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Edmund Phelps, Insider-Economists' Insider

PAUL A. SAMUELSON

Of Arms and the Man we Virgilians gather here to sing. Lest the keynote speaker steal in his overture the best tunes of the seminars that will appraise and praise the Ned Phelps feats of arms, my function now is to talk of the scholar himself as a person in his times.

In politics you know you are getting old when you hear yourself saying repeatedly, "I gave him his first job." Let the record show that Ned Phelps's rise to scientific fame owed nothing to interventions by me. However, that was not because of lack of trying on my part. When Phelps was a bright senior at Amherst, I lectured there solely in order to recruit him for MIT. His case was a no-brainer lay-down hand. But Ned was one of the fish that got away. And it was Yale's good fortune that he went there. One cannot deny that his was a good choice, for out of the ashes of Old Eli's glory in the days of Fairchild, Furness, and Buck—an interlude between the Gibbs and Irving Fisher era—Jim Tobin gathered to New Haven the refugee Cowles clan and many more. Eclectically, Ned learned from them and from the Fellner-Wallich-Triffin crowd too, and what he borrowed from his elders, he paid back at golden compound interest.

In no time at all he became known for golden rule theorems, for the Phelps-Koopmans permanent inefficiencies, for optimal intertemporal stochastic programming, for models of *endogenous* technological change, and for the concept of a natural rate of unemployment defined at the point where the algebraic rate of inflation passes from being permanently minus to permanently plus.

You might say this was Picasso's classical period. I knew of his innovations well, and not only because Solow and I were pedaling in the same bicycle marathon. Often I was a free rider boosted ahead by Ned's windbreaking lead efforts. Truly Phelps has been external-economy. Thus, my much-cited 1969 paper on optimal intertemporal portfolio programming opportunistically used the Bellman-Beckman-Phelps recursive techniques to analyze what defines the best qualitative asset-portfolio mix of the Phelps 1962 aggregate saving. It was not plagiarism but it was horning in on a created public good there for the taking.

The biography of a Phelps illuminates the nature of scientific advance and of innovators' behavior. Physics or mathematics or botany or anthropology, all

of them are group efforts—you might call them overlapping generations of clique efforts. On the Midway at the University of Chicago, there stands a statue depicting Time, the work of Sculptor Lorado Taft (Senator-Professor Paul Douglas's father-in-law). It portrays the stationary figure of Time, before whom draped figures of succeeding generations pass from left to right. Etched in the marble base is the legend that I paraphrase from imperfect memory. "Time passes, you say? Ah no. 'Tis we who go."

The inner history of economics is a bit like that. Into the main ring of the circus each of us enters from the left and departs from the right. But it is not a simply ordered sequence ABC . . . XYZ: The better image is that of each epoch's chorus of scholars: Smith, Malthus, Ricardo, and the two Mills in the prime classical age. Then, in Victorian times, Jevons, Menger, Walras, Marshall, Pareto, Slutsky, Wicksell, and Cassel. Contemporaries of my teachers were Pigou, the Clarks, von Bortkiewicz, Keynes, Knight, Young, Viner, Schumpeter, and Hotelling—followed by the 1900+ vintages of Hayek, Haberler, Leontief, Hicks, Lerner, Kaldor, Robinson(s), Robertson, Tinbergen, Frisch, Ohlin, and Meade. Never are the hall lights so dimmed that a previous chorus can be replaced in one fell swoop by a new set of singers. Rather, imperceptibly new voices come on stage while old ones quietly slip off, humming ever more softly as they first linger and then fade away.

This construct enables me to place today's birthday boy in his generation. For a surprisingly long time most of our productive economists had their roots in the pre—World War II epoch. This is true of Tobin, Modigliani, Alexander, McKenzie, Arrow, Kaysen, Baumol, and Solow—to say nothing of Methuselahs like Bergson and me—and all of us had a head start over graduate students of the post-1945 years—the hot breath of ingenious youth at first burned less scorchingly on our necks.

But of course that could not last. The 1950s began with the Beckers, Ecksteins, Jorgensons, Grilicheses, von Wiezackers, Diamonds, Fishers, and Phelpses, all of whom were still singing soprano when the Pearl Harbor attack took place, and soon to come were the invading hosts of the Halls, Gordons, Stiglitzes, Mertons, Dornbusches, Fischers, and . . . but now I must stop because a countable infinity is still an infinity and a lunchtime speech is of finite duration, however boring it may become.

Returning to our rags-to-riches Horatio Alger, Jr., hero, Phelps established his credentials in the easy micro and macro of Hicks-Dantzig-Debreu: Santa Claus domains of convex sets and the differentiable calculus of variations. Would he advance into the unpromising lands of increasing scale returns, asymmetric information, lumpinesses, and all those other imperfections undreamed of in the philosophies of the equilibrium mongers?

The answer is a resounding, Yes. To sum up my hagiographic panegryic, I shall steal a few lines from Philippe Aghion, who "sees Phelps's contribution [to economics] as basically *one* project: *to introduce imperfect information and knowledge, imperfect competition, and market frictions* into macroeconomics"—and, I would add, into microeconomics as well. To polish Max Planck's dictum: Science does progress funeral by funeral—as the chorus of Phelpses and Stiglitzes explicates those many ways that palsy can afflict the invisible hand of Smith, Say, and Lucas.