

# Rejoinder

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Let me begin by thanking *Enterprise and Society*, especially Ken Lipartito, for organizing the symposium on my paper “Chandler in a Larger Frame” and for permitting me this short rejoinder.<sup>1</sup> I would also like to thank the authors who paid such careful attention to what I had to say. I hope that all agree with me that the symposium has advanced the conversation. As Sabel and Zeitlin put it, we are all Post-Chandlerians now. In this spirit, I propose to respond not to the details of their critiques – many of which I might take issue with – but to the larger matters they raise and to the differences that might illuminate rather than recriminate.

Some of these issues turn on what I see as misconceptions about my argument, for which deficiencies in my own exposition are no doubt partly to blame. But one point of difference does not fall into that category: the meaning of the term “coordination.” For LRT, coordination seems to be entirely a matter of solving agency problems. The “difficulties involved in coordinating labor and other inputs into production” arise because “in the real world economic actors have to make decisions based on information that is highly imperfect and, more important, asymmetric in character.” This may be a part of “coordination” in a

broad sense, but it is not what I mean by coordination. For me, coordination is the problem of making sure that goods, services, inputs, outputs, capabilities, etc., find themselves in the right place at the right time – and that they stay in the right place at the right time. Solving problems of asymmetric information may be part of this process, but it by no means defines the process. As I hinted in “Chandler in a Larger Frame,” agency problems may have represented a larger part of the problem of coordination in earlier times than in more recent ones. The medieval (or antebellum American) merchant was arguably more preoccupied with problems of reliance than with problems of logistics. To put it another way, problems of time-and-place coordination collapsed into problems of agency. I don’t care within a month or so when the cloth gets from Antwerp to Genoa, but I do care whether I can trust the ship captain and whether I will be paid for my goods. It was one of Chandler’s insights that, in parts of the nineteenth-century American economy, time-and-place coordination was becoming an important issue. If we are to take advantage of economies of scale and low costs of distribution, all the elements of a complex process have to work together in time and space. It is not “privileging production over distribution” to say that we ought to pay attention to those problems of coordination, not just to problems of agency.

Another source of difference does, however, seem to arise out of a misconception. LRT spend some time criticizing my account as “basically George J. Stigler’s venerable theory of vertical integration and disintegration writ

large.”<sup>2</sup> The criticisms they make of Stigler are telling. But they are not criticisms of my view, which is not in fact Stigler writ large. I am a great pains in “Chandler in a Larger Frame” to refer to my own alternative to Stigler’s account, some of which was worked out with Paul Robertson, that not only fails to fall prey to LRT’s strictures against Stigler but was in fact motivated by a perception of the very problems with Stigler that LRT highlight.<sup>3</sup>

Coordination also seems to be the central issue of difference to which Sabel and Zeitlin point. Unlike LRT, they appear to see the problem of coordination the same way I do. But they are deeply troubled by what they perceive to be my interpretation of the way the post-Chandlerian economy solves that problem of coordination. In their portrayal of my views, the New Economy is all about “hard modularity,” the literal use of rigid technological standards and fixed interfaces to coordinate all economic activity. I am no doubt partly to blame for this misinterpretation, as I tend to rely on examples of hard modularity to convey what is a far more general idea: the decentralization of coordination into market-supporting institutions rather than managerial coordination of the sort Chandler described. This tendency is no doubt akin to the related habit of instructors of elementary economics to rely on examples from highly structured markets (like stock markets) in order to get students to think about “markets” – or even The Market – in a wider sense.

Despite this perhaps misplaced rhetorical tendency, I really did try to make my views on the matter clear. Sabel and Zeitlin cite one such passage.

Although modularity in a deep sense lies behind all decentralization ... I do not want to be understood as saying that the Chandlerian corporation is giving way to pure modular systems and anonymous arm's-length markets. In many cases, the visible hand has indeed been socialized into technical standards that permit external mechanisms of coordination and reduce the need for rich information transfer. In other cases, however, products will continue to maintain significant 'integrality,' and relationships between stages will often be collaborative ones involving trust, permanence, and the transfer of rich information ... As a central tendency, however, the buffering functions of management are devolving to the mechanisms of modularity and the market - informational decomposition, flexibility, and risk spreading.<sup>4</sup>

The passage is not in fact about minimizing the empirical significance of the problems inherent in "hard modularity" (like "modularity traps" or lock-in to outmoded standards). Rather, it is an attempt to make clear that I mean modularity in the wider sense: various kinds of decentralized arrangements, often relying on institutions of some sort. Keep the context firmly in mind: I am trying to demonstrate that decentralized mechanisms can solve the kinds of

coordination problems that Chandler thinks only the visible hand of management can solve. The logic of “hard” modularity offers a heuristic for understanding how this could be possible. But that doesn’t mean that it is the only mechanism of coordination visible in the population of decentralized organizational arrangements.

Far from minimizing the importance of “disruptive technologies,” I tend to think that competition is often all about the creative destruction of rigidly bound networks of complementary capabilities.<sup>5</sup> I never said that modularity, in either the broad or the narrow sense, is an easy life. Indeed, I had always imagined that “just imbedded” systems – modular systems in which the standards are rigid enough to provide coordination but flexible enough to evolve when necessary – are actually rare birds. At least until I read Sabel-and-Zeitlin’s wonderful discussion of the “iterative process of co-design,” which strikes me as precisely an effort to avoid design lock-in by trying to create just-imbedded systems.

Part of the disagreement with all my interlocutors arises, I think, because, unlike LRT or Sabel and Zeitlin, I am not really attempting to pronounce on which specific kinds of contractual arrangements constitute the New Economy. My claim is only that they are “market” arrangements in the broad sense, including relational contracts, iterative co-design, and lots of other things none of us has yet noticed. Think of this as an extension of the argument George

Richardson made in his famous 1972 paper.<sup>6</sup> Richardson argued that organizations are limited in what they can do well by the knowledge, experience, and skills they possess. This means that it is typically costly for a single organization to manage a variety of complementary activities if those activities require dissimilar kinds of knowledge. As a result, it is more likely that organizations will stick to what they do well, and will access the complementary activities they need through various kinds of contracts and hybrid arrangements. My extension of the argument is simply to notice that growth in the extent of the market brings a finer division of knowledge as well as a finer division of labor; indeed, these are two faces of the same process. As knowledge becomes increasingly variegated and differentiated, in the large it will become *increasingly* necessary to resort to market collaboration (again, broadly understood) rather than internal coordination.

Putting the matter this way brings us finally to the issue of historicism, which seems to be a major theme in both comments. From one perspective, this is an odd charge indeed. Far from seeing the New Economy as the end of history, I have in fact scripted an episode of *The Twilight Zone* in which we awaken from the era of large Chandlerian firms to discover that we had actually never left the world of Adam Smith. History hasn't traveled through stages: it never departed the dock. But even if my interlocutors accepted this bit of cleverness (quite unlikely), they might still find me guilty of historicism: for Sabel and Zeitlin go so far as to label *Smith* a historicist.<sup>7</sup>

If we are going to throw around a term as weighty as “historicism,” it might actually be worth pausing to think about what historicism is and is not. As there has never been a more virulent critic of historicism than Karl Popper, let us take his *Poverty of Historicism* as our text.<sup>8</sup> For Popper, historicism is essentially a confusion of a law and a trend. A law is unconditional, whereas a trend is a specific sequence of historical events. Some trends can be powerful and persistent without becoming historicist laws: Popper specifically suggests population growth and scientific and industrial progress as trends not laws. They are contingent and potentially reversible. For example, he writes, scientific progress is dependent on institutions and other factors, and we could imagine a number of ways in which it could be brought to a halt.<sup>9</sup> Economic growth is an extremely durable trend, but when the institutional conditions supporting it are changed appropriately, it too can be reversed. (If you don’t believe me, I recommend a nice holiday in Zimbabwe.) Moreover, says Popper, it is perfectly okay to use laws (theoretical propositions) in explaining trends so long as those propositions are accompanied by “specific statements pertaining to the special case in question, called the ‘initial conditions.’”<sup>10</sup> The initial conditions may themselves be trends.<sup>11</sup> So if one offers an explanation for a trend that happens to be durable, that explanation is not *ipso facto* historicism – it is just an explanation of a durable trend. Smith’s account of the division of labor – and my account of the Vanishing Hand – are attempts to explain trends using both

theoretical propositions and appropriate initial conditions.<sup>12</sup> They are not attempts to promulgate laws of history.

Sabel and Zeitlin accuse me of what they call “multi-dimensional historicism: the view that historical development is determined by the interaction of two or more independent but simultaneously operating logics or tendencies”<sup>13</sup> As I’ve shown, such a view need not be historicism, and in my case it is not. But might it still be an oversimplification of a complex history? Maybe. Chandler’s great contribution was to provide an intellectual framework for the field of business history. The exercise I set for myself was to rethink Chandler while remaining a Chandlerian, that is, while attempting to provide a larger intellectual frame for organizational change. Obviously, casting complex historical transitions in terms of simple diagrams was a dangerous gambit, but I thought it a valuable heuristic and a way of calling attention to the importance of factors like the extent and evolution of the market and the changing nature of the coordination problem organization has faced. For more than 200 years, economic growth has been a durable trend in the United States. The same is true of the expansion in the extent of the market and the elaboration of the division of knowledge. Indeed, these trends may be the most significant facts of modern economic and organizational life, even if we often take them for granted. Using these trends as initial (or boundary) conditions in explaining organizational choice is not historicism. But failing to take them into account is *ahistoricism*.

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<sup>1</sup> Richard N. Langlois, "Chandler in a Larger Frame: Markets, Transaction Costs, and Organizational Form in History," *Enterprise & Society* 5 (2004); Naomi R. Lamoreaux, Daniel M. G. Raff, and Peter Temin, "Against Whig History," *Enterprise & Society* 5 (2004); and Charles Sabel and Jonathan Zeitlin, "Neither Modularity nor Relational Contracting: Inter-Firm Collaboration in the New Economy," *Enterprise & Society* 5 (2004).

<sup>2</sup> Lamoreaux, Raff, and Temin, "Against Whig History," . George J. Stigler, "The Division of Labor is Limited by the Extent of the Market," *Journal of Political Economy* 59 (June 1951), 190.

<sup>3</sup> Richard N. Langlois and Paul L. Robertson, *Firms, Markets, and Economic Change: A Dynamic Theory of Business Institutions* (London, 1995).

<sup>4</sup> Richard N. Langlois, "The Vanishing Hand: The Changing Dynamics of Industrial Capitalism," *Industrial and Corporate Change* 12 (April 2003): 351-85, 376.

<sup>5</sup> Langlois and Robertson, *Firms*, chapter 3. See also Richard N. Langlois, "Technological Standards, Innovation, and Essential Facilities: Toward a Schumpeterian Post-Chicago Approach," in *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues*, ed. Jerry Ellig (New York and Cambridge, 2001), 193-228. As this latter title suggests, I did not need Clayton Christensen to teach me about disruptive technologies (although I respect Christensen's work very much); I learned about them from Schumpeter, who

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also taught me that the capitalist economy has always been a “relentlessly innovative” one. See Clayton M. Christensen, *The Innovator’s Dilemma* (Boston, Mass., 1997) and Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York, 1950).

<sup>6</sup> G. B. Richardson, “The Organisation of Industry,” *Economic Journal* 82 (Sept. 1972), 883-96.

<sup>7</sup> Sabel and Zeitlin, “Neither Modularity,”

<sup>8</sup> Karl Popper, *The Poverty of Historicism* (1957; London, 1994).

<sup>9</sup> Popper, *Historicism*, 156-157.

<sup>10</sup> Popper, *Historicism*, 123.

<sup>11</sup> Popper, *Historicism*, 128.

<sup>12</sup> In my case, the extent of the market in a particular time and place would be an example of an initial condition – what in “Chandler in a Larger Frame” I called a boundary condition.

<sup>13</sup> Sabel and Zeitlin, “Neither Modularity,”