Review Essay

The Corporation and the Twentieth Century: The History of American Business Enterprise. *By Richard N. Langlois*. Princeton, NJ: Princeton University Press, 2023. 816 pp. Hardcover: $50.00. ISBN: 978-0-691-24698-7.

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Reviewed by Richard S. Tedlow

On the first page of this large and ambitious book, Richard N. Langlois states that Alfred Chandler, "who arguably created the modern field of business history," believed that the large, integrated corporations born in the late nineteenth century came to dominate significant sectors of the American economy because such corporations "successfully substituted administrative coordination by expert managers for the invisible hand of the market" in the efficient allocation of resources (p. ix). Langlois then writes that these big business empires were beginning to crumble at the very time that Chandler's classic, *The Visible Hand*, was published in 1977. The firms with which Chandler was so familiar were being supplanted by many small entrepreneurial companies. Even those companies that were large "in terms of sales or market capitalization ... were not highly vertically integrated" (p. ix).

Why did this change take place? Langlois believes there are a variety of reasons, including the demise of the international monetary system created at Bretton Woods, New Hampshire, in July 1944; globalization; technological change; and such governmental initiatives as antitrust. The big Chandlerian firms were a product of a specific historical era, most notably World War I, the Great Depression, and World War II. These events do not play much of a role in Chandler's work. Langlois, in contrast, feels they are vital in understanding why market mediation was stymied in the first half of the twentieth century and managerial control became more important. As these traumatic events receded into the past, Langlois writes, "[W]hat seemed a world of powerful firms and fragile markets transformed into a world of powerful markets and fragile firms" (p. 478).

Langlois seeks to place Chandlerian firms in historical context. An admirable goal. But Langlois wants to do more. He has set out "to write what Bernard Bailyn called an essential narrative, a compelling story

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that weaves together and makes sense of the technical findings and historical details" (p. x). More admirable still.

For Langlois, the base case is the market as the organizing and coordinating force behind economic activity. When the market fails to deliver necessary information because prices are distorted, administrative coordination by professional managers is called for. Why might the market not function as it should? Wars; depressions; and macroeconomic events such as exchange rate fluctuations, government regulation, and antitrust can all conspire to make numbers lie. Administrative coordination is a "second–best" mode of business organization to which companies default in these difficult circumstances (pp. ix, 8).

When Alfred Chandler came to Harvard Business School from Johns Hopkins in 1971, business history was taught in a course named "Business in Its Historical Environment." Chandler reimagined the course and renamed it "The Coming of Managerial Capitalism." Prior to the 1840s, speaking generally, there were few, if any, professional managers. Rather, owners managed and managers owned single-unit enterprises. What was new—what needed explaining—was "modern business enterprise," which Chandler believed was defined by "two specific characteristics": it contained "many distinct operating units, and it is managed by a hierarchy of salaried executives" (Chandler, *The Visible Hand: The Managerial Revolution in American Business* [1977], p. 1). These "new bureaucratic enterprises" internalized "the coordination and integration of the flow of goods and services from the production of the raw materials through the several processes of production to the sale to the ultimate consumer" (Chandler, p. 11). The new bureaucratic enterprise took on, in Werner Sombart's famous phrase, "a life of its own."[1] It was not limited to the lifespan of a member of a partnership. This was the story with which the course now concerned itself.

It should be noted that Langlois also quotes Sombart's phrase, but he uses it to illustrate the difference between his view and Chandler's. Sombart's "life-of-its-own" corporation "may well be part of the story," he writes. "But it is a central thesis of this book that other, more powerful forces account for the long dominance of the managerial corporation in the middle of the twentieth century" (Langlois, p. 7). These are, as alluded to above, the "great catastrophes of war, depression, and war" as well as "[a]nother, often related, factor ... government policy" (p. 7).

[1] Werner Sombart, "Capitalism," *Encyclopedia of Social Sciences* [1930], p. 200, as quoted by Chandler, *Visible Hand*, p. 8.

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Chandler emphasized that big firms did not "replace the market as the primary force in generating goods and services" (Chandler, *Visible Hand*, p. 11). What managers did was to push back the boundary between human agency and impersonal market forces. Standard Oil, for example, internalized many transactions that might otherwise have been mediated by the market during the mid- and late nineteenth century. However, when the electric light was invented at the close of that century, the market for petroleum refined into kerosene was quickly extinguished. By sheer chance, a new market for petroleum refined as gasoline materialized, thanks to the victory of the internal combustion engine as the motive power for automobiles. The salaried managers at Standard had no influence over the collapse of one market and the appearance of another, but this development was vital in saving the firm.

When I began teaching Chandler's course at Harvard Business School in the mid-1980s, I was told only half in jest that the course should be renamed "The Going of Managerial Capitalism." This is advice with which Langlois would have concurred. In his view, deregulated capital markets and the decline of the regulatory state created by the New Deal sowed the seeds of destruction for Chandlerian firms. "The spread of managerial capitalism and the separation of ownership from control," Langlois writes, "would be their own undoing" (p. 410).

Langlois views the conglomerate as the natural outgrowth of the multidivisional firm. "Thanks in significant part to the invention of the M-form, the 1960s became the era of the conglomerate" (p. 410). He footnotes an article by two economists, Andrei Shleifer and Robert W. Vishny, that asserts that "the M-form begot the monster of the conglomerate."[2] ITT is the poster child for this development.

As Langlois notes, Chandler drew a sharp distinction between the M-form (characterized by related diversification) and the conglomerate (characterized by unrelated diversification). He thought the latter was extremely ill-advised. In a 1994 article in the *Business History Review,* he observed: "During the 1960s and into the 1970s, as American industries began to be challenged by those of Europe and Japan, U.S. firms overdiversified into businesses in which their capabilities gave them little or no competitive edge (Chandler, "The Competitive Performance of U.S. Industrial Enterprises since the Second World War," *BHR*, 68, no. 1 [Spring 1994]: 1–72, 58).[3] As to whether Chandler would have agreed with Langlois, Shleifer, and Vishny that the M-form

[2] Langlois, p. 648, fn51, referencing Andrei Shleifer and Robert W. Vishny, "Takeovers in the '60s and '80s: Evidence and Implications," *Strategic Management Journal* 13 (Winter 1991): 56.

[3] I am grateful to Walter Friedman for bringing this to my attention.

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"begot" the conglomerate, no citation is offered. There is room for doubt on this point.

The problem with the conglomerate was and is that it is inherently inefficient if capital markets are healthy. "[I]nvestors in a well-functioning capital market are always better off holding shares directly in the enterprises themselves rather than in an intermediary" (Langlois, p. 411). Moreover, it was far easier to chop out divisions of a conglomerate then it was to deconstruct a functionally organized U–form company.

Unrelated diversification became fashionable at the worst possible moment from the point of view of the businesspeople who created the conglomerate (ITT's Harold Geneen is the best-known example). In numerous industries, especially automobiles and electronics in which the United States had once held a leadership position, American firms lost their competitive advantage in the context of globalization. Macroeconomic developments as well as production breakthroughs further doomed the conglomerates. The awakening of a new asset class (high yield, also known as junk, bonds) was an important tool used by, for example, KKR for takeovers, both semi- and fully hostile as well as friendly buy-outs of no-longer-wanted divisions.

The extent of the job losses from the Fortune 100 firms from 1979 to 1989 that Langlois documents is startling. The firms in question shed 1.5 million employees, 14 percent of their workforce. The steel industry was clobbered. "Between 1979 and 1983, alone, U.S. Steel's share of national steel output dropped from 21% to 16%" (p. 429). Employment declined from 172,000 in 1979 to 19,300 two decades later. At Bethlehem, employment dropped from 98,000 to 15,500 in those years. In 2001, the company declared bankruptcy. The big three automakers laid off a quarter of a million employees by 1982, as the industry became a "world of … feast and famine" (p. 445). Time and again, Langlois writes of once great industries running amok. Railroads, to choose yet another example, employed 1.2 million people in 1950 but only 182,000 by the end of the century.

There are a host of reasons for these developments. These reasons include deregulation, globalization, technological change, and such advances in manufacturing as the Toyota Production System.

Langlois devotes considerable attention to antitrust, which comes across, to use Robert Bork's phrase, as "a policy at war with itself" (Robert Bork, *The Antitrust Paradox: A Policy at War with Itself* [New York, 1979]). Was antitrust designed to protect the consumer or the small, often inefficient, competitor? If ever a government policy was contingent on the individuals managing it, antitrust qualifies. In 1903, antitrust promoted the growth of the big firm. DuPont's attorneys that year informed its executives

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that "the structure of the corporation, which owned the stock of legally separate companies and had its hands in the gunpowder cartel, had become 'absolutely illegal,' and that legal safety lay in abandoning the old ways and concentrating on building one big company" (Langlois, pp. 68–69). However, antitrust could also lead to the breakup of large firms as in the cases of Standard Oil and American Tobacco in 1911 and, in more recent times, of AT&T in 1984. Langlois asserts that, "On one point there is universal agreement: the conglomerate character of the merger movement of the 1960s was the product of antitrust policy" (p. 413). (It is a bit unclear whether antitrust or the M-form is the most important progenitor of the conglomerate in Langlois's view.)

There is much to recommend this book. Langlois asks an important question: Are Chandler's observations and conclusions specific to an unusual period of time or are they more enduring? He has mastered a staggering amount of literature in law and economics as well as history. The result is a book by which most readers will be greatly informed. It seems churlish to be critical of this laudable effort. Nevertheless, in a number of particulars, criticism is warranted.

This criticism makes three principal points. These concern: (1) the book's subtitle, which seeks to position it in the literature, (2) the role of the individual business leader in the history of the American corporation, and (3) the place of the Big Tech firms in the nation today.

1. The subtitle is misleading. Whatever this book's virtues may be, it cannot be described as "The History of American Business Enterprise." Substituting "A" for "The" would help, but even that is not quite right.[4]

The book does not mention Mary Kay Ash, Warren Buffett, Elon Musk, Sam Walton, or Oprah Winfrey, to name but a few people from whom the historian has much to learn. Berkshire Hathaway has a market capitalization of $776.04 billion. (Market capitalizations change daily. This one, as well as those figures that follow, including employment statistics, were accessed on August 27, 2023). Is it a conglomerate? What are we to make of it? The company is not discussed.

When the book deals with "business" writ large, it is effective. But when one gets down to individual companies, it is less persuasive. This book's concerns are primarily with the macro-economic and regulatory environment in which business has been conducted during the years in

[4] On this point, see Richard R. John's outstanding essay "Elaborations, Revisions, Dissents: Alfred D. Chandler, Jr.'s, 'The Visible Hand' after Twenty Years, *Business History Review* 71, no. 2 [Summer 1997]: 160, n.27.

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question. Its title and subtitle should reflect what it covers. These observations bring us to the next issue.

2. The role of individual business leaders in the history of business enterprise deserves greater attention.

The book deals in passing with two of the great retailers of the twentieth century—Sears in general merchandise and A&P in food—but it offers no explanation of why these two firms failed. Sears was "the everything store" for most of the century. Amazon is today. Why could Sears not have become Amazon? None of the factors—macro-economics, regulation, exchange rates, globalization, patents, antitrust—with which the book concerns itself in detail offers an explanation.

The treatment of Intel is especially problematic. Founded in 1968 by two of the great technologists in American history, Robert Noyce and Gordon Moore, Intel, Langlois writes, "would rise to become the largest, and most important semiconductor firm in the world. It would also catalyze the creation of a new industry in Silicon Valley: the personal computer" (p. 487).

Memory chips were Intel's specialty during the 1970s, but it was driven out of that line of business by Japanese competition. Fortunately, almost fortuitously, it also manufactured logic chips; and in the mid-1980s, it dropped its "fading memories" and concentrated on microprocessors.[5] "The story of the American resurgence in semiconductors is basically the story of the resurgence of Intel" (p. 501).

In 1985, Intel's profits were negligible. In 1986, it lost $173.17 million. If 1987 had born the same relationship to 1986 as 1986 did to 1985, Intel would have lost $346.34 million and would have been on the road to bankruptcy. But it did not. "Crucial to Intel's success," Langlois writes, "was the company's decision to stop licensing its microprocessor designs to other manufacturers" (p. 501). That is true. This critical decision was taken in 1985, and the person most responsible for it was Andy Grove. Grove was Intel's president from 1979 to 1987. He became CEO in 1987 and served in that role until 1998.

The reader very much needs to know what it was like for Grove to make the "crucial" decision to sole source. Fortunately, he told us. Here is what he said to a class at Stanford: "You're sitting in a room with IBM purchasing executives who purchase more of any one item in one month than all of your total production for the year, and they ask, 'Who is your

[5]The phrase is Robert A. Burgelman's. See "Fading Memories: A Process Theory of Strategic Business Exit in Dynamic Environments," *Administrative Science Quarterly* 39, no. 1 [March 1994]: 24-56, cited in Burgelman, *Strategy is Destiny: How Strategy-Making Shapes a Company's Future* (New York, 2002), 7, n.6.

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second source?' Weigh in the balance: what good is the 386 if IBM doesn't adopt it?"[6] This was quite a gamble.

The Grove years were the glory years at Intel. It was half of the Wintel bilateral duopoly, which dominated the explosion in demand for the personal computer during those years.

Two issues assert themselves. First, by deciding to serve as the sole source for the 386 microprocessor and refusing to license its technology, Intel was doing the opposite of what Langlois states was the trend in business at this time. Remember the assertion that what was once a world of powerful firms and fragile markets had become a world of powerful markets and fragile firms. Yet by Langlois' own description, a key move by what was then the key firm in a key industry demonstrated precisely the reverse. By not licensing its 386 technology, Intel was eliminating a market. It is the firm that is muscular at this juncture.

The second issue is more important. What happened to Intel from 1998 to 2021, when this book concludes? The answer is that it has experienced a long, slow, painful decline.

At this writing, Intel's market capitalization is about $139.25 billion. Microsoft, its co–equal during Grove's years as CEO, has a market capitalization of $2.40 trillion. At the conclusion of the last century, Intel had a virtual monopoly on the microprocessor, a device essential to life in the modern world. Yet now, heretofore lowly AMD has a market capitalization of just over $165.20 billion. And Nvidia, which was founded during the heart of Intel's greatness in 1993, has a staggering $1.14 trillion market capitalization. In the words of one research firm: "Intel: Dead Money Walking, Avoid."[7]

These tectonic shifts are not mentioned in the narrative. However, given the earlier emphasis on the pivotal role Intel played in a pivotal industry, some discussion of what went wrong is warranted. Such a discussion requires an analysis of the strengths and weaknesses of the CEOs at these three firms: Jensen Huang of Nvidia, Lisa Su of AMD, and the succession of CEOs at Intel in the quarter century after Grove.

3. The Big Tech Firms. The concluding paragraph of the Langlois book is striking. "There is no reason to believe that the public corporation will disappear completely from the economic world. But the twenty-first century has witnessed the end of the large

[6] Burgelman, *Strategy is Destiny*, 140, as quoted in Richard S. Tedlow, *Andy Grove: The Life and Times of an American* (New York, 2006), 224.

[7] JR Research, "Intel: Dead Money Walking, Avoid," 26 May 2023, *Seeking Alpha*, accessed 11 Oct. 2023, https://seekingalpha.com/article/4607609-intel-dead-money-walking-to-avoid.

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> managerial corporation as a centerpiece of American life" (p. 551). What is one to make of that second sentence?

The book contains a discussion of the "Big 5": Alphabet (known to everyone as Google despite the effort at re-branding), Amazon, Apple, Meta (known to all as Facebook), and Microsoft. One could argue that the "Big 5" should be the "Big 6," the sixth being Tesla. The first successful domestic automobile start-up since 1925, Tesla is revolutionizing the automobile industry. It has a market capitalization of $747.61 billion and 127,855 employees. Perhaps the "Big 6" should be the "Big 7," with Nvidia (with its aforementioned market capitalization of $1.14 trillion and 26,196 employees) included.

Sticking with five because that is what Langlois chooses, he writes that while many people compare these firms "to the industrial giants of yore like Standard Oil and U.S. Steel, a more informative comparison would be to the railroads. Like the railroads, today's tech firms are high fixed cost enterprises that have altered the country's economic geography and have become crucial to the lifestyles, and often the livelihoods, of almost everyone. In [Senator Josh] Hawley's view, 'Big Tech increasingly controls the channels of communication in this country, personal and political; it controls the delivery of news; it controls the avenues of commerce'" (p. 543). According to one source, "The average American spends seven hours and four minutes staring at a screen per day. Globally, the average screen time per day is six hours 58 minutes. Americans spend an average of three hours and 43 minutes on their phones."[8]

Let's look at the big five in terms of employment and market capitalization:

Alphabet	181,798 employees	$1.64 trillion
Amazon	1,461,000	$1.37 trillion
Apple	164,000	$2.79 trillion
Meta	71,469	$734.64 billion
Microsoft	221,000	$2.40 trillion

The Big 5 employ 2,099,267 people. Their combined market value is $8.934640 trillion.

This brings us back to the final sentence in the Langlois book. How large, valuable, and influential does a firm have to be in order to be the "centerpiece of American life"? How different are the big five from

[8] Jack Flynn, "18 Average Screen Time Statistics [2023]: How Much Screen Time is Too Much?" 10 March 2023, *Zippia*, accessed 11 Oct. 2023, https://www.zippia.com/advice/average-screen-time-statistics/.

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Chandlerian firms? Are they manager intensive? Are they vertically integrated? At its inception, Apple backward integrated into manufacturing. No longer. However, it is forward integrated into retailing. The relationship between production and distribution is brilliantly executed by salaried managers. And it makes a practice of owning and controlling the technologies that are most important to its mission. Thus, there is no market for providing, for example, cameras for the iPhone. That is done in-house.

By what calculus are these firms less important to the nation today than the five most important firms in 1900 were to the nation then?

The book under review is based on a great deal of valuable research. We are in the author's debt for all the book teaches us about the environment for conducting business during a long expanse of years. Is this the "essential narrative" that the author set out to craft? That determination rests with each reader.

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