

## Principles of Economic Analysis

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December 1, 1991  
Rev. Dec. 28, 1998

### Foundations of Economic Analysis

In *The Economists* (1976), *New York Times* economic correspondent Leonard Silk reviewed the careers of several leading U.S. economists, including Paul Anthony Samuelson. Of this erstwhile *enfant terrible* of mainstream economics, Silk wrote that his ideas must be the starting point for any attack on or defense of modern economics.

This refers to Samuelson's Ph. D. thesis written at Harvard around 1940 on the methodological aspects of neo-classical mainstream economics and published in 1947 as *Foundations of Economic Analysis*. In it, Samuelson noted the "unmistakable signs of decadence which were clearly present in economic thought prior to 1930." (p. 4)

This bench-mark year marks the eve of the Keynesian Revolution in mainstream economics, whose American version was fashioned in Cambridge Mass. in the 1940s by Samuelson *et al.*. Keynes' own analytical approach to monetary theory was an early intellectual casualty of the American "keynesian" tenet that "Money Does Not Matter."

Keynes never taught any such thing. In fact, his *The Economic Consequences of Mr Churchill* (1927) and *Treatise on Money* (1930) prove that he recognized that Money Does Matter. As for the General Equilibrium Model, whence the American "keynesians" derived their tenet, Keynes dismissed it in 1934 as "a little better than nonsense."

The General Equilibrium Approach to "economics" formalized by Leon Walras in the late 19th century mirrored the contemporary methodology of Newtonian Mechanics. Briefly, Walras reasoned that the all exchange transactions observed at any given point in time in real-world market economies were interrelated through an economic calculus.

In other words, the precise "configuration" of all observed exchange transactions was held to reflect an underlying maximizing-minimizing behavior of economic agents, whose motivation translated into such "configuration" much as gravitational interaction was held to determine the position and paths of all material particles in the universe.

In this respect, of course, all such material particles are in general equilibrium at all points in time. By the same token, as noted by Walras, the market economies of the real world are ALWAYS in general equilibrium in a formal sense. There is no indication in *Foundations of Economic Analysis* that their youthful author understood any of this.

Instead, Samuelson charged his predecessors with abject intellectual failure in that they had not enunciated "operationally meaningful theorems" about the time-paths of economic variables deemed to be in general equilibrium at the point-in-time of their observation in the manner of 19th century Newtonian/Laplacian physicists.

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In this respect, it is clear from the record that classical economists of first rank as distinct from neo-classical mathematical economists were NEVER concerned with the pseudo-problem of “operationally meaningful theorems” as defined by Samuelson (see below). Thus, in 1922 John Maynard Keynes underscored that very point as follows:

“The Theory of Economics does NOT furnish a body of settled conclusions immediately applicable to a policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessor to draw correct conclusions.”

Nor did Samuelson challenge the record on this point. Instead, he implicitly put classical and neo-classical economists into a SINGLE GROUP with respect to which he then stipulated that “THE MAJORITY would have been glad to enunciate [“operationally meaningful theorems”] if any had occurred to them.” (pp. 3-4)

Again, the record confounds Samuelson’s assertion, for as he noted in a paper on Consumer Behavior (ca. 1950), the Swedish economist Gustav Cassell had pointed out long before Samuelson did his Ph.D. thesis that ALL EMPIRICAL OBSERVATIONS of market exchange transactions represent POINT OBSERVATIONS.

While Alfred Marshall and other neo-classical economists had represented such POINT observations in terms of NON-OBSERVED but intersecting Supply-and-Demand SCHEDULES, Cassell emphasized that this was not warranted in logic. Samuelson did NOT attempt to refute Cassell’s conclusion on its merits, but dismissed it as “naive”.

More recently, Samuelson has declined on grounds of advanced age to respond to criticism of his work on related issues. In this respect, the fact that Samuelson was only in his 30s when he ducked Cassell suggests that it is at least a half-century since it dawned on Samuelson that his *Foundations of Economic Analysis* thesis is nonsense.

Yet, some two decades later, in 1971, Samuelson accepted the Nobel Memorial Prize for Economic Science, awarded in recognition of the basic analytical innovation of his *Foundations*, namely, the “Correspondence Principle” between Comparative Statics and Dynamics which remains the cornerstone of ALL modern mainstream economics.

As such, the Correspondence Principle and associated mainstream economics are predicated on assumed LOGICAL admissibility of the notion that NON-OBSERVED Supply-and-Demand SCHEDULES may be inferred from POINT OBSERVATIONS. In *Foundations*, Samuelson brought the analytical issues involved to a head as follows:

“By a *meaningful theorem* I mean simply a hypothesis about empirical data which could conceivably be refuted, if only under ideal conditions. A meaningful theorem may be false. It may be valid but of trivial importance. Its validity may be indeterminate, and practically difficult or impossible to determine.” (p. 4)

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By this definition, a “meaningful theorem” is a prediction about empirical events. When circumscribed further by Samuelson’s Correspondence Principle, such “theorem” reduces to the proposition that the “Conditions of Equilibrium” which are held to apply to economic variables at a POINT IN TIME apply ALSO to such variables OVER TIME.

In the context, such “Conditions of Equilibrium” relate to the question whether inferred Supply-and-Demand Schedules are properly SLOPED around the Point of their intersection.

In turn, the essence of Samuelson’s challenge to Marshall and other “decadent” neo-classical scholars was that they made little use of the calculus in addressing this question.

In advancing his Correspondence Principle, Samuelson asserted that it differed from the *modus operandi* of “decadent” scholarship, which he held to be predicated on premises of “universal truth and vacuous applicability”, in that it was based on two “very general hypotheses”, whose “truth” and “applicability” has NEVER been established.

Indeed, the first “hypothesis” merely restated in the formal “maximizing-minimizing” terminology of calculus the “truth” of statics whereby all Supply-and-Demand Schedules are held to be properly SLOPED at their POINT of intersection.

Thus, Samuelson’s originality resided in the second “very general hypothesis” to the effect that market economies in the real world are General Equilibrium “systems in *stable* [...] motion” OVER TIME as well as at any POINT IN TIME.

At the outset of *Foundations of Economic Analysis*, Samuelson had decried what he termed the “bad” methodological presupposition that the theories of economists had validity independent of their applicability to events in the real world. The present writer suggested to Samuelson in the 1970s that his *Foundations* were “bad” in this sense.

For IF the market economies in the real world are General Equilibrium Systems, THEN (a) the conditions of general equilibrium are satisfied at all points in time such that (b) the “displacement” of such conditions cannot in principle occur, whence it follows that (c) there can be no empirical refutation of Samuelson’s first “very general hypothesis”.

The above summary critique of Samuelson’s *Foundations of Economic Analysis* mirrors ideas originally set forth in a Ph.D. thesis outline submitted by the present writer to the Harvard Department of Economics in 1976. Then Department Chairman James S. Duesenberry and his successor Dwight Perkins declined to accept the thesis outline.