

Lecture V: Schumpeter's "Creative Destruction"

The mid-20th Century economist and social thinker Joseph Schumpeter is remembered mainly for coining the phrase "creative destruction" to describe the process by which companies are upended by new technologies that undercut their business. Schumpeter saw other "life-changing" experiences that could lead to the demise of successful corporations, but posterity latched onto this catchy and paradoxical phrase. How could "destruction" be "creative?" To Schumpeter, corporations, even successful ones, were like people. They often failed to see what was coming and were ill-prepared for change. He attributed this to the inevitable bureaucratization of management, which after years of success doing one thing will find it difficult, if not impossible, to adapt to change, whether it be in the market or in the development of new products and services. Today we speak of the importance of "innovation" as key to the success of a large corporation, it was Schumpeter who first identified this illusive quality that enables a company to continue growing and prospering, but also upsets established ways of doing business. Let's face it: it's hard to change, especially as we get older. Schumpeter went so far as to predict the demise of capitalism and its gradual replacement by socialism due to the inability of capitalists themselves to see and act on new opportunities. Writing in 1942 and again in 1950 in a second edition of his work *Capitalism, Socialism and Democracy*, he asserted that the entrepreneurial spirit that made capitalism the most successful economic system in human history, would inevitably fade as the capitalist economy matured and that the men (and women) who managed American and European companies – that is the Western democracies – would cease to be interested in taking chances on new ideas because they were too wedded to the comfortable lives their former successes had provided them. This would be even truer for their children and grandchildren, born as they would be into a smooth running and prosperous capitalist system. A man who greatly enjoyed irony, Schumpeter perhaps hoped that his provocative prediction would have the effect of spurring a new outburst of creative risk-taking by future would-be entrepreneurs. One could point to Bill Gates or Jeff Bezos as examples of the very innovative entrepreneurs Schumpeter thought were a thing of the past. Of course he totally missed the innovative capacities of non-Western entrepreneurs who have brought us Sony, Samsung, and a host of Chinese business successes.

Schumpeter did identify, however, the sort of sweeping changes that would overtake retailers like Woolworths, Sears, and J.C. Penney. While Sam Walton and, later, Jeff Bezos, were reinventing the business of retailing goods, these "legacy" companies slowly lost market share and went bankrupt. What, we might ask, do Walmart and Target have that Sears, J.C. Penney, or even Woolworth's did not have? The answer seems to be huge stores under one roof that sell almost everything. With the coming of the Internet, Bezos turned his Amazon website from a place to buy books into a place to buy almost anything. One could point to lower prices as a key element in the success of the newcomers. The self-service store and on-line shopping eliminated thousands of employees that traditional retailers had to pay to serve customers. People were willing to accept this lower level of service in order to enjoy the lower prices and so they took their business elsewhere.

The "mortality rate" of companies runs about 10 per cent per year, according to economists. Of the one hundred largest companies in the world in 1912, 29 were bankrupt by 1995, 48 had disappeared altogether, and only 19 were still in the top one hundred, according to figures cited in Niall Ferguson's book *The Ascent of Money* (2008, p. 349).

We see a vivid example of "creative destruction" at work with the advent of digital photography, which devastated the core business of the Kodak Corporation. Kodak's researchers had actually discovered and perfected the electronic systems necessary for digital picture-taking as early as 1975, but the company withheld the technology from the market, seeing it (accurately) as likely to destroy their profitable film business. Kodak finally introduced a line of digital cameras in the 1990s in partnership with Microsoft.

But by then, it was too late. Nikon, Sony, and other Japanese companies had already taken over the market. Of course, the introduction of high resolution cameras in cell phones crushed even this business. This was a classic example of how corporations can bury a technological innovation that threatens to destroy the company's long-standing business, in Kodak's case, the manufacture of photographic film. Today, following its 2012 bankruptcy filing, Kodak is a shadow of its former self, with some 4,900 employees and world-wide revenue of a little over one billion dollars in 2019; down from 40,000 employees and 10.3 billion dollars in revenue in 2007. During its downward spiral the company's revenue came largely from selling off its valuable patents. In the final analysis, Kodak was a high tech company that failed to benefit from its own research.

Schumpeter would have appreciated the Kodak story as a telling example of "creative destruction." In fact, he was actually more of a historian than an analytical economist. He did pioneering work on business cycles – those mysterious regularities of boom and bust that seemed to characterize capitalism. Looking at the individual corporation, we see another sort of cycle: birth, growth, prosperity, challenge, decline, death. Schumpeter's "creative destruction" might be best located in the "challenge" phase of corporate life. That is when a new technology or a change in public taste or the emergence of a cheaper competitor, can push a previously successful corporation into bankruptcy and liquidation. We have already looked at this trajectory with public service companies like canals, railroads, and telegraph. I would like to look now at two manufacturing companies that once dominated their industry, but after about a one hundred year run, went out of business. One is a textile manufacturer, Amoskeag Corporation whose mill in Manchester, New Hampshire was once the largest in the world. The other is the iconic Pullman Palace Car Company, the brainchild of George Pullman, which built and operated sleeping cars on American railroads from the 1870s until 1968.

Amoskeag began life in 1837 when a group of Boston capitalists -- denominated the "Boston Associates" by a later historian -- seeing the success of the textile works at Lowell, Massachusetts, decided to duplicate Lowell's model by building a company town in New Hampshire at the Amoskeag Falls of the Merrimack River, naming it after the city of Manchester, England. The Amoskeag Corporation grew to be one of the largest textile manufacturers in the world before it closed its doors in 1936, almost exactly one hundred years after its establishment. At its peak in the early 1900s, the mill employed some 17,000 workers, many of whom lived in company houses on the mill grounds. The mill was central to the life of Manchester. Frederick Dumaine, Jr., the son of one of the company's long-time managers, recalled that "At one time, the Amoskeag owned practically everything in town. . . . The churches and the YMCA received land from the Amoskeag free. All the parks were given to the town by the Amoskeag. They had sewing classes, cooking schools, gardens." (*Amoskeag*, p. 76)

The Amoskeag, like other New England textile companies, began a long, steady decline to bankruptcy in the 1920s. Cheaper labor in the South and overseas led textile companies to move their production to these areas. The Amoskeag's owners, however, had already decided after a series of strikes in the early 1920s that the giant mill was a losing proposition and ceased to make any further investment into modernizing its operations. The physical structure itself, constructed over the course of almost a century, constituted a manufacturing dinosaur. Newer, one story mills in the South offered greater efficiency of operations. After citing the antiquated nature of the buildings and machinery, a *New York Times* article of November 15, 1936 reporting on the plants closure, noted that as elsewhere in New England, "the nature of ownership changed."

Owners and managers had in the beginning tended to be the same persons. That made for close attention to business, a willingness to plow back earnings and to forego profits temporarily. It made for pride in the business as

a business. But gradually ownership became absentee and management was delegated. Stock was held by trusts. Small controlling groups found it more profitable to trade in the company's stock than to operate a plant efficiently.

Citing the report of the Federal Bankruptcy Court, the article noted that "The trustees of the company formed a holding company in 1925 and financial reorganization was effected in 1927." Reviewing these steps, the Court commented "The trustees . . . had definitely decided to put their winnings aside and play safe. From that day to this they have never put a cent into the operation of this mill property." Elsewhere in the Court report, the *Times* reporter quotes it as saying the Trustees were accused of "pulling out their money as fast as they could."

The loss of manufacturing jobs in New England presaged a similar decline in manufacturing throughout the so-called "Rust Belt" of the North. New investments, when made, went primarily into plants in low wage areas in the South. More and more by the 1970s, manufacturers gave up on producing their products in the United States entirely and shifted their production to overseas low wage areas. Eventually, as we know, American manufacturers simply exited the business of manufacturing altogether, seeking higher profits in financial and service industries. What manufacturing they still did was undertaken through contracts with companies in China or other low wage countries, or through middle men who worked with sweat shop operations in Central America to produce garments sold under famous brand names in the U.S. and elsewhere.

The decline and eventual disappearance of manufacturing companies like Amoskeag raises the question, first broached in their 1932 book *The Modern Corporation and Private Property* by Adolf Berle and Gardner Means, of who actually owns and operates a large, modern corporation with thousands of shareholders. And, beyond that, in whose interest should the company operate. Berle and Means were concerned by the growing separation between corporate ownership (i.e., stockholders) and corporate management, and their perception that managers increasingly ran companies with their own interests in mind rather than those of the stockholders. The Amoskeag experience seems to argue just the opposite: the absentee owners in Boston and elsewhere paid little attention to the actual day-to-day operation of the company, having turned that over to the resident manager, while they were highly concerned about maximizing profits and extracting whatever value the business had in it in order to invest the money in some more lucrative enterprise. Seeing the textile business, especially in New England, as a losing proposition, the owners gradually disinvested in the factory and eventually abandoned it altogether, turning the property over to the city of Manchester for practically nothing. The experience of most businesses, we shall see, suggests that the longer a company exists, the harder it is for it to grow and prosper. There seems to be a "law of diminishing returns" at work here.

In the final lecture, we will look more closely at the relationship between ownership and management of the modern business corporation as it has evolved over the past forty or fifty years, particularly the growth of the nation's financial sector and the implications for the future of American corporate capitalism.

The other manufacturer we will look at, George Pullman, established his company in the 1860s. It stayed in business until 1968. Like Amoskeag, Pullman established a town to house his factory and workers and modestly named it after himself: Pullman, Illinois. The fate of Pullman (later Pullman Standard) Industries was tied closely to that of American railroads, especially the decline in the demand for passenger service. As such, its story differs from that of the

Amoskeag Corporation: there is still a large demand for textile products and as long as people wear clothes and put sheets on their beds, this demand will remain and even increase with population growth. As a manufacturer and operator of railroad sleeping cars, Pullman Corporation did not have the luxury of moving its operations to a low wage area or otherwise outsourcing production. At the same time, Pullman did not have to contend with foreign competition in the way Amoskeag and other textile companies did. Although today, passenger rail and transit equipment is produced (or at least “assembled”) by foreign-owned companies with plants in the U.S. as well as abroad.

Pullman’s idea was to provide luxurious travel accommodations to Americans (and some Europeans) who could afford to go “first class.” In addition to the eponymous Pullman sleeping cars, the company manufactured a whole line of other specialized rail cars: parlor cars, dining cars, cars with barber shops and separate smoking rooms. Pullman retained ownership of the cars and staffed them with Black porters. These men became synonymous with “Pullman” and their numbers grew until the company employed some 10,000 porters on 25,000 sleeping cars by the mid-1920s. But that was the high point of the passenger rail business and the company went into slow decline in the following years.

In 1944, Pullman was ordered to divest itself of the “Pullman” sleeping cars to the various railroads that used them. The federal courts decided its control of such cars nationwide constituted a monopoly and a violation of the Sherman Anti-Trust Act. It continued to produce passenger and freight cars for American and foreign railroads into the 1960s, but ended this line of work in 1968, moving its remaining assets into a merger with the Kellogg Construction Company, which eventually was merged with Brown & Root Construction Company in 1998. Pullman Standard Car Company was acquired by Dallas based Trinity Industries in 1984 and ceased to exist as an independent company. Today Pullman is remembered for the classic rail sleeping cars and the company town George Pullman had built in the 1880s.

Towns created by corporations, like Manchester, New Hampshire and Pullman, Illinois, are an extreme example of the social impact of business decisions. Writing about another such town at the Sparrows Point steel mill outside of Baltimore, Mark Reutter notes that:

Company towns expressed in mortar and bricks a strongly embedded sentiment among the respectable that the best way to handle problems arising from mass industrialization was in the benevolent yet firm control of the employed by the employer. (Reutter, p. 70)

Even without the sort of proto-feudal notion of a “company town,” we can see how a dominant industry can make and then break a community. Cities as big as Pittsburgh, Detroit, Rochester, New York, or Akron, Ohio were both the beneficiaries and victims of the rise and fall of American manufacturing. Much of the destruction in these cases can be traced to foreign competition, but the inability of established firms to adjust to new technology is also a factor. It will be interesting to see what happens to legacy auto manufacturers if and when we transition from internal combustion engines to electric motors as the power source for our vehicles.

Conglomerate Corporations

Since the 1970s, American business has seen a big increase in “conglomerate” corporations, that is, companies that engage in a wide variety of often (seemingly) unrelated businesses. Many times this diversification aims to help hedge against a downturn in the firm’s historical core business: General Electric buying NBC or Universal Studios, for instance; or R. J. Reynolds buying Nabisco and Kentucky Fried Chicken to hedge against the decline in its core cigarette business. It could also be the result of so-called “private equity” firms that buy up many different “undervalued” businesses and end up with a whole stable of unrelated companies under their control. Their object is, of course, to try to turn them into profitable enterprises. “Private equity” refers to the fact that the firm – Bain Capital, for instance – borrows money in order to purchase all of the outstanding stock and other assets of a company, including its various liabilities, and “takes it private.” With no stockholders or corporate board to deal with, the private equity firm is able to move quickly to reduce costs or restructure debt by liquidating the least profitable parts of the business (together with their employees) and eventually selling the more desirable parts of the company at a price well above what they paid for it.

There is nothing very new in this mode of doing business. One might cite Sears, Roebuck and Company, a giant retail business, that also owned Allstate Insurance Company, a totally unrelated business. At one point, U.S. Steel, before it transformed itself into the USX Corporation, purchased the Marathon Oil Company, a medium size refining and retail gas station business in Ohio. Companies on both the way up – Amazon, for instance – and those on the way down, Westinghouse, let’s say – seem to reach out on the way up as a means of growth, and on the way down as a desperate effort to find a road to renewed growth and profitability. In general, these diversifications do not succeed in saving a company from eventual dissolution. Acquisitions as a means of growth make more sense, but when the acquired firms or investments are in areas outside the historical competence of the purchasing company, the result is often disastrous. One of the country’s oldest corporations, Proctor & Gamble, once thought it saw a road to greater profitability by investing in “interest rate derivatives” through the Bankers Trust Company. After suffering large losses on these investments P&G sued Bankers Trust, testifying that management did not actually understand how these financial instruments worked and that the Bank had misled them into thinking they would be profitable. Better, the company concluded, to stick to consumer goods, even if the returns on investment might be more modest than those promised by some fancy financial transactions. The Westinghouse Corporation suffered similar losses in the 1980s by investing almost one billion dollars in “junk bonds.” When the savings and loan crisis of the late 1980s led to default on these bonds, the company lost most of its billion dollar stake.

Large, “old line” companies gradually all seem to fall into the same problem of slowing growth and declining share prices. This makes them likely targets for takeover bids by other companies or “corporate raiders,” those billionaires who gain seats on corporate boards and either oust the existing management or seek to sell off parts of the company in order to increase immediate profits and raise share prices so they can then sell off their holdings at a large profit. Somewhere along the line, the long-term interests of the corporation are lost in the scramble for short-term gains.

Innovation and Invention

The period after the Civil War up to World War I saw a huge outpouring of inventions by lone tinkerers, both in the U.S. and in Europe. The light bulb, phonograph, internal combustion engine, and eventually radio and moving pictures gave birth to whole new industries. Most of the original inventions that made these industries possible were the work of individuals like Edison, Tesla, Benz, and Ford. In fact, historians estimate that 85 per cent of patents granted by the U.S. Patent Office in the period between 1870 and 1920 were awarded to individual inventors. Since World War II, however, invention has moved from the basement to the research laboratory, often one operated by a large corporation. There are exceptions, of course. Steve Wozniak and Steve Jobs started Apple Computers in their garages. Hewlett and Packard also began their computer business in this modest way. Other innovators like Bill Gates of Microsoft achieved success by linking up with corporate giants like IBM or AT&T (Bell Labs) who did not fully appreciate the importance of the innovations their own companies had come up with and were willing to sell them to others. Today, 85 per cent of all patents are granted to corporations and just fifteen per cent to individual inventors. One can speak more accurately of “entrepreneurs” than inventors as the real innovators of the past fifty years. The desire to create a new industry and reap the monetary rewards spurs individual entrepreneurs – many of them still in the 20s and 30s – to risk failure in order to maybe gain a great success. A corporation like AT&T or IBM might devise a better way of doing things, but is apt to see it as a threat to its existing business, although it may be willing to sell or license the patent to someone else, hoping to gain at least some of the rewards without taking the risk that it might fail to catch on.

The “Special Century”: 1870 to 1970

In his 2015 book *The Rise and Fall of American Growth*, the economist Robert J. Gordon argues that the inventions of the late 19th and early 20th centuries spawned an unprecedented (and, in his view, unrepeatable) explosion of economic growth in the United States. Many of the historically important corporations that are concerned with in these lectures were born during this immensely fertile period in human economic and scientific history. Gordon notes that for centuries, from the fall of the Roman Empire in the 400s C.E. to about 1770, there was virtually no such thing as economic growth. Starting in the 1700s, there was a slow but steady increase in human productivity, mostly in the latter part of that century and then into the early 1800s with the invention of the steam engine. For the United States, the explosive economic growth set-in right after the Civil War and continued for much of the next one hundred years, with periods of depression in the 1870s, 1890s, and 1930s. Gordon stresses that economic production accelerated rapidly, but also the quality of the goods manufactured increased exponentially. The car an American bought in 1970 might cost about the same as one purchased in 1920, but the vehicle itself had changed dramatically for the better in the meantime. Gordon attributes most of this phenomenal growth to the invention of electric light, internal combustion engines, airplanes, radio, television, and the entrepreneurship that brought the new products to the average consumer. Since 1970, however, the pace of innovation/invention and economic growth has slowed dramatically, even with the introduction of computers and other advanced electronic devices. None of these inventions of the last fifty years has had the impact of those made during the “special century.”

Corporate America was born and came of age during this outpouring of new technology and can be credited with turning these inventions into mass market products that have raised the American standard of living above the rest of the world. But, if Gordon’s researches are to be believed, this rapid growth of corporate America cannot be sustained, much less repeated. Economists seem to obsessively study and report on GDP growth from quarter to quarter and year to year. Measuring economic growth has always

been an imprecise science, and Gordon notes again and again that the GDP figure measures only “quantitative” growth, not “qualitative” improvements. It is fair to suggest, I believe, that had the United States adopted a socialist, state-operated economy, such qualitative improvements would have been few and far between. The competitive demands of the free market have created an immense amount of hype about “new, improved” products, but the fact is almost every consumer item on the American market has undergone a series of quality-enhancing changes in record time (just look at how computers and cell phones have evolved in the last few years) and that these changes would not have come as quickly had the products come out of state-owned enterprises, where the only criterion was the *quantity* of output.