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Nondestructive Creation

by Glenn Hubbard

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Nobel laureate Edmund Phelps says that Joseph Schumpeter was wrong: Entrepreneurship *can* generate stable growth.

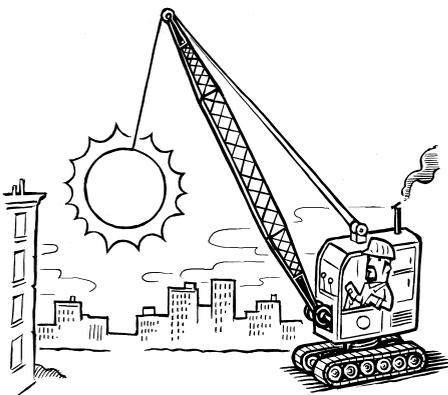
by Glenn Hubbard

Edmund (Ned) Phelps, best known for his work on macroeconomics, has never taught at a business school. Nonetheless, the work that earned him the Nobel Prize in Economics in 2006 is sure to shine a new light on business education, and to illuminate basic business practice as well.

Previously, the prevailing economic view of entrepreneurship (and the prevailing view of public policies related to entrepreneurial innovation) had centered on Joseph Schumpeter's famous concept of "creative destruction." Schumpeter described entrepreneurship as an uncoordinated activity, one conducted without central direction or planning, in which the entrepreneur is not a "rational economic calculator" (like the businessperson of neo-classical economic theory) but instead a relatively unfettered and unpredictable force. The entrepreneur's contribution to society was seen as a kind of unavoidable pain. Like a forest fire that sweeps out old underbrush and makes room for hardier new growth, an entrepreneur, Schumpeter said, competes

with established (and often moribund) businesses, undermining their business models in favor of newer, more effective, and more resilient technologies, products, and services. Even with that valuable net result, the Schumpeterian view has led many people to regard capitalism as a turbulent milieu in which neither the economic winners nor the losers ever get to enjoy stability.

Phelps sees the role of growth-enhancing entrepreneurship differently. Innovation leads not to "creative destruction," but to "nondestructive creation," in which the free and uncoordinated contest of ideas generates growth. Phelps then goes beyond economic formalism to suggest ways in which nondestructive creation can be fostered. This work is still under way, but there are already signs that it will make an enormous contribution to our understanding of business management and innovation, and the ways in which they can (and probably should) be taught. Anyone making choices about business or government policy — for example, about how to invest in innovation — would probably make them



differently after an acquaintance with Phelps's ideas.

Embracing Entrepreneurial Risk

The Nobel Prize was formally awarded to Phelps in 2006 for his “inflation and employment” theory. First published in 1968, that theory refuted the then widely held notion that there is always a trade-off between inflation and unemployment. Instead, Phelps proposed that jobs were affected less by actual inflation than by the perception of inflation to come: more specifically, by employers' expectations of the demand for their products or services and thus the number of people they would have to hire. This insight — a decoupling of the threat of inflation from the fear of unemployment — gave macroeconomic forecasters, including many central banks, the confidence to use much more effective instruments for managing the economy than they would otherwise have used. And it also neatly anticipated both the “stagflation” of the 1970s and the “inflationless boom” that began in the 1990s and continues today.

At first as an outgrowth of his work on inflation, Phelps (who, I should acknowledge for disclosure's sake, is a friend of mine and a fellow faculty member at Columbia University) began to look more closely at other possible causes of prosperity. What, for example, *did* cause the inflationless boom of the 1990s? And why did it take hold more completely in some countries than in others? This led him in turn to study the “institutions of capitalism,” as he called them, and ultimately to focus, as Schumpeter and Friedrich von Hayek had in the early 20th century, on entrepreneurs: creators of the technological

and managerial innovations that lead to productivity and growth. Having shown that inflation per se does not directly drive a prosperous economy, Phelps posited that under the hood of macroeconomic and institutional forces the engine of change is the entrepreneur.

It's not just the quantity of entrepreneurship, but its quality — and, most of all, its level of experimentation — that makes a difference. Some innovators do better than others in both bettering their own future and improving the state of the economy at large.

Why hadn't this drawn much attention before? Perhaps because economics, as a discipline, has tended to give short shrift to the subject of innovation and entrepreneurship. Over the past 20 years, there have been 35 Nobel laureates in economics. Twenty-eight of them made no use of the terms *entrepreneur* or *entrepreneurship* in their prize lectures. The 17 references that Ned Phelps made in *his* Nobel Prize acceptance lecture exceeds by two the sum of all the other references made in the previous 19 years.

And the way in which he described entrepreneurs (or, as he called them, “Hayekian entrepreneurs”) is also significant. Like Hayek, Phelps sees entrepreneurs as seekers and experimenters: “continually striving to expand their knowledge into some areas where knowledge is scarce or nonexistent in order to see whether they might develop something commercially salable that no one else has conceived before.” He added: “This is creativity — acquiring ideas that no one else has or likely will have without doing the necessary exploration.” The long wave of exactly this sort of experimentation, from

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the mid-19th through the mid-20th century — followed by technological innovation in the past two decades — has led to unparalleled booms in investment and cumulative economic growth and change.

Significantly, Phelps does not generally refer to the entrepreneur as many economic models do: as a “black box,” a human calculator evaluating all available information to process optimal choices. Rather, his concept harks back to the more classical entrepreneurs that Hayek and the Chicago School economist Frank Knight described — entrepreneurs who, like today’s business innovators and managers, must make decisions in a rapidly changing world. As Phelps observed in his Nobel lecture, those entrepreneurs play a “human role over a vast range of activities, involving management, judgment, insight, intuition, and creativity.” They take on risk, with only their own judgment as protection against failure; and although some do indeed fail as individuals, together the entrepreneurs reduce the economic risk for society.

And they do not do this in a vacuum. The modern capitalist economy includes both entrepreneurs and large organizations in its process of innovation and economic growth (in contrast to the precapitalist economy, which grew more slowly because it depended on farmers and small-scale merchants). As many economists have noted, institutional arrangements undergirding property rights, company law, and financial institutions made possible the advances of substantial large-scale innovations by entrepreneurs. In his Nobel lecture, Phelps summed this up by listing the people required to make an innovation take hold: not just entrepreneurs

but also the managers who evaluate whether a new product or service will succeed in the market, the consumers who bring it home, and the financiers “who can do better than choose randomly” in deciding where to invest their money. Concluded

an economy that is able to respond flexibly to entrepreneurial innovation. In his lecture, Phelps said that policies based on neoclassical economics, with its workhorse models of investment, production, and economic growth, have “abstracted

Although some of them fail as individuals, together entrepreneurs reduce the economic risk for society.

Phelps, “It takes a whole village for an innovation to be developed, launched, and adopted.”

Captors of Opportunity

How, then, can policymakers and corporate chiefs better encourage a vibrant system of entrepreneurial risk taking — and how can business schools better foster entrepreneurialism? The first step is to recognize and even embrace the uncertainty and ambiguity inherent in a dynamic economy, spilling out beyond the future for entrepreneurs to the economy as a whole. As Phelps observed in his Nobel lecture, “Since innovation and change occur unevenly from place to place and industry to industry, there is also uncertainty about the *present*.” Governments that try to protect their people from uncertainty by fiat, like many of the “social welfare”—prone governments in western Europe, will, according to Phelps, succeed primarily in slowing their own economic growth.

That doesn’t mean that Phelps is callous about the disadvantaged; rather, he suggests a different type of protection is necessary for them. And that protection will come from

from the distinctive character of the modern economy — the endemic uncertainty, ambiguity, diversity of beliefs, specialization of knowledge, and problem solving. Thus neoclassical theory could not capture the observable phenomena of the modern economy — endogenous innovation, endogenous growth, and endogenous swings, disequilibrium phenomena, the engagement of employees, and their personal phenomena.”

Entrepreneurs and entrepreneurially minded business leaders are successful not because they set an unchanging goal and then labor to achieve it. Rather, they succeed as agile seekers looking for many different ways to identify and capture opportunity. Business institutions and governments could serve society better by *enabling* these seekers more effectively — not just in their technological research, but in taking innovations to market.

For example, Phelps has noted in his later work that businesspeople, not scientists and technicians, are the conceivers of much of the “clinical research” or experimentation that constitutes the bulk of contemporary innovation. He

stresses the role of financial institutions and economic culture in enabling entrepreneurs to capture opportunity, and his research over many years has emphasized the role of managers in analyzing innovations to evaluate their viability. (See, for example, Edmund Phelps and Gylfi Zoega, “Structural Booms,” *Economic Policy*, vol. 16, no. 32, April 2001; or Richard Nelson and Edmund Phelps, “Investment in Humans, Technological Diffusion and Economic Growth,” *American Economic Review*, vol. 56, no. 2, May 1966.) A lively stock market, in itself, is perhaps the first ingredient an emerging nation needs to create a prosperous, self-sufficient economy, because entrepreneurs need investors to back their risky ventures.

Broadly Educated Managers

Ned Phelps’s insights are already changing some of the prevailing economic models that minimized the importance of people (entrepreneurs and managers) and concepts (uncertainty and uncoordinated seeking of opportunity). His work also offers two important observations for education — both in business schools and in firms.

First, *general knowledge* — of business, technology, and the economic environment at large — is an important enabler of the virtuous circle of creativity, innovation, and growth. In Phelps’s view, knowledgeable managers are better able to evaluate innovation and have the confidence to pursue it. “The manager of a vineyard confronting a new insecticide,” he said in his Nobel speech, “might have no idea what the expected value of the benefit and cost would be, or what the probability of successful practice

with it would be if adopted — if he lacked an education in basic science and humanities.” This point is consistent with recent empirical evidence linking general management talent (grounded in a liberal arts and sciences background and with awareness of management techniques) to firm-level productivity growth. Another point complementary to Phelps’s argument is that multiskilled managers may facilitate the ability to innovate when they can see the whole picture.

Stanford University economist Edward P. Lazear, as reported in his April 2003 article “Entrepreneurship” (Institute for the Study of Labor discussion paper no. 760), studied the career paths of Stanford

“Measuring and Explaining Management Practices Across Firms and Countries,” Centre for Economic Policy Research discussion paper no. 5581, March 2006.) In addition, project-based exercises with academic faculty and industry practitioners can be particularly fruitful. At Columbia Business School, we tackle the latter through a series of industry-based master classes, cotaught by senior faculty members and leading practitioners and focused on actual projects and decisions.

Some commentators have recently stressed the importance of incorporating creativity and “design thinking,” specifically in business education. (See, for example, David

When business schools prepare future managers to act on “Eureka!” moments, the economy becomes more dynamic.

MBA students. He found that individuals with more varied backgrounds were more likely to become entrepreneurs. So were students who pursued a broader curriculum while in business school.

Phelps’s second observation is that business education could do much more to promote uncoordinated, effective entrepreneurial exploration by its students. General theory and ideas are important in business training, but so is practice in seeking, identifying, and capturing opportunity. Such practice can take the form of case studies of entrepreneurs and managers making the leap from creative ideas to commercially viable innovations. (See Nick Bloom and John Van Reenen,

Dunne and Roger Martin, “Design Thinking and How It Will Change Management Education: An Interview and Discussion,” *Academy of Management Learning and Education*, vol. 5, no. 4, 2006.) Phelps has formalized an economic rationale supporting that concept. When schools advance a more general business education with a focus on opportunities, preparing future managers and entrepreneurs to act on the “Eureka!” moments that signal a new idea, the whole economy becomes more dynamic. In such an economy, workers — even if they aren’t entrepreneurial themselves as individuals — are generally more satisfied. In short, these economies yield tangible benefits and psychic

opportunities that many people associate with the good life.

As Phelps noted in his Nobel lecture, his research on entrepreneurship has, at its heart, a question that has been asked since ancient times: “What is the good life?” He argues that the highest-quality life is one with a “career of challenges and personal development,” and he traces the history of this idea from Aristotle through Benvenuto Cellini, William Shakespeare, Thomas Jefferson, and William James, up to Abraham Maslow, the psychologist who devised the hierarchy of human needs, and John Rawls, a philosopher of economic justice. This idea first became prominent, says Phelps, “when there were grand projects and heroes” — that is, when the transformation by innovation of work in the modern economy led to greater pursuit of satisfaction in creative employment. His most recent writing on this subject is an essay called “The Economic Performance of Nations: Prosperity Depends on Dynamism, Dynamism on Institutions,” published in Eytan Sheshinski’s anthology *Entrepreneurship, Innovation, and the Growth Mechanism of the Free-Enterprise Economies* (Princeton University Press, 2007).

Phelps mentioned one early test of this idea in his Nobel lecture. When job satisfaction and general satisfaction were scored by the World Values Survey (an international study of political and cultural beliefs, archived at the University of Michigan), satisfaction scores were higher in dynamic economies. These economies have high levels of research and development spending, labor force participation, and economic growth. If such correlations prove causal, Phelps noted, the

emphasis in public policy in many countries might shift from cushioning losses from change (the European social model) to reforming financial, labor, and product markets in a way that enables both creative destruction and non-destructive creation.

“A country’s dynamism, being slow to change, is not measured by the growth rate over any short- or medium-length span,” Phelps wrote recently in an op-ed called “Entrepreneurial Culture,” published February 12, 2007, in the *Wall Street Journal*. “The level of dynamism is a matter of how fertile the country is in coming up with innovative ideas having prospects of profitability, how adept it is at identifying and nourishing the ideas with the best prospects, and how prepared it is in evaluating and trying out the new products and methods that are launched onto the market.”

Parts of the industrialized world, particularly the United States, have built up and grown accustomed to an impressive level of dynamism over the past 150 years. The measures that Ned Phelps suggests — more institutions like stock markets, more precise regulation, and more ingrained general education — have all been talked about before. But for the first time, there is a clear case for institutionalizing these values and for recognizing the ways in which the psychic rewards of the good life and the unfettered experimentation of the entrepreneur reinforce each other. +

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