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`Practical' Economics Captures The Prize
Chicago scholar is also honored

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A University of California at Berkeley professor who developed new ways of analyzing how consumers make decisions won the Nobel Prize in economics yesterday.

Daniel McFadden, 63, received the coveted award for designing statistical techniques that predict how people will behave when they choose among limited alternatives, whether it's where they live, how they commute or what they buy. He used his method to project ridership levels for BART in the 1970s, and it has since become a standard tool for forecasting demand for products and services.

McFadden shared the 2000 award with University of Chicago economist James Heckman, who was cited for developing techniques that strip out such hidden biases as race and sex in studies of the labor force, according to the Royal Swedish Academy of Sciences, which picks Nobel winners. The two will split a $915,000 prize.

McFadden's work in such areas as transportation, energy policy and housing for the elderly stands out for its usefulness in the real world, colleagues said. For example, his research on how the 1989 Exxon Valdez oil spill affected tourist decisions to visit Alaska helped size up the economic damage to the state.

His analysis of consumer choice ``is an extraordinarily deep and beautiful thing that at the same time is deeply practical," said Princeton University economist Angus Deaton.

For the past 15 years, McFadden has focused on economic issues facing the elderly, such as their housing choices.

``Now I'm studying the relationship between people's wealth and the health care they get," he said.

He has found, for instance, that wealth does not seem to increase people's life expectancy but does decrease their risk of depression.

``A recurring theme in McFadden's research is his ability to combine economic theory, statistical methods and empirical applications, where his ultimate goal has often been a desire to resolve social problems," the Swedish Academy noted.

McFadden's Nobel is the 17th handed to a Berkeley scholar, putting it slightly behind Stanford University, which has collected 21 in the 99 years since prizes were first awarded. Economics, not an original category set by dynamite inventor Alfred Nobel when he established the prize, was added to the prize list in the late 1960s.

Among colleagues, McFadden is known for a gentle and humane style

--and an ego kept firmly in check. ``In a profession full of alpha males, he's sort of exactly the opposite," Deaton said.

At a press conference on the Berkeley campus yesterday, the bearded, bespectacled scholar said he was overwhelmed by the attention he's getting after winning the economics profession's highest honor.

``I was taught to be modest,'' he explained. ``It's a little shocking to be thrust into this position of prominence.``

McFadden, dressed in an open- collar khaki shirt and blazer, said his first thought when he got his sleep-shattering 2:30 a.m. call was ``Rats! I should have cleaned my office.''

Berkeley's newest Nobel laureate played down his part in building the Bay Area's rapid transit system, calling his role advisory. ``I didn't invent the Internet, and I didn't design BART,'' he quipped.

McFadden grew up as an only child on a North Carolina farm, the son of a banker father and schoolteacher mother. At 16, he enrolled at the University of Minnesota, switching from physics to psychology and in the process developing a lifelong interest in how people make choices.

Later he jumped to economics, collecting his doctorate from Minnesota in 1962. He joined the Berkeley faculty in 1963, moved to the Massachusetts Institute of Technology in 1977 and returned to the University of California in 1991.

McFadden runs Berkeley's econometrics laboratory, which specializes in the application of mathematical and statistical techniques to economic analysis.

The Nobel committee cited McFadden for his work in the early 1970s pioneering a field known as ``discrete choice analysis.'' The technique uses statistical methods to predict how people will behave when they face a limited set of options.

Before McFadden, economists were adept at predicting how consumer demand would change as the prices of goods or services moved. But they had no good tools for predicting where people would choose to live, what job they would take, where they would go to school or any of the thousands of decisions that involve picking from a limited number of alternatives.

``People have an enormous range of choices that involve not the amount they will pay for something, but whether to do something or not. We call those discrete choices,'' said Northwestern University economist Charles Manski. Until McFadden's work, ``there were no statistical approaches to (predict) that.''

McFadden's analytical technique was to apply basic economic theory to the mass of statistical data available on consumer behavior. According to theory, each person seeks to get as much as possible of what's important to them individually.

McFadden's approach was to break down a complex phenomenon into a bundle of separate characteristics and then use statistical analysis to figure out how many people would want those qualities.

Commuters, for example, are making choices between the speed of the trip, the cost of transportation and the wear and tear of the trip when they choose among alternative travel modes. That kind of analysis helped BART planners decide what fares to charge and how often to run trains in order to persuade commuters to abandon their cars.

``These tools I developed have turned out to be useful in a whole range of applications from voting behavior on the one hand to markets for new products on the other,'' McFadden said.

DANIEL McFADDEN

PROFILE

--Age: 63

--Position: UC Berkeley professor of economics.

--Expertise: Statistical methods that predict how people make decisions.

--Nobel Prize perk: Lifetime campus parking space.

--Residence: Berkeley; weekends in Napa Valley where he owns a small vineyard.

--Family: Married to Beverlee Simboli McFadden, a photographer; children Nina Simboli, 42, an executive chef in Tucson; Robert McFadden, 36, an Intel engineer in Beaverton, Ore.; and Ray McFadden, 34, Web designer at Excite@home in San Francisco; three grandchildren.

-- Urban travel: How demographic shifts in a population affect ridership on BART.

-- Social issues: The demand for residential energy, telephone services and housing for the elderly.

-- Environment: How the Exxon Valdez oil spill affected the decision of tourists to visit Alaska.

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