at Trinity University.

The Nobel Prize in Economics was not created by Alfred Nobel himself. In 1901 his will established prizes in physics, chemistry, medicine or physiology, literature, and peace. He wished to reward specific achievements rather than outstanding persons. In the case of the natural sciences, the awards were to be given for "discoveries," "inventions," and "improvements." In 1968 the Central Bank of Sweden, in connection with its tercentenary celebration, initiated a new award, the Central Bank of Sweden Prize in Economic Science in Memory of Alfred Nobel. This prize was to be granted in conformity with the standards that governed the awarding of the original Nobel prizes. According to the rules established by the Central Bank of Sweden, the "Prize shall be awarded annually to a person who has carried out a work in economic science of the eminent significance expressed in the Will of Alfred Nobel."[1]

The idea for a series of autobiographical lectures by Nobel laureates in economics was that of the senior editor, who has spent a good part of his academic career studying, teaching, and writing about the lives and ideas of leading contemporary American economists. This abiding interest in the relationship between biography and the creative process led naturally to the thought of providing a forum in which outstanding economists would express in their own words, in any way that seemed congenial, a personal memoir under the general rubric, "My Evolution as an Economist." At the very least such a forum would preserve part of the rich record of accomplishment that helped to shape the direction and character of economic science in the post–World War II era. But the larger purpose was to provide important source material for a theory of scientific discovery.

Little is known about the process by which original ideas are germinated and eventually accepted by one's peers. To what extent is the substance of scientific work in social science a reflection of the lives of those who produced it? What is the role of influential teachers and colleagues? To what extent are the problems to which these thinkers addressed themselves a result of their own backgrounds and the economic and social problems of their times? What forces were most responsible for leading them to their insights? In short, what is it that enables an individual to discover something that seizes and holds the attention of a large segment of a scientific community? To help answer such questions was the major rationale behind the lecture series.

But whom to invite? It was clear that budgetary and time constraints would limit the number of invitations, and so the roster was restricted in the following way: (1) only economists who served on the faculties of American universities at the time the Nobel Prize was awarded would be included; and (2) the roster would represent as many different facets of economics in terms of types of contributions, specific areas, methods of analysis, and ideological differences as possible. In 1983, when the program was being planned, there were twelve winners of the Nobel Prize who met the first criterion, although one was too ill to travel. A difficult winnowing process in accordance with the second criterion narrowed the final list to eight. To our pleasant surprise, only one invitee declined to participate.

For most of the participants, the assignment was a difficult one. There is an understandable reluctance to give a public talk about one's own intellectual contributions. As one of the invitees put it, "I do not know that I could keep it between the Scylla of false modesty and the Charybdis of boastfulness, and I am afraid I would find the whole business rather stressful." Moreover, most of their work in its professional formulation was technical in nature, closed off to those not trained as economists. Yet each was being asked to make his contribution accessible to a lay audience at a public lecture open to the whole community. This would provide greater difficulties for some than for others. Samuelson's and Arrow's scientific contributions are largely in the domain of mathematical economics. Klein, Friedman, Stigler, and Tobin make liberal use of statistical techniques and econometrics. All express themselves in the technical vocabulary of their discipline.

And yet in each instance, as the reader of these pages will discover, each speaker somehow managed to convey the nature and significance of his contributions. (The essays in this book are in the order in which they were presented in the Trinity lecture series.) It is hard to imagine a less painful way of grasping the essentials of Kenneth Arrow's "impossibility theorem" than hearing it (or reading about it) in his own words. And is there anywhere a more clearly presented conception of what goes into econometric "model building" than is to be found in Lawrence Klein's essay? George Stigler's masterful explanation of his "information theory" is made luminously clear and understandable to almost everyone with an interest in this fruitful innovation. Indeed, each participant achieved the goal of clarity without sacrificing inherently difficult content.

The visit of each of the Nobel laureates was an unqualified success. The audiences were large and appreciative. Some traveled considerable distances to attend. Each economist met with students and faculty informally. At small receptions, at restaurants, over coffee cups in the faculty lounge, and at dinners in private homes, students and faculty were able to talk with some of the most highly regarded economists of the twentieth century. Notwithstanding their formidable reputations as scholars and, in some instances, as strong personalities, their lack of arrogance impressed almost everyone who came into contact with them. An important side benefit of the lecture series was the lesson that some of the most illustrious figures of modern economics are human after all.

Looking back over these lectures, one is struck by the many currents within the stream of modern economics. The reader will find that paths cross in unexpected ways; that disparate thinkers were often influenced by the same teachers; that luck as well as perseverance and hard work play a role in the successful creation of scientific knowledge. Equally important, these autobiographical essays reveal psychological truths, perhaps hidden from the subjects themselves, which an especially perceptive reader will discern. Taken as a whole, they provide a comprehensive picture of the diverseness, richness, and profundity that is the hallmark of contemporary economic thought in America.

Lives of the Laureates

Contents

W. Arthur Lewis

I had never meant to be an economist. My father had wanted me to be a lawyer, but as he died when I was seven he had no vote at the appropriate time. That came when I was awarded the St. Lucia government scholarship in 1932, tenable at any British university. I did not want to be a doctor either; nor a teacher. That put me into a hole, since law, medicine, preaching, and teaching were the only professions open to young blacks in my day. I wanted to be an engineer, but neither the colonial government nor the sugar plantations would hire a black engineer. What to do? My mother, without whom I could not have gone so far, would support whatever I might choose. As I leafed through the University of London prospectus, my eye was caught by something called the Bachelor of Commerce degree, which offered accounting, statistics, business law, business management, economics, a foreign language, and economic history. What was this economics? I had never heard of it before, and nobody in St. Lucia knew what it was—though my sample was small and unrepresentative. No matter. The rest of the degree was very practical and would give me a basis for a job in business or some kind of administrative work. So I settled for this and went off to London for the B.Com. degree in 1933, at the age of eighteen.

At the London School of Economics it turned out that I was good at economics, so when I graduated with a first in 1937 I was given an LSE scholarship to do a Ph.D. in economics. Next year I was appointed for one year as a teaching assistant and the year after that became an assistant lecturer. Years of wondering how I would ever earn a living, and of smiling confidently when friends and relatives pushed the question at me, could now be forgotten. I was going to be an economist.

Though ignorant of economics, I knew what was meant by administration. I had left school in 1929 and had been a junior clerk in the government service for the intervening four years. There I had acquired the clerical skills—to type, make notes, write letters, and file—that helped me as an undergraduate. I became familiar as well with administrative and legal structures, knowledge that would also help me.

Also, of course, I earned some money (three pounds a month) to contribute to the family budget. My mother was unsurpassed in the ways of stretching income, and this, combined with loving care, was what enabled her to bring up five sons, who were all minors when she was widowed. (I was the fourth son.) My mother's story is standard in the life history of achievers. A widow with young children, very little money, an immigrant (my father and she were immigrants from Antigua), the highest integrity, unshakable courage, unlimited faith in God. As a youngster in school, I would hear other boys talking about the superiority of men over women; I used to think that they must be crazy.

I had left school because I had completed the curriculum at the level of the Cambridge School Certificate, which is equivalent to SAT. I had completed at fourteen because when I was six I had had some kind of infection that kept me out of school for three months. My father, a former teacher but at this stage a customs official, said to me, "Don't worry; I will teach you a little every day, so you will not fall behind." This was an understatement. Any intelligent child receiving personal tutoring every day will learn in three months as much as the school-teacher's class learns in two years. When I returned to school, I was moved up two grades and was still ahead of what was being taught. This was a traumatic experience. It meant that for the rest of my school life I was always in the company of boys two or three years older than myself. They flexed their muscles, but I had nothing to show. They played cricket in the first eleven, whereas I was in the fourth eleven. I acquired an acute inferiority complex with regard to my physique. I learned that acceptance into the group is not a matter of academic performance only: you must meet their criteria as well as your own. I matured faster than I would have done had I stayed in school. I went to England apprehensive that the English eighteen-year-olds would be much better able to handle themselves than I was, only to find that they were not.

Fate had decided that I was to be an economist. What kind of economist I was to be was also settled: an applied economist. This did not mean just that I should apply economics to industrial or other structural problems. It meant that I would approach a problem from its institutional background, recognizing that the solution was as likely to be in the institutional setting as in the economic analysis.

What part of applied economics I would work in was also settled for me, since my assistant lectureship was in the commerce department, under Professor Sir Arnold Plant. He was my mentor, and without his word at crucial points I would have received neither the scholarship nor the assistant lectureship. (This was the school's first black appointment, and there was a little resistance.) He and I had intellectual difficulties, since he was a laissez-faire economist and I was not; but this did not stand in the way of our relationship.

Because Plant was a specialist in the organization of British industry, he put me to lecture in this field and suggested a Ph.D. thesis topic in the field; and so I became an "expert" on

British industrial organization. I liked the subject, so it was no hardship to me.

LSE in the 1930s was (as at any other time) a very lively place. Every point of view was represented on the faculty, and as two or three competing courses of lectures were offered on each "hot" topic, those who understood what was going on had marvellous intellectual feasts. The typical high-achieving LSE student was bright, from the effort to keep up with so many conflicting themes, and skeptical, from learning to distinguish so continually between plausibility and truth. We were reputed to make excellent managers but poor parliamentarians.

The school had not quite caught up with Keynesianism, which was taught by the young lecturers but denounced by the big names. On the other hand, the school was in the forefront of the development and worldwide expansion of neoclassical economics, especially with John Hicks, Roy Allen, Nicholas Kaldor, Friedrich Hayek, and Lionel Robbins.

This was where what I was doing fitted in. Most of the writing in this area was concerned with elaborating the theory: turning words into diagrams and diagrams into equations. I was one of a minority engaged in testing the theories against the facts.

I worked in industrial organization from 1937, when I was given a scholarship for the purpose, until 1948, when I went to Manchester and published *Overhead Costs*, which was essentially an updated version of my Ph.D. thesis.

My interest in overhead costs was the structure of prices in situations where average cost per unit exceeds marginal cost. The Pareto rule was that price should equal marginal cost, but to apply this rule would bankrupt the firm. In practice, such situations oscillate between bankruptcy and monopoly, as in the airline industry today. The general inclination of economists in those cases was to enforce marginal pricing and subsidize firms to the extent of the differences between marginal and average cost. This was hardly practical, as an industry-wide policy. Neither could it be justified, as many taxpayers would be forced to pay for services that they did not use. If one started from the premise that those who use the service should pay for it, the problem reduced to how to spread the fixed costs among the users. Here I started from the railway principle of "charging what the traffic will bear" and linked up with the new price discrimination theory, as elaborated by Joan Robinson.

Another aspect of overhead costs was the time dimension. Demand was not steady, but fluctuated. If the output could not be stored, there would be times of idle capacity, regular or irregular; how was the cost of this to be shared? I demonstrated that the correct approach to this problem was to treat the fixed investment as a producer in joint cost of different outputs at different times, each paying what it could bear, and subject to the sum of payments not exceeding total cost.

The main point of my thesis was, therefore, to examine in the light of these approaches to overhead costs those price systems found in industry other than the simple unit price per unit of output. These included two-part tariffs, time of day pricing, quantity discounts, loyalty discounts, and such related systems as trading stamps and tied purchases. My interest also overlapped into the history of the laws relating to pricing. With the spread of price regulation in Britain over the next twenty years my book had a ready-made audience.

This analysis of industrial structure was the background to what I was writing in my spare time, so to speak, which included a small book called the *Principles of Economic Planning*, published in 1949. The Fabian Society is one hundred years old this year. It is the thinking arm of the British Labour Party, though in fact it is older than the Labour Party and quite independent of it. I went to one of its conferences in 1947 and was roundly abused for a paper I read on the importance of avoiding inflation and on the measures required for that outcome. I in my turn was horrified by the sentiments of the members on this subject, and said to the secretary: "You really ought to commission a study on the problems and pitfalls of administering a mixed economy." "Why don't you do it," he said, and after thinking about the subject for a little time I agreed to do so.

Fabian pamphlets usually run from twenty to thirty pages, but his one came out at more than one hundred pages, not because of my long-windedness but because it takes at least that to discuss in detail how to run a mixed economy. The book was not original, but it was timely. It addressed itself exclusively to the problems of Great Britain in the year 1948, but nonetheless was translated into several languages and sold widely all over the world. Its prescriptions for evading inflation were Keynesian and turned on the feasibility of keeping money incomes rising at not more than 3 percent a year. On rereading the book recently for this occasion, the only other point that catches my eye is that governments of mixed economies, coming into power on a wave of popular frustration, always run straight onto the rocks of the balance of payments and have to reverse themselves (for example, France in 1936 and 1981; Britain in 1945; Jamaica in 1976). Somebody should write a manual called something like "The First Two Years," which would map the problems by which the mixed economy is assailed as a new social democratic government moves to implement its program. But that will have to be some other author.

Let me come back to my academic program. I gather that the sponsors of this set of lectures hope to see how one's thinking is tied to one's environment. I am not a very good example. I began by showing you that I became an economist when I really wanted to be an engineer, bcame a university teacher because there was nothing else for me to do, and became an applied economist because that was my mentor's subject. The next phase of this story continues in the same vein. I am not complaining; fate has been kinder to me than to most other persons. I am merely recording what happened.