The Corporation and the Twentieth Century: The History of American Business Enterprise

Preface to the Chinese Translation

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I am delighted that China Machine Press has chosen to translate *The Corporation and the Twentieth Century* and to present it to a Chinese-speaking audience. Although the book tells what is very much an American story, it does so with the help of theoretical ideas that are more generally applicable, and I hope that the story will have lessons for the analysis of business institutions outside the American context.

By custom, a preface to a new edition or a translation has two required tasks: to address critiques of the book and to talk about what has changed since the book was published. In this case, those two tasks are closely related.

I was gratified that the book was reviewed appreciatively in the *Financial Times* and the *Wall Street Journal* as well as in a number of academic journals, including *Business History*, EH.Net, and the *Journal of Economic History*.[1] But I will concentrate on a couple of longer reviews, in *Enterprise and Society* and *Business History Review*, that raise some substantive criticisms.[2] The "roundtable review" in *Enterprise and Society* reflects the written comments of several prominent historians who spoke during a well-attended symposium on the book held at the University of Pennsylvania on September 29, 2023. I am immensely grateful to Daniel M. G. Raff and the Penn Economic History Forum for organizing this symposium.

More than one reviewer complained – rightly – that the book should have been subtitled *A* History of American Business Enterprise, not *The* History. The subtitle was in

[1] Giorcelli (2025); Gregg (2024); Smith (2025). Apologies for not citing all reviews of the book.

[2] Field, Cheffins, Phillips-Sawyer, Lamoreaux and Raff (2026); Tedlow (2024).

fact proposed by my editors at Princeton University Press, though I certainly didn't put up a fight. I had submitted a much more nerdy subtitle that had the word "institutions" in it.

First, some questions of fact.

Alexander field found some faults (not all expressed in his written comments) with my treatment of American mobilization during World War II. I certainly regret that I didn't solicit his comments on that section of the book when it was in draft. Readers interested in this period should consult Field's own recent work on the topic.[3] His main complaint seems to be that I failed to appreciate the dire character of the rubber famine that occurred after the Japanese takeover of Southeast Asia halted all supplies of natural rubber to the U.S. Although I thought my treatment of the synthetic-rubber program was far from uncritical, he is probably right that I failed to appreciate the extent to which Jesse Jones, head of that program, had opposed pre-war stockpiling and had slow-walked the development of synthetics until the situation had become so critical that the rubber shortage threatened the Allied invasion of Europe. Field also notes my citation of Abba Lerner's paper suggesting that mobilization might have been best directed by using market prices. No, I wasn't in fact endorsing Lerner's idea. But I was criticizing those in charge of mobilization for their faith in often-centralized non-market methods of allocation, which did indeed generate bottlenecks and misallocations that could have been alleviated with greater attention to incentives.

Brian Cheffins criticizes me for implying that American holding companies outside the utility sector were importantly pyramidal in form in the early century, that is, that they

[3] Field (2022); (Field 2025).

consisted of one firm holding stock in a daughter company that in turn held stock in another daughter company and so on down the line. It is certainly true that pre-New Deal pyramids were indeed largely in utilities. But I still strongly suspect that pyramids would have developed in other sectors absent the measures taken to restrict them during the New Deal. One piece of evidence is that holding companies of at least two levels have now become common – think of Berkshire Hathaway or of private-equity firms like KKR. These would have been largely impossible in the middle of the twentieth century. The modern private-equity model is not far from the early-century model of the House of Morgan, which was most certainly a business group like those we find widespread outside the U.S. today.

Most of the substantive criticisms were concerned with more general issues of interpretation.

Richard Tedlow complains that I underplay the role of historical figures in the history of the corporation and fail to mention many important such figures. Definitely guilty, but I was more concerned with the economic forces at play – and I did indeed mention many crucial figures. As Laura Phillips-Sawyer points out in her commentary, moving away from "great man" accounts of business history was Chandler's signal innovation.

For the most part, Cheffins criticizes me for not orienting the book toward the theory of the corporation as an institutional structure. As he recognizes, that is not what I wanted to accomplish with this book, and I have indeed written about the nature and purpose of the corporation elsewhere, in work that he cites.[4] (Indeed, he spends much of

[4] Langlois (2019).

his comment criticizing the purely contractual nexus-of-contracts view of the firm, even while admitting that I do not hold that view.) I made a conscious decision *not* to make *The Corporation and the Twentieth Century* a treatise on the nature of the corporation as a legal institution, and I stand by that judgment. I am now at work on a paper that will in fact attempt to explain and defend the institution of the liberal corporation.

Field seems to think that that I somehow was arguing that the large multiunit enterprise was a creature of the mid twentieth century. He rightly points to Chandler's account of the rise of the large firm in the late nineteenth and early twentieth century in response to the development of the railroad and the telegraph. But I fully agree, and I myself tell exactly that story. A central focus of the book is to explain why the large multiunit enterprise *persisted* during the middle of the twentieth century, not to claim that it originated then. As the reader will soon learn, my argument is that the large multiunit enterprise remained important through the middle of the twentieth century in the U.S. because, at the margin at least, it offered a better organizational structure than the alternatives in a world in which, because of depression and war, markets were hampered and sometimes nonexistent. It is not clear what Field's answer is to the question of persistence. The inherent superiority of internal organization? Path dependency? A skepticism that a counterfactual market would have worked well?

This is worth exploring further. In the spirit of being my own harshest critic, let me suggest what is at least a partial alternative to my story. Carliss Baldwin has argued that there are basically three archetypical organizational responses to technology: job shops,

flow production processes, and platforms.[5] Much of the technology of the twentieth century – much of the mass-production technology of the so-called second industrial revolution – involved flow processes, the step-by-step transformation of goods from raw materials to finished products at high speeds in high volumes. In a world of flow processes, productivity increases by discovering and eliminating bottlenecks to the flow. This requires the kind of fine tuning advocated by the proponents of systematic – which may not be the same thing as "scientific" – management. And that in turn requires "direct authority" and vertical integration. In Baldwin's account, any attempt to achieve productivity through some kind of inside-contracting or outsourcing would suffer many kinds of coordination costs and hold-up problems that could be obviated with unified command and control. Some of the costs reduced by integration are arguably what I call dynamic transaction costs, including the costs of learning new capabilities and conveying them to operatives.[6] Not surprisingly, Baldwin invokes Alfred Chandler in support of this analysis.[7]

I do think this is an important part of the story, and, indeed, the reader will find many accounts of flow-production processes in this history. In retrospect, perhaps I should have addressed this and related "technological determinism" arguments more carefully. But at the end of the day, the flow-production story only takes us part of the way, and it doesn't explain the full extent of the dominance of the vertically integrated firm in the middle of the twentieth century. Many if not most firms were integrated beyond what technology alone would have called for. AT&T, one of the paradigms of the mid-century

5 Baldwin (2024, chapter 5).

6 Langlois (1992).

7 Chandler (1977).

firm, was arguably a platform in many ways, and it certainly would have been broken up by markets much earlier if that hadn't been prevented by regulation. Flow production technology cannot explain the multidivisional form (or M-Form) in which one enterprise controls what are in effect several different flow-production processes that are not interconnected with one another (at least in principle). And, as I chronicle in detail, firms in this period integrated into many technologically separable activities like distribution because contractual alternatives were foreclosed. My institutional story is an explanation on the margin.

Naomi Lamoreaux asks why the macroeconomic shocks of mid-century worked to bolster the integrated corporation whereas those the late twentieth century arguably worked to disadvantage them. The answer, I think, is that market-supporting institutions were far more robust by the end of the twentieth century. Beyond that, the Great Depression was a massive episode of *deflation*, whereas the big shock of the late twentieth century was inflationary. (The twenty-first century shocks of the dot-com bubble and the financial crisis were deflationary, but the Federal Reserve handled those much better than it had handled the crisis of the thirties, using (re)inflationary policies. Again, better market-supporting institutions.)

This brings us to another important issue that reviewers raised: what caused the deverticalization of production at the close of the millennium? Or even more fundamentally: are today's firms really different from those of the middle of the twentieth century?

Both Lamoreaux and Raff point to an important 2003 paper they wrote with the late Peter Temin.[8] There they argue that the relative demise of the large vertically integrated corporation was the result of two interacting trends since the late nineteenth century: the dramatic fall in transportation and communications costs and the equally dramatic rise of per capita income. Initially, as Chandler described, decreasing transportation and communications costs led to integration, as firms could manufacture at scale centrally and ship cheaply to the periphery. And the low incomes of consumers meant that they were content with standardized, mass-produced products. By the end of the twentieth century, however, consumers had become richer, and they demanded more variety and were willing to pay higher prices. At the same time, even lower transportation and communications costs meant that production could take place anywhere, which advantaged smaller, more vertically disintegrated firms that were able to respond nimbly to changing consumer wants. There is much to be said for this analysis, and I failed to cite this paper in the book only because I had already engaged with the argument elsewhere.[9]

I don't really think that my own explanation is inconsistent with this argument. I see the evolution of organizational structure, especially when markets are working reasonably well, as a result of the increasing division and specialization of industries, a manifestation of Adam Smith's concept of the division of labor.[10] As markets expand, market-supporting institutions blossom more thickly. This is certainly a supply-side

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8 Lamoreaux, Raff and Temin (2003).

9 Langlois (2004). See also Lamoreaux, Raff and Temin (2004).

10 As long ago well discussed by the great early-twentieth-century economist Allyn Young (1928). That the division of labor tends to increase with the extent of the market is not a historicist claim, as there are ebbs and flows in the process and, most critically, the process is reversible, as we have seen many times in history when market extent has collapsed.

account of specialization, but it does not preclude the demand-side effects Lamoreaux, Raff, and Temin point to.

In keeping with my self-criticism, and in keeping with Baldwin's tripartite distinction among types of production system, could we explain the relative deverticalization of the late twentieth century by a shift in technologies of production? Perhaps upscale consumer tastes increasingly called for a return to bespoke job shops and less continuous-flow production. More likely, I think, there is a supply-side explanation under the hood: the same technological changes that lowered transportation and communications costs also lowered the minimum efficient scale of production on average. To put it another way, the population of firms simply moved away from large-scale flow-production technology (the technologies of the second industrial revolution) toward platforms (the technology of the third industrial revolution). It is clear that in the last two decades of the century, flow-production industries like steel and automobiles declined precipitously, their functions often handed off to developing countries like China, while platforms arose to coordinate newer (and far more modular) technologies involving semiconductors, computers, and software.

This is scarcely a new idea, of course. The book's epilogue does consider the rise of many platform firms, from Apple and Android ecosystems to social networks like Facebook to platforms like Uber and Airbnb.[11] But I think the epilogue might have thought more deeply about the nature and role of the platform in more historiographic terms.

[11] "A *platform system* is a technical system comprising a core set of essential functional elements (the platform) plus a set of optional components that use the platform. The optional components may be

Which brings us to a question many reviewers have raised: is the landscape or firms today really different from what it was in the mid-twentieth century? Is the economy not dominated once again by large firms just as it was 75 years ago? The Big Five of Alphabet (Google), Amazon, Apple, Meta (Facebook) and Microsoft dominate the skyline much the way AT&T, Ford, General Motors, RCA, and U.S. Steel once did. With the exception of Apple, which maintains a functional organizational form, all of these – and Alphabet explicitly – are organized to some extent as multidivisional firms on the Chandlerian model.

The answer to these questions is both yes and no. It is certainly true that the M-Form reflects an underlying organizational logic that will likely always remain valuable and important. I think the book might have been clearer in acknowledging that. At the same time, it is still true that today's firms are quite different in structure from those of the past, and the distinction between flow processes and platforms help us understand that. Today's large firms are significantly less hierarchical than those of the last century. As they are mostly platforms, they have less need for tight supervision to optimize production, and internal units, held together by common core competencies, have far more autonomy than in the past.

This is not to say that mid-century-style vertical integration is completely obsolete in the U.S. One example I mention briefly in the Epilogue is that Amazon has integrated into delivering its own packages. Logistics is very much a flow process, and indeed one not far removed in structure from assembly processes. Amazon integrated in order to claim

products, processes, transactions, or messages. The platform has no value except in conjunction with the options" (Baldwin 2024, p. 2).

exactly the kind of coordination benefits that Baldwin sees in direct supervision of flow processes. Crucially, the company's massive scale meant that it was not forgoing the external market economies of relying on specialized subcontractors like FedEx and UPS. This allowed the company to fine-tune its system of delivery and continually reduce delivery times. Along other dimensions, of course, from the multi-sided market of the Amazon Marketplace to the cloud computing of Amazon Web Services, the company remains fundamentally a platform.

There are other examples of present-day vertical integration surrounding flow-process technologies. The most striking case is probably Tesla, the most successful American producer of electric vehicles, which has consistently pursued a strategy of high vertical integration, extending even to its unwillingness to sell its cars through local dealers. In many ways, this is a recreation of the strategy of Henry Ford – which the reader will soon learn about – in the early twentieth-century industry. Automobiles are highly integral (non-modular) products that benefit from the fine-tuning of direct supervision, especially in the early innovative stages of production technology, when integration lowers the costs of creating new capabilities.[12] Elon Musk, the head of Tesla, is pursuing vertical integration in his other businesses as well, including the merger of his rocketry company SpaceX with his artificial-intelligence company xAI.[13]

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[12] Chen, Chowdhury and Donada (2019); MacDuffie (2018). Chinese electric-vehicle firms are pursuing this strategy perhaps even more vigorously (Wang, Zhao and Ruet 2022).

[13] Ryan Mac, Kate Conger, Maureen Farrell, and Rob Copeland, "Elon Musk Merges SpaceX with His A.I. Start-Up xAI," *The New York Times*, February 2, 2026.

Which brings us to the final duty of the writer of a new preface: talking about what has happened since the book was published. Significantly, the only mention of Tesla in the book is in a footnote. The book makes no mention of Nvidia, which has now surpassed Apple in market capitalization – some $4.5 trillion at this writing. Nvidia is the leader in designing chips for artificial intelligence. AI gets only a passing mention in the Epilogue, but that sector has now come to sudden prominence, with startups like OpenAI and Anthropic investing aggressively in computing facilities and in research and development.

In the Epilogue I stressed that the size and seeming concentration of the Big Five firms had raised antitrust concerns, and some of my reviewers echoed those concerns. Yet in the few years since the book was published in English, the rise of AI startups has challenged the existing large firms and has dramatically shaken up competition in American industry.[14] It remains to be seen how the AI revolution will develop. But whatever the future brings, the dynamic winds of creative destruction will remain the essence of competition.

[14] Jason Furman, "I Thought I Understood A.I. Companies. I Couldn't Have Been More Wrong," *The New York Times*, February 25, 2026.

References.

Baldwin, Carliss Y. 2024. *Design Rules: How Technology Shapes Organizations*. Cambridge: MIT Press.

Chandler, Alfred D., Jr. 1977. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge: The Belknap Press.

Chen, Yurong, Shamsud D. Chowdhury and Carole Donada. 2019. "Mirroring Hypothesis and Integrality: Evidence from Tesla Motors," *Journal of Engineering and Technology Management* **54**: 41–55.

Field, Alexander J. 2022. *The Economic Consequences of U.S. Mobilization for the Second World War*. New Haven: Yale University Press.

Field, Alexander J. 2025. "The World War II US Rubber Famine," *Business History Review* **99**(3): 365–390.

Field, Alexander J., Brian R. Cheffins, Laura Phillips-Sawyer, Naomi R. Lamoreaux and Daniel M. G. Raff. 2026. "Roundtable Review," *Enterprise & Society* **27**(1): 360–379.

Giorcelli, Michela. 2025. "Book Review of the *Corporation and the Twentieth Century: The History of American Business Enterprise* by Richard N. Langlois," *The Journal of Economic History* **85**(3): 915–916.

Gregg, Amanda G. 2024. "The Corporation and the Twentieth Century: The History of American Business Enterprise," *EH.Net Economic History Services* (March). Available at https://eh.net/book_reviews/the-corporation-and-the-twentieth-century-the-history-of-american-business-enterprise/.

Lamoreaux, Naomi R., Daniel M. G. Raff and Peter Temin. 2003. "Beyond Markets and Hierarchies: Toward a New Synthesis of American Business History," *American Historical Review* **108**(2): 404–433 (April).

Lamoreaux, Naomi R., Daniel M. G. Raff and Peter Temin. 2004. "Against Whig History," *Enterprise and Society* **5**(3): 376–387 (September).

Langlois, Richard N. 1992. "Transaction Cost Economics in Real Time," *Industrial and Corporate Change* **1**(1): 99–127.

Langlois, Richard N. 2004. "Chandler in a Larger Frame: Markets, Transaction Costs, and Organizational Form in History," *Enterprise & Society* **5**(3): 355–375 (September).

Langlois, Richard N. 2019. "The Corporation Is Not a Nexus of Contracts. It's an Iphone," in Francesca Gagliardi and David Gindis, eds., *Institutions and Evolution of Capitalism: Essays in Honour of Geoffrey M. Hodgson*. Cheltenham: Edward Elgar, pp. 142–156.

MacDuffie, John Paul. 2018. "Response to Perkins and Murmann: Pay Attention to What Is and Isn't Unique About Tesla," *Management and Organization Review* **14**(3): 481–489.

Smith, Andrew. 2025. "Book Review of the *Corporation and the Twentieth Century: The History of American Business Enterprise* by Richard N. Langlois," *Business History* **67**(7): 1979–1980.

Tedlow, Richard S. 2024. "Review Essay on the *Corporation and the Twentieth Century* by Richard N. Langlois," *Business History Review* **98**(1): 333–341.

Wang, Xieshu, Wei Zhao and Joël Ruet. 2022. "Specialised Vertical Integration: The Value-Chain Strategy of EV Lithium-Ion Battery Firms in China," *International Journal of Automotive Technology and Management* **22**(2): 178–201.

Young, Allyn A. 1928. "Increasing Returns and Economic Progress," *The Economic Journal* **38**(152): 527–542 (December).