BookReview

Analyst of Change

PROPHET OF INNOVATION: JOSEPH SCHUMPETER AND CREATIVE DESTRUCTION
BY THOMAS K. MCCRAW
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REVIEWED BY THOMAS M. HUMPHREY

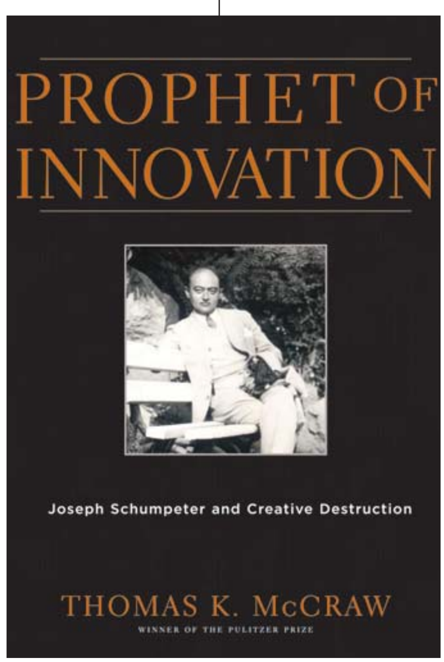
Moravian-born, Vienna-educated Professor Joseph Alois Schumpeter, who liked to say of his aspirations to be the world's greatest economist, horseman, and lover that only the second had given him problems, was a study in contrasts. He relished his fame as one of the interwar years' premier economic theorists, yet modestly declined to mention his work in his Harvard classes or in his exhaustive book on the history of economic thought. (Citations to his work were inserted into that book by his wife after his death.) An obsessively hard-working, morose (indeed often depressed) writer in private, he affected a public image of carefree, cheerful ebullience. A notoriously easy grader to his students, he often gave himself low marks in his diary. A one-time banker, he relied upon the women in his life to balance his checkbook. He chronicled the evolution of the auto industry but never learned to drive. He admired mathematics but failed to employ them in his work. A harsh critic of the static, steady-state equilibrium thinking of the neoclassical marginal utility/marginal productivity school, he nevertheless declared one of its founders, the French neoclassical equilibrium theorist Leon Walras, the greatest economist of all time.

All of his life Schumpeter championed capitalism yet was an expert on Marx, Marxist economics, and the entire socialist literature. A Marxist economist, Paul Sweezy, was among his closest Harvard friends. He was a political conservative and antisocialist who notwithstanding served as Finance Minister for a socialist government in post-World War I Austria. He lauded capitalism's superior performance while predicting the system's death from too much success. He preached *creative destruction* — the incessant tearing down of old ways of doing things by the new — as capitalism's inescapable iron law, yet he was unprepared when his own work fell prey to it.

The 1990s saw the publication of at least three biographies of this complex, paradoxical figure. Now comes Thomas McCraw's definitive and elegantly written study to top them all. Drawing upon Schumpeter's diary, correspondence, early drafts, and published works, McCraw, a Pulitzer Prize-winning emeritus professor of Business History at Harvard, paints a vivid picture of Schumpeter's life and times, his loves and achievements. Readers will choose their favorite parts of the book. Most enlightening to this reviewer is McCraw's survey of Schumpeter's scholarly contributions. Ironically, McCraw writes that he is "not concerned with Schumpeter's economic thinking, narrowly construed," but with his "life and his compulsive drive to understand capitalism." But that is a false dichotomy because Schumpeter's theories cannot be divorced from his attempts to come to grips with capitalism: Each guided and shaped the other. In any case, McCraw provides a perceptive and accurate account of Schumpeter's academic greatest hits and misses.

Greatest Hits

Hits include first and foremost the path-breaking and seminal *The Theory of Economic Development*, published in 1911 when Schumpeter, then 28, was in what he called his scholar's "sacred third decade" of peak creativity. Other hits followed including the subtle and provocative *Capitalism, Socialism and Democracy*, and the mighty *History of Economic Analysis*, which Schumpeter worked on throughout the whole decade of the 1940s, and which was edited and published by his third wife, Elizabeth, four years after his death in 1950.



Schumpeter pushed one idea all his life: that capitalism means growth and growth requires innovation. The book that put him on the map, *The Theory of Economic Development*, states for the first time his vision of capitalism as the economic system that delivers faster growth and higher living standards (especially of the middle- and lower-income classes) than any other system, albeit in a disruptive, jerky fashion. Like a perpetual motion machine, capitalism generates its own momentum internally without the need of outside force. Even technological change, seen by some as an exogenous propellant, is treated by Schumpeter as a purely endogenous matter, the product of economically motivated human ingenuity.

Breaking from received wisdom, Schumpeter replaces the static equilibrium analysis of his neoclassical marginalist predecessors and contemporaries with a dynamic disequilibrium theory of cyclical growth. His key building blocks are profits, entrepreneurs, bank credit creation, and innovation. Profits (supplemented perhaps with a desire to create a business dynasty) motivate entrepreneurs, who, financed by bank credit, innovate new goods, new technologies, and new methods of management and organization. These innovations fuel growth and generate cycles.

Why cycles? They arise when the first successful entrepreneur overcomes the stubborn resistance of incumbent interests and eases the path for other entrepreneurs. The resulting bunching of innovations (not to be confused with mere inventions, which Schumpeter saw as occurring more or less continuously over time) boosts investment spending, which bids prices above costs and raises profit margins thereby triggering the upswing or *prosperity* phase of the cycle. The high profit margins then attract swarms of imitators and would-be competitors into the innovating industries. Output over-expands relative to the demand for it, prices fall to or below costs thus eliminating profit margins, and the downswing or *recession* phase begins. The recession continues, weeding out inefficient firms as it goes, until the economy absorbs the innovations and consolidates the attendant gains thus clearing the ground for a fresh burst of innovation.

If the upswing has been accompanied with speculative excesses nonessential to innovation, the downswing may overshoot the new post-innovation equilibrium. Then the cycle enters its *depression* phase where the excesses are expunged and the economy returns via a *recovery* phase to equilibrium. Schumpeter stressed that the latter two phases and the phenomena that generate them are unnecessary for cyclical growth and could be prevented by properly designed policy. It's not speculative bubbles but rather the discontinuous clustering of innovations in time plus their diffusion across and assimilation into the economy that produces real cycles of prosperity and recession.

Profits, entrepreneurs, bank credit, innovation — all are essential to the growth of per-capita real income in Schumpeter's model. Remove any one and the growth process stops. Innovation, for instance, is abortive in the absence of bank credit creation necessary to effectuate it. Cash-strapped entrepreneurs cannot build their better mouse traps from thin air. They require real resource inputs and loans of newly created bank money to hire them away from alternative employments. In highlighting this observation, Schumpeter effectively abandoned the classical dichotomy notion that loan-created money is a mere sideshow, a neutral veil that together with metallic money determines the nominal, or absolute, price level while leaving real economic variables unaffected. Not so, said Schumpeter. For him, money and credit are integral to the process of real economic growth and so have real effects.

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Schumpeter's most popular hit was his 1942 book *Capitalism, Socialism and Democracy*. In it he coins the term "creative destruction" to denote capitalism's incessant killing off of the old by the new. The book contains his famous end-of-history prediction that capitalism's very successes, not its failures and contradictions as prophesied by Karl Marx, will produce social forces — the routinization and depersonalization of innovation, the destruction of the image of the entrepreneur as romantic hero, the creation of a class of intellectuals hostile to capitalism — which undermine the system and lead to its demise.

If capitalism cannot survive, can one rely upon its successor, socialism, to deliver the goods and amenities of life efficiently and fairly? Yes, said Schumpeter, who proceeded to provide the supporting argument. Many readers took him at his word, but not McCraw. He sees Schumpeter's "defense" of socialism as a devastating satire that mocks the system instead of bolstering it. Schumpeter, in other words, comes not to praise socialism, but to bury it. In the end, Schumpeter's case for socialism rests on extremely abstract theoretical conditions unlikely to be realized in practice. All of which creates a problem: If Schumpeter sought to show that socialism was a practical impossibility, then why did he predict its ultimate triumph over capitalism? One wishes that the real Schumpeter would please stand up.

As for democracy, Schumpeter viewed it as a political market in which politicians compete for the votes of the electorate just as producers compete for consumers' dollars in markets for goods and services. Always skeptical of consumer rationality, he believed that market power resides more with vote seekers than with the electorate, whose apathy, ignorance, and lack of foresight enable politicians to set the policy agenda and to manipulate voter preferences. Even so, he felt that capitalism, as long as it operates within a proper legal framework, is largely self-regulating and so requires little intervention. It thus constrains politicians' market power more than does socialism. McCraw fails to note that these ideas mark Schumpeter as a forerunner of the modern public choice school.

The last hit in the Schumpeter canon is his *History of*

Economic Analysis, whose title expresses his contention that the rise of analytic techniques in economics is part of the economic growth process and must be studied as such. The *History*, in terms of its scholarship, breadth of coverage, richness of content, originality of interpretation, and wealth of resurrected valuable ideas, ranks with Jacob Viner's 1937 book *Studies in the Theory of International Trade* as the finest history of thought ever written. Scholars still mine it for ideas today. Among other things, it provides sparkling accounts of the quantity theory, the gold standard, Say's Law, the development of production and utility functions, and much more.

Greatest Misses

Apart from an unfinished book on money, Schumpeter's misses include his massive, two-volume *Business Cycles* (1939), which he wrote entirely by himself with no research assistance. Seven years in the making, it emerged stillborn from the press. McCraw, however, values the book for its historical narrative of the vicissitudes of firms in five industries and three countries. But Schumpeter's contemporaries saw only the book's prolixity, discursiveness, and lack of focus. Most of all, they rejected its contrived, mechanistic analytical schema composed of three superimposed cycles — the 50-year Kondratieffs, 9-year Juglars, and 4-year Kitchens, all named for their discoverers — into which Schumpeter forced his data. As if these flaws weren't enough to sink *Business Cycles*, it had the bad luck, and bad timing, to appear when J. M. Keynes' celebrated *General Theory* was sweeping the field. Everybody talked about Keynes' book, few about Schumpeter's.

Schumpeter and Keynes

Schumpeter fumed when Keynes and Keynesian economics upstaged him in the 1930s and 1940s. Economists preferred Keynes' theory to Schumpeter's because it seemed to offer a better explanation of and remedy for the Great Depression, and because it possessed greater policy relevance and was more amenable to the mathematical modeling, econometric testing, and national income accounting techniques just beginning to come into vogue in the '30s.

Schumpeter should have foreseen this state of affairs. It was consistent with his doctrine of creative destruction in which new theories, like new goods and new technologies, displace the old in a never-ending sequence. Here Keynes was the innovator whose analysis of capitalism rested on such novel concepts as the multiplier, marginal propensity to consume, marginal efficiency of capital, and liquidity preference function. Taken together, these Keynesian innovations were bound, according to the creative destruction doctrine, to have supplanted Schumpeter's old-fashioned theory.

Instead of accepting this outcome, Schumpeter reacted exactly as he had described entrenched interests doing when threatened by an innovation that disrupts their accustomed status quo: He put up stubborn resistance. His resistance, however, was motivated not so much by simple self-interest, or desire to protect his own theory, as by his scientific judgment that Keynesian economics was fundamentally unsound.

Schumpeter accused Keynes of assessing capitalism on the basis of a short-run, depression-oriented model when only a long-run growth-oriented one would do. He scorned Keynes' claim that capitalistic economies tend to be perpetually underemployed and in need of massive government deficit spending to shore them up. He attacked the "secular stagnation" notion that capitalists face vanishing investment opportunities and slowing rates of technological progress when the opposite is true. He rejected the contention that income must be redistributed from the rich (who save too much) to the poor (who cannot afford to save) in order to boost consumption spending and aggregate demand. Nonsense, said Schumpeter. The insatiability of human wants ensures that income, regardless of who receives it, will be spent in one way or another.

McCraw does a fine job discussing Schumpeter's criticisms, all of which were valid, penetrating, and correct. He fails, however, to note that Schumpeter essentially attacked the wrong target. For it was not so much Keynes as his British and American disciples — people like Joan Robinson, R. F. Kahn, Abba Lerner, Schumpeter's Harvard colleague Alvin Hansen, and others — who were largely responsible for the doctrines, especially their extreme versions, that Schumpeter countered. But McCraw rightly points out that Schumpeter slipped when he opined that the Keynesian-style permanently mixed economy, or public sector-private sector partnership, was unsustainable and could not last. The private sector, Schumpeter reasoned, would become addicted to government expenditure stimulus and demand ever-increasing amounts. In this way, the public sector would expand relative to the private one and the economy would gravitate to socialism. Time has proved Schumpeter wrong. Private and public sectors have coexisted in a fairly stable ratio in most developed countries for the past 60 years.

Controversial Issues

Schumpeter held politically unpopular opinions in the 1930s when New Deal activism and populist anti-business sentiments were on the rise. He opposed President Roosevelt's New Deal reforms on the grounds that they hampered entrepreneurship and growth. For the same reason, he opposed Keynesian macro demand-management policies designed to tame the trade cycle. In his view, because growth is inherently cyclical, one flattens the cycle at the cost of eliminating growth. Other controversial opinions, all corollaries of his work on innovation and creative destruction, flowed from his pen.

Of income inequality he wrote that the gap between rich and poor is a prerequisite to and a relatively harmless byproduct of growth in a capitalistic system. The rich are necessary since it is they and not the poor who save and invest in the innovation-embodied capital formation that lifts the living standards of all. Moreover, high incomes provide both incentive and reward for the entrepreneurs who propel growth. No one need fear that an unequal distribution will condemn them to poverty. The Italian economist Vilfredo Pareto's notion of the "circulation of the elites" assures that. The ceaseless rise and fall of entrepreneurs into and out of the top income bracket means that it will be occupied over time by different people, many of them drawn from the ranks of the poor. The poor replace the rich and the rich the poor in never-ending sequence.

In assuming a high degree of mobility across income groups, Schumpeter may have overlooked an education barrier. He failed to acknowledge that a superior education, increasingly a prerequisite to entrepreneurship and wealth in today's high-tech world, is more affordable by the rich, enabling them and their offspring to stay on top.

Monopolistic firms and monopolistic profits hardly worried Schumpeter. He thought that monopolies, unless protected by government, are short-lived, inherently self-destroying, and require no antitrust legislation. Their high profits attract the very rivals and producers of substitute products that undercut them. For the same reason, he regarded antitrust laws aimed at breaking up large, nonmonopolistic firms as ill-advised. Not only are big firms often more efficient than small ones, but their research and development departments house teams of specialists functioning collectively — and routinely — as an entrepreneur who creates innovations that drive growth. Indeed, the very existence of R&D departments indicates that big firms realize they must continually innovate to stay alive.

Schumpeter's politically unpopular opinions continued into the wartime years of the 1940s. He distrusted Roosevelt, suspecting him of trying to establish a dictatorship. And he had mixed emotions about the Axis nations, Germany and Japan. He despised their military establishments, leaders, and advisors. But he admired the people and cultures of the two countries and feared that the United States would impose punitive reprisals at war's end. Most of all, he saw the United States' wartime ally, the Soviet Union, as its chief long-term foe, and thought that it would need Germany and Japan to serve as buffers against the communist nation. These views found little sympathy among Schumpeter's friends and associates in the ultrapatriotic environment of the early 1940s, a circumstance that caused him much unhappiness.

Schumpeter Today

The new improves upon and kills off the old. True enough. But what's new and what's old may lie in the eye of the beholder. Today's cutting-edge theorist and mathematical modeler may regard Schumpeter's analysis as older than old, a pre-Keynesian, pre-monetarist, pre-new classical/rational expectations relic. Accordingly, Schumpeter's name is stricken from required reading lists in many top graduate economic programs where theory is king. To businessmen, journalists, and historians seeking not abstract theory but rather practical understanding of global capitalism, however, his work is as fresh and insightful as the day he penned it. Journalists speak of a renaissance of Schumpeterian economics and of a reversal of his relative ranking with Keynes. Although McCraw does not say so, Schumpeter undoubtedly would be pleased, but hardly surprised, by the revival of his work. It fits his description of the zigzag path of doctrinal history in which sound economic ideas get lost or forgotten only to be rediscovered and restored to their proper place.

A Complaint

A great book deserves a great index, or at the very least an adequate one. McCraw's book has neither. Lacking comprehensiveness and precision, the index creates problems for readers searching for particular items in the text. It is inexcusable that the index fails to cover the 188 pages of endnotes containing valuable scholarly information and constituting a fourth of the book. One can fault the publisher, not the author, for this oversight. Luckily, it does little to mar McCraw's outstanding text. Elizabeth Schumpeter wrote that her husband "loved to read biographies." It's a sure bet that he would have enjoyed this one. **RF**

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component-level examinations as well as simulations with dummies and sometimes cadavers (the latter led by universities). "It's a lot more complex when we're doing the testing," Jarvis says. "We have to design for 1,001 different scenarios and we have to design so that occupants have the best level of protection in every one of those scenarios." With regards to the possible injuries to the pelvis of Ford Explorer passengers, Jarvis says that even with multiple crash tests in consistent settings, there will be variation. Also, injuries suffered by dummies don't always translate to injuries suffered by real people.

That said, Jarvis says Ford sees value in IIHS testing, as well as that conducted by governments around the world. "All of the public domain testing has upped the ante and increased the debate in the level of design and safety testing," he says. "We certainly learn things from them." **RF**