Needed: A New Empiricism

BARBARA R. BERGMANN

The *New York Times* has reported a discovery by biologists studying how bottlenose dolphins hunt fish in groups. They found that individual dolphins consistently took specialized roles: one particular dolphin always served as herder, and the others served as barriers to the fishes' escape. The scientists discovered this by watching two groups of dolphins during 120 feeding sessions.

Those two dolphin groups probably received more close attention in this single study than any of the human groups known as business establishments had received from professional economists in the last 200 years. Yet much of the operation of an economy, and consequently much of the well being (or ill being) of the human population, derives from the behavior of those who run businesses. It is not a bad thing that we are devoting time and resources to studying the habits of bottlenose dolphins, but studying the habits of business managers would, one might think, have at least an equally high priority.

The material about business behavior that students read about in economics textbooks, and almost all of the new theoretical material developed by mainstream professionals and published in the profession's leading journals was composed by economists who sat down in some comfortable chair and . . . simply made it up.

A small fraction of professional economists and psychologists have left off making up stories about how economic actors function, and started instead making direct observations of human behavior. Initially they were regarded by most in the economics profession as irrelevant pests. In the 1980s, when I was arranging seminars at the University of Maryland, I invited Herbert Simon to visit and give a talk. He was a founder of research in economic decision-making using human subjects. Simon had already been awarded the Nobel Prize in economics, but my colleagues were not impressed. They let me know that his talk had wasted their time. It wasn't economics, they said.

In 2002, the Nobel Prize in economics was awarded to one of Simon's successors, psychologist Daniel Kahneman, who with the late Amos Tversky had worked with human subjects to study the characteristics of their decision making. The assumption of rationality in decision-making has been indispensable in spinning

Barbara R. Bergmann is Professor Emerita of Economics at the University of Maryland and American University. Her latest book is a new edition of The Economic Emergence of Women.

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economic theories. The researchers found that in many cases people making choices depart from the behavior that economists had posited as rational. However as Vernon Smith, who developed the field of experimental economics, recently pointed out, it may be that the economists' notions of what is rational in various contexts needs a reality check.

Smith, who shared the 2002 Prize, had in the early 1950s been a student in the microtheory class of Edward Chamberlin at Harvard. Every year Chamberlin performed a market experiment with the students in his class, with each student assigned a minimum supply price or a maximum demand price. He found that when the buyers and sellers made individual bargains the average price was systematically lower than the price that would have equated supply and demand.

The experimental economists invite students into their laboratory, and get them to interact with each other, hopefully in ways that would be similar to what they would do in the actual economy. The subjects buy and sell to each other and bid against each other in auctions and other markets. Experiments of this type have been used to study bargaining, market bubbles, industrial organization, privatization and deregulation. Smith and his colleagues have found that the details of the market set-up affect the market's outcomes.

Yet even the experimentalists and behaviorists do little if any direct interacting with the people who manage businesses as they actually conduct their affairs. It is assumed that the students they pay to come to their laboratories are stand-ins for them, and that the students' behavior patterns will predict that of the managers. Observations of managers' behavior as they play their roles in their actual businesses will surely be necessary to the construction of a realistic science describing the functioning of the economy. One might argue that economists would do best if they adopted the strategy of anthropologists, who go to live with the tribe they are studying and become participant-observers.

While no economist has come anywhere close to undergoing such an intensive immersion in the reality of the business world, there has been some collecting of information on the behavior of people engaged in business directly from those people themselves through surveys. In 1939, R. L. Hall and C. J. Hitch published a paper reporting on a survey they had conducted among business managers. They found that managers were unfamiliar with the concepts of marginal cost and marginal revenue, and that they did not use them when setting prices and output. Rather, they made an estimate of cost per unit at what they took to be some plausible level of sales, and then tacked on an amount for profit. Professional economists received this news with pained condescension and have succeeded in forgetting it.

Alan Blinder has revived the survey methodology of Hall and Hitch to investigate the frequency of price changes by business people, an important issue in charting the likely effects of monetary policy. Economists have studied the extent of racial discrimination in the labor market by sending out carefully matched black and white "testers" to answer ads for job vacancies, so as to tally differences in treatment. In another study, testers who differed by race and sex but were coached to use similar bargaining tactics were sent out to dealerships to bargain for new cars. In these studies, highly significant differences in treatment by race and sex were found—non-whites and women were disadvantaged compared to white males. These studies disprove Gary Becker's oft-quoted theory, based solely on

conjecture and the usual assumptions, that the markets are free of discriminators because any that turn up are undersold by nondiscriminators, go bankrupt, and are thus chased from the market. (Nevertheless, Lawrence Summers, then president of Harvard, recently alluded to Becker's theory in arguing that the paucity of women appointed to science professorships at Harvard under his presidency was more likely due to women's genetic insufficiencies than to Harvard's discrimination. After all, had Harvard been discriminating, it would have lost its lustrous ranking to a nondiscriminating Podunk U., which would have stepped up to compete.)

The most intensive interaction with business people so far seems to have been carried out as a solo venture by Truman Bewley who interviewed about 300 business managers, asking why they don't lower wages in a depression. The failure to do so, which may (or may not) be an important reason for the failure of unemployment to dissipate rapidly, has long been a subject of speculation among economists. Bewley's book lists no less than 25 published theories that economists had invented to explain the phenomenon, 24 of which were wrong. Bewley was the first who dared to go out and ask those making the decisions what they did and why. They told him that to lower wages would create severe morale problems, and so would interfere with the operations of their firm.

We are only at the start of collecting the information about behavior that we need to construct a realistic model of the economy. Certainly we cannot depend for that information solely on observations of students' behavior in a laboratory. The set-up of the lab experiments may fail to capture essential elements of the situations that business managers face. So economists have to do more to find out how businesses, including those in the financial sector, actually operate. Perhaps they should combine with their colleagues in the business schools to survey the latter's alumni as to whether they are following the lessons they learned in school, or are doing something else.

A knowledge of business behavior based on observation rather than mere conjecture could revolutionize the formulation of public policy and the managing of the business cycle. Research on how businesses decide when to make price changes should make it easier for the Fed to be more adroit in its management of the inflation rate. If we had some realistic ideas about how business people arrive at their decisions on investment in plant and equipment, our ability to formulate policies that would stimulate growth would improve, as would our ability to predict GDP in the shorter run. We would be less likely to be reining in the economy when we ought to be stimulating it, and vice versa.

As of now, advocacy of theories and policies by an economist is likely to be highly influenced by the benefits they would bring to the particular groups that the economist favors. That will always be the case to some extent. But a better grasp of the realities of economic functioning should curb that tendency. For example, I submit that the idea that lowering taxes for the rich is the best way to stimulate production and employment would be unlikely to survive a realistic accounting of consumer and business behavior.

While observation-less theorizing is still the most common way economists think to advance the science, the new interest being shown to behavioral and experimental methods at places like Princeton and Harvard is an encouraging sign. But actual observation of business behavior has barely started. Whether it will flourish depends on whether an ever increasing corps of economists willing and able to do the work of

observation gets trained and then finds jobs. A few years ago I had occasion to ask Truman Bewley whether he was training students at Yale to carry on research like that he did on wages. His answer, I am sorry to report, was, "No, that would ruin their careers."

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