In July 1982, Nobel Laureate Wassily Leontief published his famous letter in Science, where he noted that less than one per cent of all articles published over the preceding decade in the American Economic Review were based on data generated by the author himself or herself. 1

Leontief's letter highlighted a major methodological and philosophical gap between economics and other disciplines in the social and behavioral sciences. Economists do very little research built on direct observations conducted personally by the researcher. Other disciplines truly interested in understanding human behavior do very little else. No wonder that economics interacts relatively little with, for instance, psychology. No wonder there is a yawning gap between macroeconomics, the behavior of economic aggregates, and microeconomics, the decision choices of individuals. No wonder economics strikes other scholars — who have not invested sufficient intellectual capital in economics to become forced believers — as dull and solipsistic.

It is not vested interests that shape our thoughts and destiny, Keynes observed, but thinkers generations back. A century ago, when economics faced a crossroads and had to choose between the pseudo-physics of Walras and the evolutionary biology of Marshall, it chose Walras. Since then, economists have embraced the methodology of theoretical physics, for which the ability to stroke a neutrino or observe a pi meson is utterly frivolous. We chose wrongly. The cost has been high — the inability to understand adequately those we purport to describe. Incredibly, a recent series of letters and articles in Science include calls by top managers, like banker John Reed, for use of more theoretical physics in economics — and renowned economists are responding favorably. Why models of elementary particles should in any way deepen our grasp of economic choice by human beings remains one of humanity's great mysteries.

There is a better way. To illustrate it, take for instance the crucial relation between tax rates and effort. No degree of econometric sophistication will ever coax operational conclusions on this issue out of time series aggregates. In contrast, read Daniel Holland's unheralded study 2 based on interviews of business executives, published in 1970. Had Holland's 90 pages of insight, quotations, and conjectures been read carefully — being "unscientific" and unmathematical, it was largely ignored — the Reagan tax reform could have come a decade sooner. Holland quotes one of his respondents: "What I really should have been spending all the time on [instead of trying to figure out how to accommodate tax law...] is how could I technologically bring along the product..." For instance is not a proof, goes the Yiddish saying. But it is certainly illuminating. And illumination is the ultimate goal of all scientific work.

There is a wide variety of direct-observation methodologies as yet largely untapped by economics. Here are only a few.

"Earliest experiences": Individuals are asked to recall, orally and in written form, their earliest memories. 3 This permits the study of, for example, the influence of social history on personal values and individual behavior.

"Protocol Analysis": Use of verbal reports by individuals, about how they think, choose or reach decisions, is widely used by cognitive psychologists. Economics could profit, too. 4

"Game simulations": This approach, often using interactive computer networks, is indeed used in experimental economics, and I believe the results have been fascinating.

A recent OECD report shows a secular decline in the rate of personal savings out of disposable income, during the 1980's, for some 22 countries. This, despite tax reforms in most of them that favored the allegedly high-saving upper income brackets. Why did this occur? Time series will never yield an answer. Only direct observation, interviews, questionnaires, etc., has any chance of answering what will be the key macroeconomic question of the 1990's: was the drop in savings permanent or temporary? The only way to observe savings behavior and its underlying motives is by directly watching it. Yogi Berra was right.

If we continue to tolerate economics built on unfalsifiable models, because they are delightfully obscure and abstract, and scorn plumbing, because
it is practical and applied, then neither pipes nor theories will hold water.

Notes: