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My remarks for the panel discussion will focus on four aspects of the contribution business history has made and perhaps can make to our understanding of the antitrust policy of the United States: I will first discuss briefly the work of Alfred D. Chandler, Jr., certainly the world's most eminent business history; second, I will consider the manner in which business history found itself linked with recent developments in economics and in managerial studies; third, I will mention the two interrelated developments that many analysts believe have recently had the most dramatic impact on the U.S. economy, that is globalization and the third industrial revolution. Finally, I will suggest some of the ways these academic and economic phenomena can be related to the antitrust case against AT&T and subsequent developments in telecommunications in this country.

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When Alfred D. Chandler, Jr., was launching his long, fruitful career as a business historian, the dominant historical paradigm for understanding the role of big business in American history was provided by Matthew Josephson, author of *The Robber Barons*. Josephson's popular book, which was published in the depths of the worst depression America had ever suffered, focused on the scoundrels who ran and robbed their corporations and the American people. In the years that followed, business historians had been attempting without much success to change that historical construct by demonstrating that the scoundrels were really good guys who were builders, not robbers. Chandler set out to develop a new context and questions for the subdiscipline of business history. By the time he wrapped up his active career, business history had been converted to a new and far more successful paradigm, in large part because of the work Chandler, his students, and his followers had done.¹

What, then, are the defining elements of the Chandler paradigm and what were the most important intellectual currents shaping his work? The two dominant intellectual currents came from sociology and from political economy. The sociology was the structural-functional equilibrium theory of Talcott Parsons, a construct that built on the work of Max Weber, the first

great analyst of modern bureaucracy. The political economy came from Joseph A. Schumpeter, whose dynamic theory of capitalist growth focused on the heroic entrepreneur, the successful innovator who introduced new technologies, new sources of raw material, new markets or new organizational forms. Seeking his own rewards, the entrepreneur reshaped society through the process of creative destruction: new and more efficient ways of doing business destroyed older, less efficient enterprises, Shumpeter said, and the entrepreneurs drove capitalism ahead in great surges of change and growth.

Chandler built upon but reconstructed these two bodies of theory. He used structural-functional ideas to build up a dynamic, comparative history of the role of large corporate enterprise in capitalist progress from the nineteenth century through the end of the twentieth century. He used the idea of Schumpeterian entrepreneurship, but he looked to organizational capabilities rather than the heroic individual as the primary source of change in the second industrial revolution. The organizations that were successful over the long-term, he said, were those that made the vital three-pronged investments in an effective managerial hierarchy, in mass production, and in mass distribution. Chandler left no doubt about the positive impact of these developments: “the modern industrial enterprise played a central role in

creating the most technologically advanced, fastest-growing industries of their day. These industries...were the pace setters of the industrial sector of their economies—the sector so critical to the growth and transformation of national economies into their modern, urban industrial form.”²

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The Chandlerian construct of business history became linked to developments in two other disciplines concerned with business and especially with the types of large enterprises Chandler studied. In economics, Richard R. Nelson and Sidney G. Winter developed *An Evolutionary Theory of Economic Change* in the early 1980s, a theory that spawned a neo-Schumpeterian school of analysts. Their effort to develop a dynamic model of long-term economic change carried them from theory into history, from a discussion of national innovation systems into the sources of industrial leadership. This left them close to the context in which Chandler was working, as did the work being done in transactions cost economics by Oliver E. Williamson and others. Williamson, like the evolutionary economists, was introducing historically particular elements to theory, pushing it toward Chandler’s analysis of the crucial role of vertical integration in the rise of the modern firm. Paul David’s work on path dependency had a similar impact.

All that I'm suggesting here is that the context in which scholars placed and analyzed big business was changing in important ways. The comparative static analysis of industrial organization theory was co-existing with dynamic styles of analysis with important elements of place- and time-related history. In an effort to answer Ronald Coase's question, "Why Are There Firms?" some economists were developing a new perspective on the modern corporation, a perspective that narrowed the gap between economics and history.³

Similar, and related changes were taking place in management studies. Management scholars were devoting substantial attention to the environment external to the firm and to the aspects of the environment and the firm's capabilities that yielded effective innovation over the long-term. The capabilities literature was linked very closely to business history, as were the new studies of how firms respond to drastic changes in their technological context. This latter work added something new to the Chandlerian concept of business history insofar as it gave substantial attention to failure. Chandler's focus had always been on successful firms (called "Chandler firms" at the Harvard Business School). The work in management, in the history of technology, and in the political history of the

administrative state also paid more attention than Chandler did to the political context in which modern corporate business evolved.

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Meanwhile, out beyond the academy and the academic research being done by historians, economists and management scholars and others, the world was rapidly changing. With the breakdown of the Bretton Woods settlement and the decisions by the leading OECD countries to foster relatively free trade, the world entered a second phase of globalization. Many American industries had been facing intense competition before this happened but the pressure on these industries to change or lose market share (or worse) increased sharply in the 1970s. The United States experienced a dramatic phase of competitive destruction that didn't seem to have a creative element – at least not for the American rustbelt.

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That, I believe, is the context in which we need to place the antitrust case against AT&T in the 1970s and the subsequent developments that have taken place in telecommunications. The Bell System seemed to have done all of the right things according to the Chandlerian paradigm. It had made the three-pronged investments, very heavy investments, in the provision and distribution of its basic service and had, to boot, developed a well-trained

and well-indoctrinated corp of professional managers. The Bell-Heads had as well created a powerful social ethic to accompany the network mystique that pervaded the enterprise. Bell Labs was a marvelously creative institution that had, in fact, developed crucial elements of the technology that gave rise to the third industrial revolution of the so-called information age. In the 1970s, when American productivity increases were drifting toward zero, the Bell System continued to experience healthy increases in productivity.

That was a pretty impressive record and it helps one understand today why AT&T's leaders ignored a vital part of their own history – the part that wasn't in the Chandler paradigm. When the modern Bell System was being created in the years before World War I and during its subsequent history, AT&T had managed to maintain a powerful monopoly in a nation opposed to monopoly by compromising with public authority. But AT&T's leadership in the early 1970s forgot about that, threw down a gauntlet to the U.S. government and its major competitor, and ended up mired in a series of incredibly expensive antitrust suits. Losing the federal case in Judge Greene's court, AT&T settled out of court by breaking up the Bell System.

At that crucial point in the development of U.S. telecommunications, AT&T's leaders and the government shifted gears and paid *too much*

attention to history and *too little attention* to the changes taking place in the global economy. The settlement opted for the Chandler vertically integrated model, with AT&T keeping the Western Electric business and Bell Labs, while sacrificing the Baby Bells and the local networks. AT&T gave away the mobile phone business it had created and looked forward to a new career as a competitive long-distance firm. Underestimating the changes that would have to take place from the top to the bottom of the organization to become an efficient competitor, AT&T struggled and failed to implement successfully the transition to competition and the firm's strategy of convergence. The market worked, and AT&T recently had its own rendezvous with creative destruction.

Perhaps I shouldn't be so harsh with AT&T's leaders because the government seems to me to have been similarly unmindful of the changes taking place in the global economy in the 1970s and 1980s. There was no consideration in the antitrust case of the Bell System's efficiency; there was no consideration of the innovations Bell Labs had produced; there was no consideration of the vast market for telecom equipment that was being thrown open to foreign suppliers; there was no consideration of whether deregulation might not serve the public interest better than a structural settlement under the Sherman Act. There was, instead, a dedication to a

policy that was rooted in a past when the most important market was the American market, when American public policy could be framed almost entirely in terms of the domestic economy.

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Subsequent developments in telecommunications suggest, however, that in this historical example, the United States government seems to have learned faster than did a large integrated corporation or the subdiscipline of business history. The United States changed its antitrust policy in the 1980s. There were no more structural cases under Section 2 of the Sherman Act until the Clinton Administration launched its attack on Microsoft. Fortunately, from my point of view, attention to global competition and the need for the United States to remain competitive in the world economy appears to have modified even the Microsoft settlement in ways suited to the world in which we now live.⁴

This is a different world from the one at the heart of Chandler's history, and business historians have recently begun to come to grips with that transition. The work of Naomi Lamoreaux, Dan Raff, and Peter Temin is at the forefront of that effort. As their new synthesis of business history suggests, this is a world economy rapidly being reconstructed by information technology and intense global competition. Disintegration is now almost as

common as vertical and horizontal integration were in the second industrial revolution.

So my conclusion is two-fold: First, don't ignore your history or you may suffer as the Bell System did (and Bill Gates almost did); and second, don't get locked into an historical model when major changes in political economy are taking place and new ideas are needed. Both conclusions bring me back, I believe, to an evolutionary model, broadly conceived.

¹ A Harvard classmate of John F. Kennedy, Chandler returned from World War II service to start graduate training in history, first at the University of North Carolina and then at Harvard. He published his dissertation on *Henry Varnum Poor* in 1956 and his more influential study of *Strategy and Structure: Chapters in the History of the Industrial Enterprise* in 1962. He has said that his last business history was *Shaping the Industrial Century: The Remarkable Story of the Evolution of the Modern Chemical and Pharmaceutical Industries*, published in 2005. He is now working on a family history. In the interest of transparency, Chandler was my second mentor.

² Alfred D. Chandler, Jr. (with the assistance of Takashi Hikino), *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, 1990), 593.

³ Ronald H. Coase, "The Nature of the Firm," *Economica*, 4 (1937), 386-405. As Christopher D. McKenna, *The World's Newest Profession: Management Consulting in the Twentieth Century* (New York, 2006), points out, Coase did not state the question exactly this way, but this formulation accurately catches the meaning of Coase's important work.

⁴ The DOJ and FTC also should be complemented for the brilliant, innovative manner in which the "prisoner's dilemma" strategy has been employed to uncover illegal cartels.