

## **Alfred Dupont Chandler (1918-2007): thoughts on strategy**

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Alfred (Al) Dupont Chandler was born just after the First World War (September 15 1918, Guyencourt, Delaware) into ‘east coast society’ and died almost 90 years later (May 9 2007) in his home state of Massachusetts. The family was immersed in railroads [1] but the young Chandler was interested in history. His formative years were spent in Buenos Aires, Argentina, followed by some time in Philadelphia and later returning to Delaware. Chandler pursued his dream of being an historian. He had a profound effect on the history niche which he chose, that of business history, a field within which he published many hundreds of journal articles and numerous books. The following is a discussion of the impact of his most widely known books upon ‘strategy’.

Chandler’s education was based around the ivy-league schools of the eastern United States: graduated Harvard College 1940, commenced his graduate schooling at the University of North Carolina, Chapel Hill, but returned to Harvard where he completed his graduate studies [1]. He was awarded his doctorate in 1952 for a history of a great-grandfather and founder of Standard & Poor’s Corporation, Henry Varnum Poor [2]. During this time he was an Associate Professor of History at Massachusetts Institute of Technology (MIT). Along with teaching a course on American Economic and Business History [1], Chandler assisted with editing President Theodore Roosevelt’s letters [3], and through discussions regarding possible strategy courses at the United States War College gathered data for the first of his revolutionary business histories, *Strategy and*

*Structure* [1, 4]. Chandler also assisted in the production of Alfred Sloan's only extant 'business record' [1, 5].

Between 1963 and 1970 Chandler was at the History Department of Johns Hopkins University. During this time he worked on the papers of President Dwight D. Eisenhower [6] and Pierre S. Du Pont [7], giving him insight into strategy both military and business on a grand scale [1, p 213]. In 1970 Chandler returned to Harvard where he was to revitalize business history: as a career choice for many, as a serious branch of history and to deliver information necessary for the formulation of the fast-moving field of strategic management. He discovered that teaching MBAs greatly assisted his business history research [1]. In the late 1970s *The Visible Hand* was published [8], at the very time Chandler had embarked on a grand-scale history, 'the collective histories of the largest industrial companies over an extended period of time [1, p. 218]. Whilst at the European Institute for Advanced Studies in Management (EIASM) in 1978, Chandler made the decision to 'focus on the industrial and enterprise histories of three nations', Britain, Germany and the USA [1]. It would take many years of seminars, conferences and research collaboration with already established historians and graduate students from all over the world before the third of Chandler's histories was published, *Scale and Scope* [9] in 1990. The three business histories represent in-depth accounts of large organizations from the late nineteenth century to the 1940s. This also marked the end of his active Harvard Business School life, although he continued to research and publish as an emeritus professor.

In the two decades that were to follow his leaving fulltime teaching, Chandler tackled the history of the modern industrial world. He concentrated on the information industry

(*Inventing the Electronic Century* [10]) and the chemical and pharmaceutical industry (*Shaping the Industrial Century* [11]). Throughout his life Chandler also published jointly with others and a list of books appears at the end of this article.

Although Chester Barnard had discussed ‘strategic factors’ within organizations [12] it was not until the 1960s that concepts of whole-of-business strategy were being formulated in the western hemisphere. Kenneth Andrews (the Harvard business professor), and others had begun stating that clear goals must be set and that managers were responsible for supervising the achievement of the goals [13]. Chandler, the historian, revealed that pressures from the external environment, such as a change in market dominance, changes in consumer need, etc., can force a change in the way a corporation does business, i.e. a new direction or strategy must be formulated. This new strategy may not work if the internal environment is not conducive and so a change in structure is required [4]. Chandler showed that in four successful, large American corporations of the 1920s, the change in structure included becoming multidivisional (M-form) [4]. Peter F. Drucker, a management intellectual [14] who had also worked with Alfred Sloan and General Motors, published a book which he felt was all ‘about what we now call strategy’ [15]. Throughout the late 1950s and early 1960s the mathematician turned organizational planner Igor Ansoff was gathering his ideas together for his book on strategy [16]. During the late 1960s and early 1970s strategy was the field of the consultants (such as the Boston Consulting Group), but few academics when the external environment once again made a major impact on business—the oil shocks of 1973 and 1979 [17]. It was into this melee that Chandler’s Pulitzer Prize winning book *The Visible Hand* was published [8]. Although the book made a major impact in the field of history

[18] it had little effect on the field of strategy. Strategic management in the 1980s was dominated by the academics such as Michael Porter, not the consultants [19]. Chandler's *Scale and Scope* once again was welcomed and widely acclaimed by the historians with the term *Chandlerian* beginning its appearance when discussing business history.

Business management and strategy were in the grip of new and better ways to 'do it' [17, fig. 15] and Chandler's publication apparently made minimal impact except to reinforce the views of *Strategy and Structure*. Strategy was now about dynamics, core competencies, and commitments [17].

The twenty-first century view on what Chandler has contributed to strategy can be exemplified by his own words regarding three of his works (see below). To these quotes one must add the take-home message from *Shaping the Industrial Century* [11]—that of innovation through new scientific learning. Others are saying similar things. Hamel [20] describes how to keep the skill base alive and thriving. McCraw [21] in his re-analysis of Schumpeter's *Business Cycles* [22] states 'above all, he [Schumpeter] pinpoints the role of innovation' [21] p. 256 and later 'Schumpeter's entrepreneurs cease just to be ideal types—as they tend to be in earlier works—and become flesh-and-blood people who did specific things at specific times and places' [21] p. 260. Schumpeter is saying the same as Chandler—innovation and new ideas are imperative for success—but Chandler has added the concept of nurturing to the mix.

The lesson of history is often ignored, that is, strategy is about looking forward so why look back. So why should the strategic management disciplines or business managers be interested in history? Booth [23] sums the argument up succinctly by stating 'because historical-knowledge is self-knowledge' [23] p. 103

Quote: 'My goal from the start was to study the complex interconnections in a modern industrial enterprise between structure and strategy in an ever-changing external environment.' Chandler on *Strategy and Structure* [1, p. 211].

Quote: 'The basic theme of *The Visible Hand* is that in the most vital sectors,..., of the economy *The Visible Hand* of managers replaced the invisible hand of the market forces in coordinating flows and allocating resources.' Chandler on *The Visible Hand* [1, p. 215].

Quote: 'Such [organizational] capabilities—both in facilities and [managerial] skills—provided the competitive advantage...Organizational capabilities are then heritage on which continuing competitive strength and profitability of enterprises and industries rest. Once created they have to be maintained. Their maintenance is as great a challenge as their creation, for facilities depreciate and skills atrophy. They can be destroyed far more quickly than they can be created and maintained.' Chandler on *Scale and Scope* [1, p. 224].

## **Endnotes**

[1] See the chapter by Alfred Chandler 'History and Management Practice and Thought' pp. 205-236 in Bedeian, A.G. (ed.) (1992) *Management Laureates: Collection of Autobiographical Essays*, (vol. 1), Greenwich CT: JAI Press. The use of the word strategy by Chandler in '*Strategy and Structure*' is discussed by Thomas McCraw in his (1988) 'Introduction: the intellectual odyssey of Alfred D. Chandler, Jr.' in A.D. Chandler, Jr. and T.K. McCraw (eds) *The Essential Alfred Chandler*, pp. 1-21, Boston: Harvard Business School Press on page 12.

[2] Chandler's doctorate is entitled *The Pen in Business: a Biography of Henry Varnum Poor*. It was later published as *Henry Varnum Poor, Business Editor, Analyst, and Reformer* by Arno Press, New York in 1981.

[3] In many biographical accounts of Chandler you read that he was and editor of the following publication, Roosevelt, T. and Morison, E.E. (eds) (1950, 1954) *The Letters of Theodore Roosevelt*, Cambridge, MA: Harvard University Press. This is not the case, he helped edit the letters and wrote essays regarding the letters but is not on the title page of the volumes.

[4] Chandler, A.D., Jr. (1962) *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, Cambridge, MA: Massachusetts Institute of Technology Press. This book, first published by an academic press, was very quickly republished by Doubleday as a popular Anchor series and was reprinted many times by both publishers. The most recent republication was by Beard Books in 2003. The Japanese were the first to translate the book in 1967 and again in 2004, followed by the French in 1972, the Italians in 1976 and the Chinese in 2002. The book was preceded by Chandler's 1956 article 'Management decentralization: an historical analysis' in *Business History Review* volume 30 pages 111-174 which has been reprinted in Wood, J.C. and Wood, M.C. (eds) (2003) *Alfred P. Sloan*, London: Routledge on pages 329-383.

[5] The autobiography by Alfred Sloan, published in 1963 *My Years With General Motors*, Garden City, NY: Doubleday is now one of the few records. Andrea Gabor in her 1999 book *The Capitalist Philosophers*, New York: Times Business on page 274 indicates GM burnt Sloan's and GM records but note the burning of records was done at the request of Sloan according to David Farber (2002) *Sloan Rules: Alfred P. Sloan and the Triumph of General Motors*, Chicago: University of Chicago Press. For other information on Sloan see my bibliography on pages 8-30 in Wood, J.C. and Wood, M.C. (eds) (2003) *Alfred P. Sloan*, London: Routledge.

[6] The first five volumes published in 1970 *The Papers of Dwight David Eisenhower: the War Years*, by Johns Hopkins Press and the sixth volume with Louis Galambos published in 1978, *The Papers of Dwight David Eisenhower: Occupation, 1945*.

[7] Chandler and Stephen Salsbury worked on the du Pont papers and in 1971 published *Pierre S. du Pont and the Making of the Modern Corporation*, New York: Harper & Row. The book was republished by Beard Books, Washington DC in 2000.

[8] Chandler, A. D. (1977) *The Visible Hand. The Managerial Revolution in American Business*, Cambridge, MA: Belknap Press. The book was reprinted in 2002. Once again the Japanese were quick to translate this book (1979) followed by the Italians (1981), Chinese (1987) and the French (1988).

[9] Chandler, A. D. (1990) *Scale and Scope: the Dynamics of Industrial Capitalism*, Cambridge, MA: The Belknap Press of Harvard University Press. Belknap Press issued a paperback edition in 1994. The book was quickly translated into Japanese (1993) and French (1992, 1993), Spanish (1996) and later into Chinese (2006). There was a large colloquium published in volume 44 of *Economic History Review* in 1990 with many essays on the book.

[10] Chandler, A. D. (2001) *Inventing the Electronic Century: the Epic Story of the Consumer Electronics and Computer Industries*, New York: Free Press

- [11] Chandler, A. D. (2005) *Shaping the Industrial Century: the Remarkable Story of the Modern Chemical and Pharmaceutical Industries*, Cambridge, MA: Harvard University Press
- [12] Barnard, C.I. (1938, 1968) *The Functions of the Executive*, Cambridge: Harvard University Press. See also the comments by Pankaj Ghemawat in his article 'Competition and business strategy in historical perspective' in volume 76 *Business History Review*, pages 37-74.
- [13] Andrews published few books in the late 1950s early 1960s, for example *Problems of General Management : Business Policy: a Series Casebook. Instructor's supplement* in 1961 and *Business Policy: Text and Cases* in 1965, with Edmund Learned and Roland Christensen (W. Guth was also an author in 1965). His ideas were summarised later in his book *The Concept of Corporate Strategy*. Note that field of 'business policy' was later re-badged as 'strategic management' within the business schools (see Rumelt, R.P.*et al.* (1991) 'Strategic management and economics', *Strategic Management Journal*, 12,: 5-29). See also the comments by Pankaj Ghemawat *loc cit.*
- [14] Guillen, M.F. (1994) *Models of Management: Work, Authority, and Organization in a Comparative Perspective*, Chicago: University of Chicago Press.
- [15] Drucker, P.F. (1964) *Managing for Result*, New York: Harper & Row
- [16] Ansoff, H.I. (1965) *Corporate Strategy*, New York: McGraw-Hill Book Co
- [17] Ghemawat, P. (2002) 'Competition and business strategy in historical perspective', *Business History Review*, 76: 37-74.
- [18] John, R.R.J. (1997) 'Elaborations, revisions, dissents: Alfred D. Chandler, Jr.'s, *The Visible Hand* after twenty years', *Business History Review*, 71, 2: 151-200
- [19] Bartlett, C.A. and Ghoshal, S. (1991) 'Global strategic management: impact on the new frontiers of strategy research', *Strategic Management Journal*, 12, Special issue: Global strategy: 5-26, see also Ghemawat *loc cit*
- [20] Hamel, G. (1996) 'Strategy as revolution', *Harvard Business Review*, 74, 4: 69-71, 74-82
- [21] McCraw, T.K. (2006) 'Schumpeter's *Business Cycles* as business history', *Business History Review*, 80: 231-261
- [22] Schumpeter, J.A. (1939) *Business Cycles: a Theoretical, Historical, and Statistical Analysis of the Capitalist Process*, New York: s.n.
- [23] Booth, C. (2003) 'Does history matter in strategy? The possibilities and problems of counterfactual analysis', *Journal of Management History*, 41, 1: 96-104.

### **Books Published by Chandler with comments**

- Chandler, A.D., Jr. (1962, 1963, 1969, 1970, 1976, 1990) *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, Cambridge, MA: Massachusetts Institute of Technology Press.  
See endnote [4] for further information.
- (ed.) (1964) *Giant Enterprise: Ford, General Motors, and the Automobile Industry. Sources and Readings*, New York: Harcourt Brace & World, Inc.  
Republished by Arno Press, New York in 1980 without subtitle. Translated into Japanese in 1970.

- (ed.) (1965) *The Railroads, the Nation's First Big Business: Sources and Readings*, New York: Harcourt Brace & World.  
Republished by Arno Press, New York 1981.
- (1977, 2002) *The Visible Hand. The Managerial Revolution in American Business*, Cambridge, MA: Belknap Press.  
See endnote [8] for further information.
- (ed.) (1979) *The Application Of Modern Systematic Management*, New York: Arno Press.  
This is an edited volume of articles reprinted from the Dec. 1914-Feb. 1917 issues of *System, the Magazine of Business*.
- (ed.) (1979) *Managerial Innovation at General Motors*, New York: Arno Press.  
This is a reprint of selected articles from *Management and Administration* (1922-1924) and from the American Management Association annual convention series of 1926-1927.
- (ed.) (1979) *Management Thought in Great Britain*, New York: Arno Press.  
This is a reprint of two important publications on scientific management in Britain: Sidney Webb's *The Works Manager Today* (1918) and Edward Cadbury's *Scientific Management in Industry* (1915).
- (ed.) (1979) *Pioneers in Modern Factory Management*, New York: Arno Press.  
This is a reprint of selected papers originally presented at the annual meetings of the American Society of Mechanical Engineers and published in the society's *Transactions* between 1885 and 1895.
- (ed.) (1979) *Precursors of Modern Management*, New York: Arno Press.  
This is a reprint of two important publications, the first management of spinning by James Montgomery and the second on the Springfield Armory by James Dalliba.
- (ed.) (1979) *The Railroads, Pioneers in Modern Management*, New York: Arno Press.  
This is a reprint of five important publications on US railroads in the nineteenth century.
- (1981) *Henry Varnum Poor, Business Editor, Analyst, and Reformer*, New York: Arno Press.  
See endnote [2] for further information.
- (1990) *Scale and Scope: the Dynamics of Industrial Capitalism*, Cambridge, MA: The Belknap Press of Harvard University Press.  
See endnote [9] for further information.
- (2001) *Inventing the Electronic Century: the Epic Story of the Consumer Electronics and Computer Industries*, New York: Free Press  
In 2005 Harvard University Press published a paperback edition with a new preface. The preface was published also in *Enterprise and Society* (volume 6, pages 138-143) by Chandler
- (2005) *Shaping the Industrial Century: the Remarkable Story of the Modern Chemical and Pharmaceutical Industries*, Cambridge, MA: Harvard University Press.
- Chandler, A.D., Jr., Amatori, F. and Hikino, T. (eds) (1997) *Big Business and the Wealth of Nations*, New York: Cambridge University Press.



- This is the published papers from the 11<sup>th</sup> International Economic History Congress at Milan in 1994. A paperback edition was published in 1997 and this was subsequently translated into Chinese in 2004.
- Chandler, A.D., Bruchey, S.W. and Galambos, L. (eds) (1968) *The Changing Economic Order: Readings in American Business and Economic History*, New York: Harcourt Brace & World.
- Chandler, A.D., Jr. and Cortada, J.W. (eds) (2000) *A Nation Transformed by Information: How Information has Shaped the United States from Colonial Times to the Present*, New York: Oxford University Press.
- Chandler, A.D., Jr. and Daems, H. (eds) (1980) *Managerial Hierarchies: Comparative Perspectives on the Rise of the Modern Industrial Enterprise*, Cambridge, MA: Harvard University Press.
- Chandler, A.D., Hagström, P. and Sölvell, Ö. (eds) (1998) *The Dynamic Firm: The Role Of Technology, Strategy, Organization And Regions*, Oxford: Oxford University Press.
- This is the published papers from the Third Bertil Symposium on the Dynamic Firm held in Stockholm, June 1994.
- Chandler, A.D., Jr. and Mazlish, B. (eds) (2005) *Leviathans: Multinational Corporations and the New Global History*, Cambridge: Cambridge University Press.
- Chandler, A.D. Jr. and McCraw, T.M. (eds) (1988) *The Essential Alfred Chandler*, Boston, MA: Harvard Business School Press.
- Reprinted in 1991
- Chandler, A.D., Jr., McCraw, T.K. and Tedlow, R.S. (1996) *Management: Past and Present: a Casebook on the History of American Business*, Cincinnati, OH: South-Western College Pub.
- A second edition published by Thomson Learning in 2006. Translated into Chinese in 1998 and 2001.
- Chandler, A.D., Jr. and Salisbury, S. (1971) *Pierre S. du Pont and the Making of the Modern Corporation*, New York: Harper & Row.
- See endnote [7] for further information.
- Chandler, A.D. and Tedlow, R.S. (1985) *The Coming Managerial Capitalism: a Casebook on the History of American Economic Institutions*, Homewood, IL: Richard D. Irwin Inc.
- Eisenhower, D.D. and Chandler, A.D., Jr. (eds) (1970) *The Papers of Dwight David Eisenhower: the War Years*, (vols 1-5), Baltimore, MD: Johns Hopkins Press.
- See endnote [6] for further information.
- Eisenhower, D.D., Chandler, A.D., Jr. and Galambos, L. (eds) (1978) *The Papers of Dwight David Eisenhower: Occupation, 1945*, (vol. 6), Baltimore, MD: Johns Hopkins Press.
- See endnote [6] for further information.