



UvA-DARE (Digital Academic Repository)

The historical alternatives approach

Zeitlin, J.

DOI

[10.1093/oxfordhb/9780199263684.003.0006](https://doi.org/10.1093/oxfordhb/9780199263684.003.0006)

Publication date

2008

Published in

Oxford handbook of business history

[Link to publication](#)

Citation for published version (APA):

Zeitlin, J. (2008). The historical alternatives approach. In G. Jones, & J. Zeitlin (Eds.), *Oxford handbook of business history* (pp. 120-140). (Oxford handbooks in business and management). Oxford University Press.

<https://doi.org/10.1093/oxfordhb/9780199263684.003.0006>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Zeitlin, Jonathan (Editor), Professor of Sociology, Public Affairs, Political Science, and History, University of Wisconsin-Madison

Jones, Geoffrey (Editor), Isidor Straus Professor of Business History, Harvard Business School

The Oxford Handbook of Business History

Print ISBN 9780199263684, 2008

pp. [120]-[140]

6 The Historical Alternatives Approach ^{*}

^{*} An earlier and less developed version of this chapter appeared under the title “Productive Alternatives: Flexibility, Governance, and Strategic Choice in Industrial History”, in Amatori and Jones (2003), 62–80.

Jonathan Zeitlin

Abstract: Introduction – The Historical Alternatives Approach: Ten Theses – Five Misconceived Objections – Conclusions

Keywords: **business history**,

6.1 Introduction

THE aim of this chapter is to present a brief conceptual overview of what has become known as the “historical alternatives” approach to business history. The notion of alternatives is central to this approach in both a historical and a historiographical sense. Historically, the hallmark of this approach is its emphasis on the salience of alternative possibilities, contingency, and strategic choice in the development of modern industry over the past three centuries.

Historiographically, this approach represents an alternative to mainstream currents in economic, technological, and business history: an alternative, in particular, to Chandlerian business history focused on the economic and technological efficiency of administrative coordination and learning within large, hierarchically managed enterprises. From its origins in joint work by Charles Sabel and myself in the early 1980s, a substantial body of empirical work on European, American, and Japanese industrial

end p.120

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)

© Copyright Oxford University Press, 2011. All Rights Reserved

history has since appeared which draws on and extends the historical alternatives approach.¹

¹ Beyond the original formulations in Sabel and Zeitlin (1982, 1985) and Piore and Sabel (1984), historical works explicitly utilizing this approach include: the essays collected in Sabel and Zeitlin (1997*a*), Zeitlin and Herrigel (2000), and Zeitlin (2000*a*); as well as Berk (1994), Berk and Schneiberg (2005), Carnevali (2003, 2005), Glimstedt (1993), Herrigel (1996), Kristensen and Zeitlin (2005), Walton (1992), and Zeitlin (1995*a*, 1995*b*). From a slightly different theoretical perspective, Philip Scranton (1997) reaches convergent conclusions in his work on specialty production in American industrialization.

At a more substantive level, the historical alternatives approach opens up theoretical space for the identification of flexibly specialized forms of production in the industrial past. This theoretical possibility, however, should not be confused with empirical claims about the role and importance in particular times and

places of flexible specialization as an ideal-typical model of productive efficiency, based on the manufacture of a wide and changing array of customized products in short runs by skilled, adaptable workers using versatile general-purpose machinery. Hence the historical alternatives approach can thus be used to analyze cases in which mass production, understood as the manufacture of standardized goods in high volumes by predominately unskilled labor using special-purpose equipment, overwhelmingly predominated over more flexible forms. At the same time, however, recent research based on this approach has greatly extended the historical scope of flexibly specialized production and identified significant elements of flexibility even within apparently classic cases of mass production.²

² For a parallel distinction between the flexible specialization *approach* to industrial change and the flexible specialization *thesis*—i.e. the claim that flexible specialization is becoming the dominant productive model in contemporary industry—see Hirst and Zeitlin (1991).

In the interests of concision, the remainder of this chapter sets out the core elements of the historical alternatives approach in the form of ten positive theses, before going on to respond to five major misconceived objections which have recurrently arisen in the course of the ensuing debate.

6.2 The Historical Alternatives Approach: Ten Theses

6.2.1 Against Teleology and Determinism

The point of departure for the historical alternatives approach is the rejection of “narrow track” models of industrialization and economic development in all their forms, from Smith’s division of labor and Marx’s mechanized factory system through Rostow’s stages of growth to Chandler’s three-pronged investments in mass production, mass distribution, and professional management. In contrast to

end p.121

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

both classical economists and modern historians alike, the historical alternatives approach thus denies the existence of a unilinear logic of material progress which must be adopted by all those wishing to advance to higher levels of productivity, income, and wealth.³

³ For an extended critique of narrow-track models of industrialization, including proto-industrialization and Gerschenkron’s theory of late development, see Sabel and Zeitlin (1985: 134–41).

Contrary to the claims of orthodox economic historians like David Landes (1987a: 27), for example, the findings of recent historical research on flexible technology and specialty manufacture confirm that neither “the logic of the machine ... tireless and repetitive ... [which] pushes it in the direction of uniformity and standardization”, nor the purportedly inevitable preference for mass production of the majority of the world’s “poor consumers whose wants exceed their purse” have prevented firms, regions, and even whole national economies organized along alternative lines from enjoying extensive commercial success over long periods of time.

6.2.2 More than One Way to Skin a Cat: The Plasticity of Technology and Organization

A second core claim of the historical alternatives approach is that technology and organization should not be taken as fixed, given, or even latent parameters to which economic actors must perforce adjust, but rather as objects of strategic

reflection and deliberate experimentation in their own right. Technological progress, on this view, should be understood as an endogenous process in which the strategies pursued by economic actors play a key part in shaping developmental trajectories. At any given moment, moreover, multiple efficient combinations of capital equipment, factor supplies, and human resources are typically possible, some more flexible than others. Thus technology and organization may be advanced not only through the pursuit of economies of scale and joint production (Chandler's economies of scope arising from the use of common materials, plant, and managerial capabilities to turn out a related set of final goods), but also through that of economies of variety, understood as the capacity to adjust the volume and/or composition of output flexibly and to introduce new products rapidly in response to shifting demand and business strategy.⁴

⁴ For this distinction between "economies of variety" and Chandlerian economies of scope or joint production, compare Storper and Salais (1997: 32, 313), with Chandler (1990: 17, 24–6, 28–31).

From this perspective, existing scale bottlenecks or indivisibilities can be overcome through deliberate innovations such as mini-mills and thin slab/strip casting in steel (Balconi 1991, 1993) or "process intensification" and "microreactors" in chemicals (Luesby 1998; Jackson 1998; Ehrfeld *et al.* 2000). Where process interdependencies remain fixed

end p.122

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

in the medium term, similarly, closely related phases of production such as auto body manufacture and final assembly can be combined organizationally in very different ways, as can be seen from the much lower level of vertical integration and greater flourishing of quasi-independent supplier firms in the Japanese motor vehicle industry in comparison to its US counterpart during the post-World War II era (Nishiguchi 1993; Shiomi 1995).⁵

⁵ For a persuasive historical demonstration that General Motors' purchase of Fisher Body in 1926, long taken as the canonical example of the transactional imperatives of vertical integration under conditions of technological interdependence, was motivated not by any concern to avoid potential hold-up by the possessors of a complementary specific asset, but rather by GM managers' desire to utilize the Fisher Brothers' noted expertise in collaborative product development to reorganize their own relations with outside suppliers, see Helper *et al.* (2000), and the related account in Freeland (2000).

Over a longer period, the range of alternative possibilities in productive organization remains bounded only by minimal requirements for internal coherence among interdependent elements and the ability to meet the often loose performance tests of changing competitive environments.

6.2.3 The Mutual Constitution of Actors and Contexts

This malleability of technology and organization is only one example of a larger theoretical point: the mutual constitution of actors and contexts. Unlike most variants of business history, including those which celebrate the creative role of entrepreneurs and managers, the historical alternatives approach does not accept a rigid distinction between maximizing agents and constraining contexts in economic life. Economic actors, in this view, are often at least as concerned with determining, in the double sense of figuring out and shaping, the context they are in—market, technological, institutional—as with pursuing their advantage within any particular context. Self-interested adjustment to conditions taken as given therefore proceeds hand-in-hand with efforts to find or create a more advantageous set of constraints. Strategic action of this type thus moots the standard Schumpeterian distinction between adaptive and creative responses to existing constraints, whose meaning, apart from extreme cases, can rarely be determined except in long historical retrospect.⁶

⁶ For a restatement of the Schumpeterian view, see Lazonick's chapter in this volume.

Crucial to this process of strategic reflection is the capacity of economic agents to imagine and weigh up alternative courses of action, connecting the present with both the future and the past through narratives which constitute their identities and interests.⁷

⁷ For a fuller discussion of the relationship between actors and context in standard economic and business history, together with the role of narrative in strategic action, see Sabel and Zeitlin (1997*b*), 5–20. For a stimulating social-theoretical analysis, which presents the “projective” capacity to imagine alternative possibilities as a central dimension of human agency, see Emirbayer and Mische (1998: especially 983–93).

end p.123

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

6.2.4 Uncertainty, Mutability, and Hedging Strategies

Through much of modern history, as once again today, uncertainty, fragility, and mutability have widely been recognized as constitutive features of economic life. Under these conditions, empirical research has found, actors are frequently aware both of the complex dependence of forms of economic organization on multiple background conditions, and of the possibility of sudden, unanticipated shifts in those conditions. Hence, they often seek to avoid definitive choices between polar alternatives and/or to anticipate in their forms of economic organization the need for future reconstruction in the face of changed circumstances. Such self-reflective actors, as historical studies based on this approach show, continuously scanned foreign competitors' practices and debated the merits of alternative models on the basis of well-developed understandings of the relationship between contexts and strategic choices. They could typically see, for example, even when local intellectuals or policy makers could not, the connections between the use of machines and the organization of the firm on the one hand and the structure of the latter's markets and institutional environments on the other. The result was often judicious rejection of apparently successful foreign models, not because they were new or foreign, but because they did not fit local economic and institutional circumstances, matched by an equally aggressive embrace of those elements of foreign practice which served their constantly evolving definition of locally appropriate strategies. At bottom, this selective rejection and acceptance of particular elements from foreign innovations reflected a constant, permanently provisional re-evaluation of local strategy and, more specifically, an anxious effort to avoid entrapment in any given organization of production and its associated markets. Hedging strategies of this sort might appear to observers steeped in Schumpeterian categories as passivity masquerading in the guise of prudence. Yet the historical record shows that they often led to the creation of innovative hybrids that combined indigenous with foreign practices in unforeseen but often remarkably competitive ways, while apparently incremental changes in industrial organization could in the aggregate amount to programs of transformation as radical in their consequences as those directly proclaimed as such.⁸

⁸ For elaboration and illustration of these claims, see Sabel and Zeitlin (1997*b*: 12–14) and Zeitlin (2000*b*: 34–41).

6.2.5 The Predominance of Hybrid Forms over Pure Types

More generally, the process of strategic reflection and hedging against risk gives rise to a proliferation of hybrid forms of productive organization between mass production and flexible specialization which can be more or less easily reconstructed and recombined in response to changing background

circumstances. Hence the

end p.124

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

predominance of hybrid, mixed, and intermediate forms of productive organization over polar types has proved to be the empirical rule rather than the exception in most times and places.⁹

⁹ See for example the case studies collected in Sabel and Zeitlin (1997a), Zeitlin and Herrigel (2000), Zeitlin (2000a), Boyer *et al.* (1998), and Crouch *et al.* (2004), as well as the discussion in Hirst and Zeitlin (1991).

Yet the notion of contrasting strategies and distinct practices remains analytically crucial, since it is economic actors' perception of the advantages and disadvantages of polar possibilities which leads them to hedge their strategies in the first place, and thus appreciation of the full range of possible diversity which provokes the search for ever more varied ways of avoiding risky bets on the extreme positions.

6.2.6 Economic Governance beyond the Firm

Along with much current writing in economic sociology and political economy, the historical alternatives approach denies any ontological or epistemological privilege to the individual business firm as the key unit of analysis and economic governance. The boundaries and internal organization of the firm, on this view, must be treated as empirical variables, both in flexible and in mass production, so that autarky and internalization of activities within the enterprise become phenomena to be explained just as much as decentralization, outsourcing, and networking. While flexible and mass production, at least in their pure form, present distinctive governance problems at both the micro and macro levels, a wide—though by no means infinite—range of institutional frameworks for their solution can be observed in historical practice. Simplifying brutally, the key governance problems for flexible production are how to check opportunism and prevent free riding without stifling fluid cooperation among decentralized economic actors through institutions for the resolution of disputes and the provision of collective services. For mass production, by contrast, the crucial problems are how to balance supply and demand at different levels from individual markets and firms to the national and international economy, though conflict resolution and the reproduction of human resources are also significant. In each case, however, these functions may be performed through a variable mix of governance mechanisms including networks, associations, and states as well as hierarchically managed enterprises.¹⁰

¹⁰ In some of Sabel's recent work on "learning by monitoring" (Sabel 1994; Helper *et al.* 2000), the "new pragmatic disciplines" of benchmarking, simultaneous engineering, and error detection/correction are presented as an alternative mechanism for governing flexible production based on symmetricizing information and de-specifying assets instead of creating the basis for sustained trust among collaborating firms. For a critical exchange on this question, which concludes that supra-firm governance institutions may be needed to stabilize "pragmatic collaborations" between customers and suppliers for iterative co-design of innovative products, but that these institutions must themselves be co-designed through a second-order application of "learning by monitoring" principles, see Whitford and Zeitlin (2004), Herrigel (2004), and especially Sabel (2004).

In both flexible and mass

end p.125

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

production, therefore, together with the vast array of hybrid forms between

them, firms' embeddedness in their local institutional contexts reaches far beyond a minimal dependence on clearly defined property rights and enforceable contracts, as the burgeoning literature on national and regional business and innovation systems likewise testifies.¹¹

¹¹ See, for example, Whitley (1999), Whitley and Kristensen (1996), Lundvall (1992), Braczyk *et al.* (1998), and Crouch *et al.* (2001, 2004).

6.2.7 The Historical Construction of Markets

An additional claim shared by the historical alternatives approach with other critical perspectives on the economy in contemporary social science is that there is no such thing as “the market”, but only particular markets. Such a conclusion follows directly from the unrealizably demanding conditions for the simultaneous clearing of all markets identified by general equilibrium theory, including perfect competition, a finite set of goods of commonly known quality, constant returns to scale, no externalities, a complete set of contingent markets, and coordination of exchanges by a central auctioneer (Boyer 1997). In the real world of actually existing economies, by contrast, social structures and institutions play a constitutive role in defining the rules and conventions governing particular markets, whether for products, raw materials, capital, or labor. Among the most important of these social and institutional influences on the construction of markets are: taxes, tariffs, and income distribution; family structure and the gender division of labor; product and quality standards; competition and antitrust policies; banking and capital market regulations; and industrial relations systems. “Efficiency”, moreover, can only be assessed relative to particular patterns of demand and supply. Thus mass production, as is now well known, depends on the existence of large and stably growing markets for standardized goods. Low unit costs of production are no competitive advantage if consumers reject the product, as the Ford Motor Company painfully discovered in the case of the obsolescent Model T during the mid-1920s; nor do theoretical scale economies yield low costs if capacity cannot be translated into sales, as Ford once again learned with its Dagenham plant, built in 1934 as a one-tenth size model of the River Rouge works, which remained far too large for the British market until the 1950s (Hounshell 1984; Tolliday 1998, 2000). Precisely because managers widely understood the need to ensure a steady and predictable outlet for the amortization of high fixed investments which could not easily be turned to alternative uses, protectionism and market power played a key role in the development of mass production in the United States as well as Western Europe and Japan. Not only mass producers but also their flexible rivals, moreover, have consistently sought to shape as well as respond to market demand through a variety of strategies such as advertising and marketing, forward and

end p.126

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

backward integration into distribution and control of raw materials, product differentiation and creation of new niches, cartels and alliances, lobbying and political struggles.¹²

¹² For an overview and research agenda, see Glimstedt and Zeitlin (1998, 2002). For useful sociological syntheses, see Slater and Tonkiss (2001) and Callon (1998).

6.2.8 Neither Frictionless Adjustment nor Path Dependency

Unlike much recent institutionalist and evolutionary work with which it shares other common ground, the historical alternatives approach rejects both frictionless adjustment and path dependency as frameworks for the

understanding of economic change. Actors' strategies and decisions really matter in this view and, whatever their intrinsic merits, often exert a significant influence on the trajectory of economic development: adjustment to changing market or technological conditions is thus far from automatic. Yet in contrast to the claims of evolutionary theorists, deliberate adaptation typically predominates over natural selection in economic adjustment, while actors are rarely so "locked in" by institutions and history as path-dependency models contend. Hedging strategies, "learning by monitoring", and continuous, provisional re-evaluation of existing practice can thus be understood as pragmatist mechanisms for "routinely questioning the suitability of [firms'] routines... without subverting them as guides to normal activity" (Helper *et al.* 2000: 14, 17). Similarly, technological hybrids such as converters and transformers in electric power systems, flexible transfer machinery composed of standard recombinable units, or programmable automation can likewise be viewed as conscious devices for avoiding and overcoming potential lock-in. At a still deeper level, even quite stable institutional arrangements, like technologies and production models, may be reconfigured through apparently marginal modifications to operate quite differently under new environmental conditions. Thus continuing relationships or network ties between institutions may belie a deep transformation in the ways actors conceive of themselves, their mission, and their strategic possibilities. History, on this view, surely matters, as in the path-dependency story; but its consequences may often be to facilitate rather than to obstruct economic adjustment by serving as a cognitive and practical resource for self-reflective actors in responding to external challenges—without, however, leading to convergence around a single set of institutions, techniques, or practices.¹³

¹³ For fuller critiques of evolutionary analogies and path-dependency models in economic, business, and technological history, see Sabel and Zeitlin (1997b: 8–11); Sabel (1996); Zeitlin (2000b: 13–14, 19–20); Zeitlin (2003); and Crouch (2005). For recent restatements and defenses of path-dependency arguments from the perspective of economics and political science respectively, see David (2000) and Pierson (2004).

end p.127

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

6.2.9 Orientations rather than Epochs

The interpenetration of strategies and practices within industries and national economies at any one time resulting from actors' efforts to hedge their organizational and technological bets about future changes in the environment casts inevitable doubt on the possibility of drawing sharp distinctions between epochs or periods such as the "age of Fordism" or the "era of flexibility". From this vantage point, it seems more useful to distinguish historical epochs according to changing orientations towards the ideas of political and economic organization regarded as normal or paradigmatic than to divide history into periods where social life was in fact thoroughly organized according to one or another master principle. This notion of changing orientations towards paradigmatic or normal ideas faithfully conveys both a sense of changing constraints on historical actors and that of continuing scope for localized strategic choice in so far as ideas of normality tend to magnify and thus to increase the importance of dominant conceptions without reflecting or constraining anything like the totality of behavior they purportedly characterize.¹⁴

¹⁴ For an elaboration of these claims, see Sabel and Zeitlin (1997b: 4–5, 29–33).

6.2.10 Contingency and Strategic Choice as the Mainsprings of Economic Change

Without a teleological and deterministic model of material progress, contingency

and strategic choice become the mainsprings of economic change and thus the core theme of industrial history. Nor is the significance of such choices, as Sabel and I originally believed, concentrated at rare moments of historical openness—evolutionary branching points, punctuated equilibria, or industrial divides. Although great events such as wars, revolutions, or radical reforms are undoubtedly critical to economic change, small everyday choices and incremental innovations may cumulatively exert a profound influence on the industrial development of individual firms, regions, and whole national economies.¹⁵

¹⁵ Compare Sabel and Zeitlin (1997*b*), 8–9 with Sabel and Zeitlin (1985).

Hence, industrial history should be written in a narrative form attentive to the relationship between economic actors' own self-understanding and strategic calculations on the one hand and the consequences of their decisions, both intended and unintended, on the other, even if the historian need not thereby be confined to the actors' own cognitive horizons. Such narratives will typically involve a variety of devices such as flashbacks, polyphony, and multiple retellings of the same tale as a means of what literary theorists Gary Saul Morson (1994) and Michael André Bernstein (1994) call "sideshadowing": the representation of action as a process of deliberative choice among an open (though not of course infinite) set of alternative possibilities, more

end p.128

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

than one of which might in fact have been realized. At the same time, conversely, they will also seek to avoid narratives based on what Morson and Bernstein term "foreshadowing" and "backshadowing": the abuse of hindsight to recount events as if their outcome were predetermined and could be used to judge the choices of historical actors irrespective of what the latter could realistically have been expected to know at the time.¹⁶

¹⁶ For fuller discussion and examples of narrative practice, see Sabel and Zeitlin (1997*b*: 15–20), and Zeitlin (2000*b*: 20–21). For an effort to apply such a "sideshadowing" perspective in reconstructing the historical development of a multinational corporation, see Kristensen and Zeitlin (2005).

6.3 Five Misconceived Objections

Since the publication of Sabel and Zeitlin (1985), the historical alternatives approach to business history has aroused a storm of critical debate. Some of the objections raised in this debate were of course well-founded, and required a rethinking and reformulation of key assumptions and claims (Sabel and Zeitlin 1997*b*). But others, by contrast, are based on a series of recurrent misconceptions about the historical alternatives approach, to the most common of which the remainder of this chapter responds.¹⁷

¹⁷ For an extended discussion of the closely related debate over the flexible specialization approach to industrial change up to the beginning of the 1990s, see Hirst and Zeitlin (1991).

6.3.1 Size of Firm is not a Determining Variable

Contrary to widespread assumptions, the historical alternatives approach is not a "small is beautiful" argument about the inherent superiority—whether economic, social, or political—of small over large firms. Flexible specialization, in this view, can be pursued both within industrial districts or geographically localized networks of small and medium-sized enterprises, and within large, decentralized, or federated firms, as well as a variety of intermediate forms between the two. Even in mass production, as argued above, the boundaries of the corporation may be fluid and variable, especially when the possibilities of hybrid production

strategies are taken into account. Forms of coordination and relationships between economic units, rather than formal ownership or even managerial structure, are thus the key variable in industrial organization. The argument about firm size in the historical alternatives approach is instead really a negative claim: that there are no intrinsic barriers preventing (networks of) small firms from being economically efficient, technologically innovative, and commercially successful, while large size

end p.129

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

and vertical integration may have as much to do with struggles for market control as with any efficiency or coordination advantages.¹⁸

¹⁸ On the importance of market power as opposed to pure efficiency considerations in the determinants of the great US merger wave at the turn of the twentieth century, see Lamoreaux (1985) and Roy (1997). On the absence of any correlation between the size distribution of industrial firms across national economies and variations in their growth rates, see Dosi (1997).

6.3.2 Industrial Sectors are not a Determining Variable

Contrary to another widely held claim, the intrinsic characteristics of industrial sectors (markets, technologies, factor supplies, etc.) do not determine the boundaries between mass production and flexible specialization. In particular, it is not the case that flexible production can only be successfully pursued in light, labor-intensive industries.¹⁹

¹⁹ See, for example, Amatori (1997). The claim that the modern corporation clustered in sectors whose technological characteristics permitted the exploitation of potential scale and scope economies through managerial coordination is a recurrent trope of Chandlerian analysis. For a recent formulation, see Chandler and Hikino (1997).

Although industrial sectors do of course have distinctive economic and technological characteristics at any given time, within each sector there are typically a range of firms pursuing different strategies marked by varying degrees of flexibility and specialization, such as fine versus commodity chemicals, speciality versus basic steels, platform technologies versus therapeutics in biotechnology, or customized information technology services versus standardized software products.²⁰

²⁰ On software and biotechnology, see Casper *et al.* (1999). Even within a given market segment, "comparisons of closely matched firms in the same country (e.g. Federal Express and UPS or McKinsey and Boston Consulting Group) have shown that there is more than one path to success... with direct competitors pursuing very different organizational and human-resource strategies": see Cappelli and Crocker-Hefter (1996), cited in Finegold and Wagner (1999: 124), who make a similar point about standardized, assemble-to-order, and customized pump manufacturing in Germany and the United States.

Such divergent strategies can in time transform the commercial and technological characteristics of the sector itself by reducing minimum efficient scales of production and/or increasing the fragmentation and specialization of demand, as can be seen from the impact of mini-mills in steel (Herrigel 2002), combined-cycle power plants in electricity supply (Hirsch 1991), and Japanese flexible production and product development techniques in motor vehicles (Clark and Fujimoto 1991). Governance structures and thus the effective boundaries of the firm likewise vary widely within the same sector not only across countries (Hollingsworth *et al.* 1994), but even within different regions of the same country, as in the case of autarkic versus decentralized industrial orders in German mechanical engineering (Herrigel 1996). This point is reinforced by the preceding argument about the size of firm as a non-critical variable, since many large German, Japanese, and even American steel, machinery, and electrical manufacturing companies turn out to have been

end p.130

extensively engaged in more or less flexible and specialized forms of production through much of their history (Herrigel 1996, 2000; Fruin 1994; Scranton 1997). Finally, as a variety of critics have noted, the Chandlerian claim that large modern corporations became concentrated in certain industries but not others fails to take adequate account of aggregation problems within sectors, diversity among large firms, and variations in the significance of the top 200 industrial firms and manufacturing itself within individual national economies (Fruin 1994; Cassis 1997).

6.3.3 Strategic Action as Hyper-Rationality?

The emphasis placed in the historical alternatives approach on the role and sophistication of strategizing actors is sometimes accused of representing a form of hyper-rationality, which imposes unrealistic demands on the information-processing and computational powers of actual economic agents, and thereby inadvertently mirrors neoclassical rational actor models, with all their well-known weaknesses (Salais 1999). Whatever its superficial plausibility, such an interpretation constitutes a clear misreading of the historical alternatives approach. Strategic reflection, as Sabel and I explicitly argued, is a necessary but not sufficient condition for competitive success, while well-informed contemplation of alternatives can in extreme cases lead to paralysis through familiar paradoxes such as Hegel's vortex of bad infinity and the dilemma of Buridan's ass (Sabel and Zeitlin 1997*b*). As in much behavioral and evolutionary economics, the historical alternatives approach recognizes volatility, uncertainty, and incomplete information as fundamental obstacles to economic optimization in the sense of fully "rational" calculation of the best means for achieving predetermined ends in any given situation. But unlike these other non-standard perspectives, the historical alternatives approach regards unreflective dependence on "satisficing" routines such as standard operating procedures, rules of thumb and accounting conventions as myopic and potentially dangerous solutions to the underlying problems of incomplete information and unanticipated change. "Bounded rationality", on this view, is not a "second-best" approximation of rationality *tout court* under adverse conditions, but rather an oxymoron, since no rational means are available to determine the optimal limits of search activity and thus the appropriate scope of any particular set of routines. Hedging strategies, "learning by monitoring", and hybrid, recombinable organizational and productive forms, as argued above, can thus be seen as superior responses to volatility and uncertainty, based on pragmatist mechanisms which enable economic actors to expose their existing beliefs and practices piece-by-piece to possible challenges without thereby plunging into a paralyzing state of complete self-doubt. No assumption of optimality or maximization is entailed by this "practically reasonable" conception of economic action, in which agents are typically capable both of giving provisional

end p.131

reasons for their actions in any given situation, and of reciprocally adjusting ends and means in light of their practical experience with particular courses of action.²¹

²¹ For this pragmatist or "practically reasonable" conception of economic action, see Sabel (1994, 2006) and Helper *et al.* (2000).

Economic actors, on this view, do not always make the "right" choices, but their decisions nonetheless are often broadly consequential for others as well as

themselves.

6.3.4 Power, Exploitation, Conflict: The Dark Side of Flexibility?

Another frequently raised charge against the historical alternatives approach is that it systematically neglects the “dark side” of power, exploitation, and conflict within industrial districts or flexible regional economies. Thus, critics claim that empirical studies of individual districts and regions such as Birmingham, Sheffield, St Etienne, or Cholet typically find greater evidence of hierarchy and power imbalances than is acknowledged by proponents of the historical alternatives approach, whether in terms of the weight of medium-sized and even large firms in their industrial structure, the role of credit and marketing relations in the subordination of formally independent small producers, or reliance on sweated labor and self or family exploitation to sustain competitiveness. Second, and relatedly, these critics contend, such empirical studies likewise challenge the characterization of these districts or regions in the historical alternatives literature by revealing a greater incidence of overt conflict in the form of strikes and other types of dispute on the one hand, together with that of industrial secrecy and other failures of local cooperation on the other (Berg 1993, 1994; Magnusson 1994; Behagg 1986; White 1997; Aminzade 1986; Liu 1994).²²

²² For the extreme case of an SS garment manufacturing enterprise at the Ravensbruck concentration camp interpreted as an instantiation of the dark side of flexible production, see Allen (1999).

Some of these criticisms are based on confusions about the role of firm size and scale in the historical alternatives approach discussed earlier (e.g. Berg 1993, 1994). Others ignore the explicit analysis in Sabel and Zeitlin (1985; 1997*b*) of internal cleavages and the scope for conflict within flexible regional economies, arising both from contention for place among individuals and social groups and from the potentially disruptive impact of hybridizing experimentation on the existing institutional order. At issue thus is not the existence or potential for such internal conflicts but rather the institutions and governance mechanisms through which they were handled and resolved. Thus in most successful flexible economies, empirical studies confirm that collective wage-setting institutions, dispute adjudication procedures, and other regulatory mechanisms have played a crucial part in balancing cooperation and competition among decentralized economic actors. When flexible regional economies face difficult adjustments to external shifts in markets

end p.132

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

and technology, social stalemate, deregulation, and decline is always a possible outcome, as in Glarus printed textiles, Sheffield cutlery, or Spitalfields silks; but so too is the regeneration of innovative capabilities and competitiveness through collective deliberation and institutional reform, as in Swiss watchmaking, Solingen cutlery, Lyons silks, or Danish agriculture and craft industries more generally.²³

²³ For these examples, see Veyrassat (1997), Cottureau (1997), Boch (1997), and Kristensen and Sabel (1997).

Crucial in each case to these divergent outcomes was whether or not internal conflicts over the challenges posed by economic change could be resolved by reinforcing collaborative governance mechanisms which equitably shared out the burdens and benefits of adjustment among the actors concerned.

What, finally, of the relationship between social power and economic choices? Doesn't the emphasis on the role of power in shaping the outcome of struggles over the evolution of markets, technology, and industrial organization, stressed

particularly in Sabel and Zeitlin (1985), undercut the role of contingency and choice by reintroducing an underlying structural logic—based now on social interests rather than efficiency?²⁴

²⁴ See for example the discussion of power-based explanations of industrial change in Roy (1997), and the book review by Levenstein (1998).

Here again, this superficially plausible conclusion proves misleading for a number of well-grounded theoretical and empirical reasons. A first such reason concerns the inherent uncertainty surrounding all strategic calculations. In a world in which actions often have unintended consequences, the distribution of power resources does not necessarily determine the outcome of economic and political struggles. Put in the opposite way, in productive competition, as in love and war, it's not so much what you have as how you use it that counts (Hindess 1982; Williams *et al.* 1989). A second reason lies in the structural ambiguity of social interests themselves, together with their frequently observed redefinition through the making and breaking of alliances with other actors in the course of pursuing particular economic or political strategies (Sabel 1982; Helper *et al.* 2000). A final reason for rejecting the idea of an underlying logic of economic and technological development based on the putatively decisive role of social power in determining collective choices at key turning points lies in the ongoing significance highlighted earlier of small, everyday decisions and micro-alternatives as well as large-scale battles and industrial divides in shaping the productive trajectories of firms, regions, and entire national economies.

6.4 Conclusions

Nor, finally, can the historical alternatives approach be fairly dismissed as “history in the optative mood”, an exaltation of ideologically desirable but unrealistic

end p.133

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

alternatives with little empirical relevance (Landes 1987*a*, 1987*b*). For as the growing body of research inspired by it testifies, the historical alternatives approach has already yielded a substantial empirical payoff as both a positive and a negative heuristic.²⁵

²⁵ For a similar argument about the flexible specialization approach in the context of contemporary debates about the analysis of industrial change, see Hirst and Zeitlin (1991: 25–6).

As a positive heuristic, the historical alternatives approach has drawn attention to neglected but empirically significant forms of productive organization, both pure and hybrid. The most important such positive finding has been the rediscovery of flexible production as a pervasive feature of industrial history prior to its contemporary resurgence since the 1970s, whether organized through industrial districts dominated by small and medium-sized enterprises, large internally decentralized or federated firms, or some intermediate combination between the two. Some of these flexible production systems have continued to thrive for long periods of time down to the present. Others were large and successful in their day, but eventually declined or were transformed into something different, whether for internal or external reasons. But the same could equally be said of many mass-production firms and regions: the survival of any particular case over a specific time period has no direct bearing on the viability of the broader productive model on which it is based. The key point, by contrast, which emerges from recent research, is that at no stage did flexible production die out altogether, or even fall into a clearly subordinate relationship to mass production, despite the latter's ascendancy as a technological and economic paradigm during the mid-twentieth century (Zeitlin 2000*a*; Zeitlin and Herrigel

2000; Tolliday and Zeitlin 1992).

At the same time, however, the historical alternatives approach also serves as a negative heuristic, drawing attention to what might have happened but did not, and thereby giving rise to different and richer accounts of the course of business history. For causal explanations in history, as is widely recognized, implicitly depend upon counterfactual arguments; but plausible counterfactual arguments must in turn be grounded in possibilities that were realistically open to historical actors at the time (Elster 1978; Hawthorn 1991; Ricoeur 1984). In this area, too, there is now a growing body of work which traces the role of political struggles, technological paradigms, and strategic choices in shaping trajectories of industrial development. Perhaps the most important findings of this strand of research concern the impact of national institutions and policies on the reproduction or decline of flexible regional economies, such as the degree of administrative centralization as opposed to local government autonomy, the effectiveness of state rationalization and concentration policies, the form and intensity of antitrust regulation, the extent of political tolerance and/or encouragement of associational governance, the territorial structure of banking and finance systems, and the relative concentration of retail distribution.²⁶

²⁶ For discussions of such national influences on the fate of industrial districts and flexible regional economies, see Zeitlin (1995*b*) and this volume.

Here, too, however, national cases of flexible production

end p.134

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

which initially appeared as exceptional deviations from the mainstream of historical development have increasingly come to be understood as the result of variations on a common theme, whereby small differences in the outcome of similar struggles can eventually yield large cumulative divergences in economic governance and productive organization.²⁷

²⁷ For an eloquent case in point, see Kristensen and Sabel (1997).

But the historical alternatives approach offers a normative as well as an empirical payoff. By expanding our understanding of the range of organizational and productive forms in the past, and enriching our understanding of the reasons for and outcomes of earlier decisions about economic governance, the historical alternatives approach can sharpen awareness and improve the quality of public debate about the range of strategic choices open to us in the present and future. This is arguably not only a legitimate but also a necessary role for business history in the twenty-first century if it is to contribute to public problem-solving in a broad sense rather than to ossify into a purely antiquarian and scholastic activity.

References

Allen, Michael Thad (1999). "Flexible Production at Concentration Camp Ravensbruck". *Past and Present*, 165: 182–217. [Link ▶ OUP Resource](#)

AMATORI, Franco (1997). "Reflections on Global Business and Modern Italian Enterprise by a Stubborn 'Chandlerian'". *Business History Review*, 71/2: 309–18. [Link ▶](#)

— and Jones, Geoffrey (eds.) (2003). *Business History around the World*. Cambridge: Cambridge University Press.

Aminzade, Ronald (1986). "Reinterpreting Capitalist Industrialization: A Study of

Nineteenth-Century France", in Steven L. Kaplan and Cynthia J. Koepp (eds.), *Work in France: Representations, Meaning, Organization, and Practice*. Ithaca, NY: Cornell University Press, 393–417.

Balconi, Margherita (1991). *La siderurgia italiana (1945–1990): tra controllo pubblico e incentivi del mercato*. Bologna: Il Mulino.

— (1993). "The Notion of Industry and Knowledge Bases: The Evidence of Steel and Mini-mills". *Industrial and Corporate Change*, 2/3: 471–507.

 [Link](#) 

BEHAGG, Clive (1986). "Myths of Cohesion: Capital and Compromise in the Historiography of Nineteenth-Century Birmingham". *Social History*, 11/3: 375–84. 

BERG, Maxine (1993). "Small Producer Capitalism in Eighteenth-Century England". *Business History*, 35/1: 17–39. 

— (1994). *The Age of Manufactures, 1700–1820*, 2nd edn. London: Routledge.

Berk, Gerald (1994). *Alternative Tracks: The Constitution of Industrial Order in America, 1865–1917*. Baltimore: Johns Hopkins University Press.

— and SCHNEIBERG, Marc (2005). "Varieties in Capitalism, Varieties of Association: Collaborative Learning in American Industries, 1900 to 1925". *Politics and Society*, 33/1: 46–87. 

end p.135

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

Bernstein, Michael André (1994). *Foregone Conclusions: Against Apocalyptic History*. Berkeley: University of California Press.

Boch, Rudolf (1997). "The Rise and Decline of Flexible Production: The Cutlery Industry of Solingen since the Eighteenth Century", in Sabel and Zeitlin (1997a), 153–87.

Boyer, Robert (1997). "The Variety and Unequal Performance of Really Existing Markets: Farewell to Doctor Pangloss?", in J. Rogers Hollingsworth and Robert Boyer (eds.), *Contemporary Capitalism: The Embeddedness of Institutions*. Cambridge: Cambridge University Press, 55–93.

— Charron, Elsie, Jürgens, Ulrich, and Tolliday, Steven (eds.) (1998). *Between Imitation and Innovation: Transfer and Hybridization of Productive Models in the International Automobile Industry*. Oxford: Oxford University Press.

Braczyk, Hans-Joachim, Cooke, Philip, and Heidenreich, Martin (eds.) (1998). *Regional Innovation Systems: The Role of Governance in a Globalizing World*. London: University College London Press.

Callon, Michel (ed.) (1998). *The Laws of the Markets*. Oxford: Blackwell.

CARNEVALI, Francesca (2003). "Golden Opportunities: Jewelry Making in Birmingham between Mass Production and Specialty". *Enterprise and Society*,

4/2: 272–98.  [Link](#)  OUP Resource

— (2005). *Europe's Advantage: Banks and Small Firms in Europe and Britain*. Oxford: Oxford University Press.

Cappelli, Peter, and Crocker-Hefter, Anne (1996). "Distinctive Human Resources Are Firms' Core Competencies". *Organizational Dynamics*, winter: 7–21.

CASPER, Steven, LEHRER, Mark, and SOSKICE, David (1999). "Can High-Technology Industries Prosper in Germany? Institutional Frameworks and the Evolution of the German Software and Biotechnology Industries". *Industry and Innovation*, 6/1: 5–24.

Cassis, Youssef (1997). *Big Business: The European Experience in the Twentieth Century*. Oxford: Oxford University Press.

CHANDLER, Jr., Alfred D. (1990). *Scale and Scope: The Dynamics of Industrial Capitalism*. Cambridge, Mass.: Harvard University Press.

— and Hikino, Takashi (1997). "The Large Industrial Enterprise and the Dynamics of Modern Economic Growth", in Chandler *et al.* (1997), 24–57.

— Amatori, Franco, and Hikino, Takashi (eds.) (1997). *Big Business and the Wealth of Nations*. Cambridge: Cambridge University Press.

Clark, Kim B., and Fujimoto, Takahiro (1991). *Product Development Performance: Strategy, Management, and Organization in the World Auto Industry*. Boston: Harvard Business School Press.

Cottareau, Alain (1997). "The Fate of Collective Manufactures in the Industrial World: The Silk Industries of Lyons and London, 1800–1850", in Sabel and Zeitlin (1997a), 75–152.

Crouch, Colin (2005). *Capitalist Diversity and Change: Recombinant Governance and Institutional Entrepreneurs*. Oxford: Oxford University Press.

— Le Galès, Patrick, Trigilia, Carlo, and Voelzkow, Helmut (2001). *Local Production Systems in Europe: Rise or Demise?* Oxford: Oxford University Press.

— — — — (2004). *Changing Governance of Local Economies: Responses of European Local Production Systems*. Oxford: Oxford University Press.

David, Paul (2000). "Path Dependence, its Critics, and the Quest for 'Historical Economics'", in P. Garrouste and S. Ioannides (eds.), *Evolution and Path Dependence in Economic Ideas: Past and Present*. Cheltenham: Edward Elgar, 15–40.

end p.136

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

Dosi, Giovanni (1997). "Organizational Competences, Firm Size, and the Wealth of Nations: Some Comments from a Comparative Perspective", in Chandler *et al.* (1997), 465–79.

Ehrfeld, Wolfgang, Hessel, Volker, and Löwe, Holger (2000). *Microreactors: New*

Technology for Modern Chemistry. New York: John Wiley & Sons.

Elster, Jon (1978). *Logic and Society: Contradictions and Possible Worlds*. New York: John Wiley & Sons.

EMIRBAYER, Mustafa, and MISCHE, Ann (1998). "What is Agency?" *American Journal of Sociology*, 103/4: 962–1023. [Link ▶](#)

Finegold, David, and Wagner, Karin (1999). "The German Skill-Creation System and Team-Based Production: Competitive Asset or Liability?", in Pepper D. Culpepper and David Finegold (eds.), *The German Skills Machine: Sustaining Comparative Advantage in a Global Economy*. New York: Berghahn Books, 115–55.

FREELAND, Robert F. (2000). "Creating Hold-Up through Vertical Integration: Fisher Body Revisited". *Journal of Law and Economics*, 43/1: 33–66. [Link ▶](#)

Fruin, W. Mark (1994). *The Japanese Enterprise System: Competitive Strategies and Co-operative Structures*. Oxford: Clarendon Press.

Glimstedt, Henrik (1993). *Mellan teknik och samhälle: stat, marknad och produktion i svensk bilindustri 1930–1960*. Gothenburg: Historiska institutionen.

— and Zeitlin, Jonathan (1998). "Constructing Markets, Shaping Production: The Historical Formation of Industrial Markets since 1870", research proposal to the Swedish Council for the Coordination and Initiation of Research (FRN), Stockholm.

— — (2002). "Constructing Markets, Shaping Production: The Historical Construction of Product Markets in Europe and America", introductory presentation to an international conference organized by the Institute of International Business, Stockholm School of Economics, Idöborg, Sweden, July 5–6.

Hawthorn, Geoffrey (1991). *Plausible Worlds: Possibility and Understanding in History and the Social Sciences*. Cambridge: Cambridge University Press.

HELPER, Susan, MACDUFFIE, John Paul, and SABEL, Charles F. (2000). "Pragmatic Collaborations: Advancing Knowledge while Controlling Opportunism". *Industrial and Corporate Change*, 9/3: 443–88. [Link ▶ OUP Resource](#)

Herrigel, Gary (1996). *Industrial Constructions: The Sources of German Industrial Power*. Cambridge: Cambridge University Press.

— (2000). "American Occupation, Market Order, and Democracy: Reconfiguring the Japanese and German Steel Industries after World War II", in Zeitlin and Herrigel (2000), 340–99.

— (2002). "Varieties of Collective Regeneration: Comparisons of the German, Japanese, and American Steel Industries Since the Mid-1970s", unpublished paper presented to the international conference on "Constructing Markets, Shaping Production: The Historical Construction of Product Markets in Europe and America", Institute of International Business, Stockholm School of Economics, Idöborg, Sweden, July 5–6.

— (2004). "Emerging Strategies and Forms of Governance in High-Wage Component Manufacturing Regions". *Industry and Innovation*, 11/1–2: 45–80.



HINDESS, Barry (1982). "Power, Interests, and the Outcome of Struggles". *Sociology*, 16/4: 498–511.

Hirsh, Richard F. (1991). *Technology and Transformation in the American Electric Utility Industry*. Cambridge: Cambridge University Press.

end p.137

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

HIRST, Paul and ZEITLIN, Jonathan (1991). "Flexible Specialization vs. Post-Fordism: Theory, Evidence and Policy Implications". *Economy and Society*, 20/1: 1–55.

Hollingsworth, J. Rogers, Schmitter, Philippe C., and Streeck, Wolfgang (eds.) (1994). *Governing Capitalist Economies: Performance and Control of Economic Sectors*. Oxford: Oxford University Press.

Hounshell, David F. (1984). *From the American System to Mass Production, 1800–1932*. Baltimore: Johns Hopkins University Press.

Jackson, Tony (1998). "How the Mighty are Falling: Many Big, Capital-Intensive Industries are Locked in a Damaging Cycle of Over-Supply—and the Swings May Be Getting Worse". *Financial Times*, Nov. 30.

Kristensen, Peer Hull, and Sabel, Charles F. (1997). "The Small-Holder Economy in Denmark: The Exception as Variation", in Sabel and Zeitlin (1997*a*), 344–78.

— and Jonathan Zeitlin (2005). *Local Players in Global Games: The Strategic Constitution of a Multinational Corporation*. Oxford: Oxford University Press.

Lamoreaux, Naomi, R. (1985). *The Great Merger Movement in American Business, 1895–1904*. Cambridge: Cambridge University Press.

Landes, David S. (1987*a*). "Small is Beautiful. Small is Beautiful?", in Fondazione ASSI/Istituto per la storia dell'Umbria contemporanea, *Piccola e grande impresa: un problema storico*. Milan: Franco Angeli, 15–28.

— (1987*b*). *A che servono i padroni? Le alternative storiche dell'industrializzazione*. Turin: Bollati Boringhieri.

Levenstein, Margaret (1998). Book review of Roy (1997). *H-Business*, Aug.

Liu, Tessie P. (1994). *The Weaver's Knot: The Contradictions of Class Struggle and Family Solidarity in Western France, 1750–1914*. Ithaca, NY: Cornell University Press.

Luesby, Jenny (1998). "Smaller, Cheaper, Safer". *Financial Times*, Sept. 8.

Lundvall, Bengt-Ake (ed.) (1992). *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter.

Magnusson, Lars (1994). *The Contest for Control: Metal Industries in Sheffield*,

Solingen, Remscheid and Eskilstuna during Industrialization. Oxford: Berg.

Morson, Gary Saul (1994). *Narrative and Freedom: The Shadows of Time*. New Haven: Yale University Press.

Nishiguchi, Toshihiro (1993). *Strategic Industrial Sourcing: The Japanese Advantage*. Oxford: Oxford University Press.

Pierson, Paul (2004). *Politics and Time: History, Institutions, and Social Analysis*. Princeton, NJ: Princeton University Press.

Piore, Michael J., and Sabel, Charles F. (1984). *The Second Industrial Divide: Possibilities for Prosperity*. New York: Basic Books.

Ricoeur, Paul (1984). *Time and Narrative*, vol. (1). Trans. by Kathleen McLaughlin and David Pellauer. Chicago: Chicago University Press.

Roy, William G. (1997). *Socializing Capital: The Rise of the Large Industrial Corporation in America*. Princeton, NJ: Princeton University Press.

Sabel, Charles F. (1982). *Work and Politics: The Division of Labor in Industry*. Cambridge: Cambridge University Press.

— (1994). "Learning by Monitoring: The Institutions of Economic Development", in Neil J. Smelser and Richard Swedberg (eds.), *The Handbook of Economic Sociology*, 1st edn. Princeton, NJ: Princeton University Press/Russell Sage Foundation, 137–65.

end p.138

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

— (1996). "Intelligible Differences: On Deliberate Strategy and the Exploration of Possibility in Economic Life", *Rivista Italiana degli Economisti* (Journal of the Società Italiana degli Economisti), 1/1: 55–80

— (2004). "Pragmatic Collaborations in Practice: A Response to Herrigel and Whitford and Zeitlin". *Industry & Innovation*, 11/1–2: 81–88. [Link](#)

— (2006). "Theory of a Real-Time Revolution", in Charles Heckscher and Paul Adler (eds.), *The Firm as a Collaborative Community*. Oxford: Oxford University Press, 106–36.

— and ZEITLIN, Jonathan (1982). "Alternative storiche alla produzione di massa". *Stato e mercato*, 5: 212–58.

— — (1985). "Historical Alternatives to Mass Production: Politics, Markets and Technology in Nineteenth-Century Industrialization". *Past and Present*, 108: 133–76. [Link](#) [OUP Resource](#)

— — (eds.) (1997a). *World of Possibilities: Flexibility and Mass Production in Western Industrialization*. Cambridge: Cambridge University Press.

— — (1997b). "Stories, Strategies, and Structures: Rethinking Historical Alternatives to Mass Production", in Sabel and Zeitlin (1997a), 1–33.

SALAIS, Robert (1999). "Review of *World of Possibilities*". *American Journal of Sociology*, 104/6: 1857.

Scranton, Philip (1997). *Endless Novelty: Specialty Production and American Industrialization, 1865–1925*. Princeton, NJ: Princeton University Press.

Shiomi, Haruhito (1995). "The Formation of Assembler Networks in the Automobile Industry: The Case of Toyota Motor Company (1955–80)", in Shiomi and Kazuo Wada (eds.), *Fordism Transformed: The Development of Production Methods in the Automobile Industry*. Oxford: Oxford University Press, 28–48.

Slater, Don, and Tonkiss, Fran (2001). *Market Society: Markets and Modern Social Theory*. Cambridge: Polity Press.

Storper, Michael, and Salais, Robert (1997). *Worlds of Production: The Action Frameworks of the Economy*, Cambridge, Mass.: Harvard University Press.

Tolliday, Steven (1998). "The Diffusion and Transformation of Fordism: Britain and Japan Compared", in Boyer *et al.* (1998), 57–96.

— (2000). "Transplanting the American Model? US Automobile Companies and the Transfer of Technology and Management to Britain, France, and Germany, 1928–62", in Zeitlin and Herrigel (2000), 76–119.

— and Jonathan Zeitlin (eds.) (1992). *Between Fordism and Flexibility: The Automobile Industry and its Workers*, 2nd edn. Oxford: Berg. (1st edn.) Cambridge: Polity, 1986.

Veyrassat, Béatrice (1997). "Manufacturing Flexibility in Nineteenth-Century Switzerland: Social and Institutional Foundations of Decline and Revival in Calico-Printing and Watchmaking", in Sabel and Zeitlin (1997a), 188–237.

Walton, Whitney (1992). *France at the Crystal Palace: Bourgeois Taste and Artisan Manufacture in the Nineteenth Century*. Ithaca, NY: Cornell University Press.

WHITE, Alan (1997). "'...We Never Knew What Price We Were Going to Have Till We Got to the Warehouse': Nineteenth-Century Sheffield and the Industrial District Debate". *Social History*, 22/3: 307–17. 

WHITFORD, Josh, and Zeitlin, Jonathan (2004). "Governing Decentralized Production: Institutions, Public Policy, and the Prospects for Inter-Firm Collaboration in the United States". *Industry & Innovation*, 11/1–2: 11–44.



end p.139

PRINTED FROM OXFORD HANDBOOKS ONLINE (www.oxfordhandbooks.com)
© Copyright Oxford University Press, 2011. All Rights Reserved

Whitley, Richard (1999). *Divergent Capitalisms: The Social Structuring and Change of Business Systems*. Oxford: Oxford University Press.

— and Peer Hull Kristensen (eds.) (1996). *The Changing European Firm: Limits to Convergence*. London: Routledge.

Williams, Karel, Williams, John, Haslam, Colin, and Wardlow, Andrew (1989). "Facing Up to Manufacturing Failure", in Paul Hirst and Jonathan Zeitlin (eds.), *Reversing Industrial Decline? Industrial Structure and Policy in Britain and her Competitors*. Oxford: Berg, 71–94.

Zeitlin, Jonathan (1995a). "Why are there No Industrial Districts in the United Kingdom?", in Arnaldo Bagnasco and Charles F. Sabel (eds.), *Small and Medium-Size Enterprises*. London: Pinter, 98–114.

— (1995b). "Flexibility and Mass Production at War: Aircraft Manufacture in Britain, the United States, and Germany, 1939–1945". *Technology and Culture*, 36/1: 46–79. 

— (ed.) (2000a). "Flexibility in the 'Age of Fordism': Technology and Production in the International Automobile Industry", special issue of *Enterprise and Society*, 1/1, Mar.

— (2000b). "Introduction: Americanization and its Limits: Reworking US Technology and Management in Post-War Europe and Japan", in Zeitlin and Herrigel (2000), 1–50.

— (2003). "Introduction: Governing Work and Welfare in a New Economy: European and American Experiments", in Jonathan Zeitlin and David Trubek (eds.), *Governing Work and Welfare in a New Economy: European and American Experiments*. Oxford: Oxford University Press, 1–30.

— and Herrigel, Gary (eds.) (2000). *Americanization and its Limits: Reworking US Technology and Management in Post-War Europe and Japan*. Oxford: Oxford University Press.

end p.140

Top



Privacy Policy and Legal Notice © Oxford University Press, 2003-2011. All rights reserved.