

Conferment of the Degree of Doctor of Social Science, *honoris causa* A Citation



Professor Sir James A. Mirrlees, MA, PhD, Nobel Laureate in Economics

One of the key problems in modern economic research is how to deal with problems of *asymmetric information* - that is, where different decision-makers have different information. For example, if the government thinks about raising income tax, it doesn't know if I will then decide to work less hard than I do now. If the government doesn't know this, how can it set taxes so as to optimize revenue without stifling my incentive to work hard? Professor Sir James Mirrlees, whose work we are honouring here today, found a solution to this complex problem. The solution was so powerful that it has provided the basis, not only for the construction of taxation systems around the world today, but for our understanding of a whole range of other markets and systems. These include insurance, auctions, wages, and share markets. The contribution of Professor Mirrlees was of such fundamental importance to our understanding of these markets and systems that in 1996 he was awarded the Nobel Prize for Economics.

As a schoolboy, Professor Mirrlees wanted to be a professor of mathematics. When he entered the University of Edinburgh he found the mathematics so easy he was able to develop a range of other interests in literature, music, art and philosophy. His study of Utilitarian moral philosophy led him to think about fundamental questions such as: What is a good life? What is truly rewarding? His intensive political discussions with his classmates led him to ponder questions of welfare economics. When he went on to Cambridge he found absorbing interest in issues such as poverty and the distribution of wealth so much so that he chose to take his PhD in economics. He was moved by the moral questions of his day. As he says himself in his Nobel autobiography: "... because poverty in ... the underdeveloped countries seemed to me what really mattered in the world ... that meant [taking up] economics."

Starting a new discipline at PhD level meant a lot of catching up, which he proceeded to do amidst the great intellectual ferment of Cambridge in the early 1960s. It was in his PhD that he began to work on the neglected question of uncertainty how, for example, it affected the optimal rate of saving in an economy. Using his mathematical background he was able to produce an original model for showing that "uncertainty is a reason for saving more, not less". The breakthrough came after months of not getting anywhere, a product partly of sheer determination and of the happiness of his recent marriage.

His first experience of Asia was a visit to India, where he learned a great deal about how developing economies work, partly from talking to people in government and observing at first hand how people lived in rural areas.

On his return to Britain Professor Mirrlees took up a Fellowship in Economics at Trinity College, Cambridge. The stimulus of teaching led him to think increasingly about welfare economics and to conceive a general theory of economic activity. In fact, the germ of his Nobel Prize work was contained in an examination question he set on optimal taxation. The question



turned out to be troublesome and too difficult, but it set him off in the direction of optimal taxation theory. The teaching at Cambridge was stimulating but very heavy, and it wasn't until he took up a chair in mathematical economics at Nuffield College, Oxford, that he had the time to work on a more general theory of the relationships between principal and agent in economic contracts. After a sabbatical at MIT, he produced the first version of the optimal income taxation paper; but it took several more years' intellectual labour to produce the rigorous mathematical reasoning that would justify the Nobel Prize winning theory.

It is characteristic of Professor Mirrlees that he gives great credit to his collaborators, such as Peter Diamond. As he says himself, "I followed the main principle for academic success: get a good co-author (and also the second: get another)." Creative inspiration in the life of thought, he believes, requires at least three things. The first is spending time in discussion with intelligent people, not only in your own field - people who can keep up with your thoughts and grasp the problem you are trying to solve. He was fortunate in Oxford and Cambridge to be challenged by very sharp minds - those of physicists, for example. The second thing needed is curiosity and interest - really wanting to know what other people are doing; really wanting to understand, at the deepest level, why things are so. The third is sheer persistence. There are many blind alleys in the life of strenuous thought. The person who is driven by a great curiosity and interest needs great determination to overcome frustration and to push the calculations forward as far as they need to go. Those who know Professor Mirrlees well are struck, above all, by his persistence.

As well as his Nobel Prize, James Mirrlees has received honorary degrees from many universities, including Warwick, Portsmouth, Brunel, Edinburgh, Oxford, Peking and Macau. In 1997 he was knighted by Queen Elizabeth II.

He has been Fellow and President of the Econometric Society in Britain; a Fellow of the British Academy; an Honorary Fellow of the Royal Society of Edinburgh; President of Royal Economic Society; President (Section F) of the British Association for the Advancement of Science; a Foreign Associate of the US National Academy of Sciences; and President of the European Economic Association.

Sir James has held visiting positions at many institutions: the MIT Center for International Studies in New Delhi; the Pakistan Institute of Development Economics in Karachi; at MIT, Berkeley and Yale. In 1995 he returned to Cambridge as Professor of Political Economy, a position he held until 2003.

Professor Mirrlees developed an interest in Chinese economic development in the 1980s when he was involved in the establishment of the Chinese Economic Association in Britain. In 2002 he accepted appointment at The Chinese University of Hong Kong as Distinguished Professor-at-Large. In this role he is able to provide leadership in the advancement of the University, enhancing the University's links with the international scholarly community. He has given important lectures at the University, including the Special Lecture on "Incentives and the Universities: the Impact of Performance Measurement", which was delivered at the University



Presidents Global Forum held in March 2004. He is also a member of the Management/ Nomination Committee of the Sun Hung Kai Properties Nobel Laureates Distinguished Lectures. Last month he himself participated in the series, in a seminar along with Professor Michael Spence, Nobel Laureate in Economics 2001. Professor Mirrlees' topic was "Ageing and Pensions in the Chinese Economies".

Mr Chairman, it is my honour to present to you Professor Sir James Mirrlees, Nobel Laureate and one of the fundamental economic thinkers of our time, for the award of the degree of Doctor of Social Science, *honoris causa*.

This citation is written by Professor David Parker