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Alfred Chandler and the Sociology of Organizations*

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I remember the first time I read Alfred Chandler's Strategy and Structure (1962) as a graduate student in the mid 1970s. I was taking a class in the Sociology of Organizations and was finding much of the class to be filled with books and articles that I found to be uninteresting. Corporations were clearly one of the dominant forces in our society, yet none of what I read seemed to me to capture what they did and how they did it. When I read the first 18 pages of Strategy and Structure, it was like having the scales fall from my eyes. Here was a view of the largest corporations that was historical, placed them in their context, and most importantly, argued that real people with real purposes undertook to make these organizations work. Chandler's book opened the black box of the large modern corporation for me. Chandler realized that what was interesting about corporations was not that they made profits, but how they did so. In a single chapter, Chander articulated much that I found lacking in organizational theory.

I do not think that I was the only graduate student (or faculty member) who became captivated by Chandler's broad and provocative argument. Chandler played an important role in affecting an entire generation of scholars interested in organizations. His formulations were clearly written and his books were chock full of relevant evidence. Moreover, whether or not one agreed with all of it, he was interested in big questions. What was the role of the emergence of large corporations in the American economy? How did managers come to coordinate complex business processes that eventually spanned the globe? What was the link between the emergence and transformation of corporations and economic growth more generally?

Chandler staked out a clear position in these debates. He viewed the large, modern corporation as the engine of economic growth in the 19^{th} and 20^{th} centuries. Chandler argued that without the large corporation to coordinate complex production processes, the explosive economic growth of the past 150 years just would not have happened. He viewed the managers of these large enterprises as people who confronted practical problems and figured out how to organize their firms to produce the wealth of nations (1993).

In this essay, I take up the task of considering Chandler's contributions to the sociology of organizations. In order to do that, I need to consider what constituted the sociology of organizations in the 1960s and Chandler's critique of those theories. Chandler’s implicit critiques of existing organizational theories played an important role in the subsequent development of organizational theory. But, while Chandler raised lots of important questions, his view of corporations was almost immediately under assault from several quarters of the sociology of organizations. The subsequent developments in the sociology of organizations offered critiques of Chandler’s perspective and evidence that his "heroic" managers were not the whole story. Chandler's work still offers insight into the larger questions, but his take on the ultimate role of the corporation in the economy is more in doubt from the perspective of the sociology of organizations.

There were three main strands of the Sociology of Organizations in the 1960s and early 1970s. All of these perspectives were interested in discovering a “science of organizations.” Because of this, none of them saw the difference between corporations, government bureaucracies, and nonprofits as important. Further, there was a distinct lack of interest in the historical emergence of organizations. A large part of the Sociology of

Organizations was still focused on Max Weber's original formulation of the modern bureaucracy (1978: 901-940). One of the strands of the empirical literature had a positivist bent. Its main task was the attempt to discover the degree to which organizations did or did not conform to Weber's ideal typical description (see Blau and Scott, 1962; Hage and Aiken, 1970 for examples). This school of thought took Weber's main ideas about how bureaucracies were structured, turned them into empirical measures, and then did surveys of organizations to figure out the degree to which organizations conformed to Weber's view.

A second tradition in sociology also used Weber as inspiration. But this perspective was more critical of Weber's idea that bureaucracies actually worked. Scholars focused on demonstrating that real organizations were less omnipotent and rational and more driven by gaining the compliance of workers (Gouldner 1954) and more open to internal and external political and social forces (Selznick, 1966). These perspectives culminated in Perrows' reading (1972) which saw organizations as power seeking devices wielded by particular actors with particular interests. Perrow argued that organizational theory had become subverted by "managerial" theory which saw organizations as benign. He urged an understanding of organizations that emphasized how they constituted systems of power.

The third school of thought was mostly located in business schools (which most sociologists were barely aware of during the 1960s and early 1970s) and was dominated by the work of Simon (1957) and March and Simon (1958). This elegant formulation was set up as a critique of the economic model of actors in organizations. The economic perspective emphasized that the leaders of the firm had perfect information on all of their costs and were able to implement the most efficient form of production. Simon and March's formulation started with a model of the individual that emphasized that individuals had bounded rationality which implied that they could not have all of the relevant information in any particular situation and even if they did, they did not have enough cognitive capacity to process such information. They also postulated that all of the individuals who worked in a firm would not have interests that would align exactly with the interests of those who ran the organization. The solution to these problems was to create the right kind of formal organization that would deal with the issue of both bounded rationality and the potential for individual members of the organization to shirk or otherwise act opportunistically.

For Simon (1962), managers and workers would be given goals and standard operating procedures to attain those goals. This would reduce the problem of bounded rationality on the part of actors by giving them tools to know what they were supposed to be doing and to evaluate their relative success at doing it. Rewards and punishments would be attached to the attainment of goals and thus, control opportunism. Higher level managers would also be bound by goals and standard operating procedures. But in this case, their procedures would allow them to monitor the performance of the next lower level of the hierarchy. Their monitoring would allow them to be alerted to subunits that were failing. They then could undertake actions to understand why they were failing and allow them to make adjustments based on whether or not they the problem was the fault of particular employees or more dramatic shifts in market conditions.

This perspective gave rise to a set of related managerial theories that can be called contingency theory or rational adaptation theory (for a review of these perspectives, see

Miles, 1984). The idea that managers could make adjustments to changes in the performance of their organization became enshrined in contingency theory. This approach came to focus on using the failure to meet organizational goals as mostly about how environments (i.e. markets) had changed. From this perspective, the adjustment of managers to changing market conditions was continuous. Good managers could read market signals, adjust their organizations use of inputs and production of outputs, and adapt.

Chandler's work is certainly most sympathetic to managerialism. But, Chandler's views of managers was more pragmatic and grounded than March and Simon. This worked in several ways. Chandler viewed the purpose of the firm as an organizational device to bring products to market. In the 19^{th} century, markets grew as the population became more urbanized, educated, and richer. To take advantage of this, firms needed to figure out how to engage in mass production. For Chandler, this presented the owners of firms with a set of practical puzzles to solve. These involved building plants, financing larger scale facilities, securing needed supplies, and reliably producing products on a mass basis. It also involved solving the problems of communication and transportation in order that goods could be moved to where they were needed. Managers emerged as the people to solve these problems and coordinate these activities. If managerial hierarchies had not been built, the needs of these markets could not have been met. Simply put, without managers to coordinate production in hierarchical organizations, mass production was impossible.

This perspective meant that Chandler was always skeptical of economic theories that purported to view the rise of the corporation in narrow terms. He resisted the Simon and March and Williamson (1981) view of managers as being mostly affected by bounded rationality or opportunism or managing transaction costs (see for example, his 1981 response to both Perrow and Williamson). Instead, he saw managers as pragmatic problems solvers who begin with business strategies and designed structures to solve their problems. Their solutions, when they worked, allowed for the expansion of the market and because of this, the eventual dominance of big firms. Because of his historical bent, he was inclined to view these pragmatic innovations as being the product of the situation in which the manager found themselves, and a kind of cultural innovation that managers would craft. He also saw that once some managers had solved a particular problem, their solution would be adopted by their principal rivals who would see it as the way to success.

It is most useful to view Chandler as a Weberian. Max Weber saw the modern world as the product of two forces, one cultural and the other organizational. The dominant logic of the modern world for Weber was the idea that people came more and more to view themselves as rational actors with goals (1978: 3-62). Weber identified these actors as engaged in "means-ends" actions whereby once they had formulated their ends, they would construct social organization vehicles as a means. For Weber, the form of organization they used was the bureaucracy or formal organization. Large complex organizations made states and firms more efficient because these types of organizations were more effective at attaining their goals. Chandler's view of managers is quite consistent with Weber's general theoretical formulation. For Chandler, managers have strategies (goals) and they design structures (bureaucracies). The corporations they create “win” because they are able to reliably produce products for a mass market where their smaller or less organized competitors fail.

Chandler's challenge for the sociology of organizations was two-fold. First, the concern in constructing a scientific theory of organizations meant that sociologists had given up on the Weberian project of understanding how historical forms, like the corporation emerged and were transformed. This made it hard for sociologists to ask the big questions that both Chandler and Weber asked. Chandler’s relentless historicism pushed sociologists to move away from the idea that there was a scientific theory of organizations that would provide an ahistorical account of their emergence and dynamics. Instead, sociology had to confront the fact that there was a time when such organizations did not exist and that over time new organizations and organizational forms are now constantly appearing.

Second, the narrow focus on a few characteristics of those organizations and the relentless desire to view all organizations as the same meant that the sociological of organizations could not consider how firms were different from state bureaucracies and non-profits or what their relationships might be. The sociology of organizations that existed could not get back to Weber’s original formulation that stressed the interdependence of the various factors that produced modern society. Eventually, organizational theory in sociology confronted both of these problems and began to evolve some different theoretical views.

The most critical views of Chandler's work have really emerged from sociology. The sociology of organizations since the mid 1970s has offered at least three critiques of Chandler's perspective, what can be termed population ecology, institutional theory, and most directly, Chandler's general lack of interest in the issue of how governments intervened in market processes and the role of firms seeking out market power in the face of cutthroat competition in the rise of big business. The important precursor to this last train of thought was Perrow (1972) whose work would inspire subsequent sociologists to challenge Chandler's thesis more explicitly and directly. It is useful to briefly review these challenges.

Population ecology (beginning with Aldrich, 1979; Hannan and Freeman, 1977) started with the idea that Chandler had paid too much attention to large corporations. Scholars argued that if one examined the emergence of a new market, there was a process whereby a large number of firms were born, most of them died, and the few survivors persisted because of their fit to the environment. Such a view began with the idea that all of the people who ran firms were equally capable and adept at reading the market and producing the product. Since the beginning of any market occurs amidst great uncertainty as to whom the customers were, what they want from the product, and how to produce the product they want, these equally rational individuals make investments in a different ways in order to try and exploit the market opportunity. Put another way, the key resource dependency of organizations at the beginning was just not apparent. The critique of Chandler was that by only considering the winners of this competitive process (i.e. the stories of the largest firms), Chandler was certain to overemphasize the degree to which the choices of managers were pivotal to organizational survival. His selection on the dependent variable (i.e., large survivors) meant that he could not really know if it was those choices or some other ones (including luck!) that explained the winners.

Institutional theory (Meyer and Rowan, 1978; DiMaggio and Powell, 1981) offered an alternative critique. These theorists began with the idea that the legitimacy of what managers might do is as important as the degree to which their action actually might produce positive results for the firm. Such legitimacy would depend on convincing other people (owners, boards of directors, other managers, workers, communities, the governments) that the selected course of action “made sense”. DiMaggio and Powell argue that since the environments of large firms are somewhat hard to interpret, pressures would exist for managers to take actions similar to their principal competitors. Managers might justify their actions by copying what they perceive to be successful organizations, adhering to what experts tell them are best practices, or doing what a regulator tells them to do. That such actions are prevalent in firms in a particular industry may be the result, not of competitive processes by which all firms are forced to produce according to the same logic, but instead, isomorphic pressures to look like other firms independent of whether or not they are efficient. So, for example, while General Motors pioneered the multidivisional form, its eventual adoption by many organizations, both large and small could easily reflect, not structure following strategy, but that a particular structure became legitimate as the right way to organize.

The most direct criticisms of Chandler’s work comes from sociologists who argue that Chandler mistakenly overemphasizes the relative efficiency of the large American corporation and underemphasizes the role of government in the emergence of large corporations and the role of firms trying to find ways to control their competitors in a world of cutthroat competition. Here sociologists like Fligstein (1990), Dobbin (1994), Roy (1998) and Perrow (2002) have returned to Chandler's research sites and directly challenged his interpretation of what happened.

At its most theoretical, Chandler understood Weber's message that modernity introduced a new logic of action and a new organizational form to revolutionize everyday life. But, Chandler missed a large part of Weber's theory. First, Weber was convinced that modern markets and firms were impossible to imagine without the state. In Weber's view, the state made investments, provided law and public order, and adjudicated labor relations and commercial matters. Without a state to produce public order in general and to provide protection for property rights and exchange, the investments that firms made just would not have gotten done. Without states to underwrite those investments by creating infrastructure like roads and other forms of transportation, finance, and education, those investments would have proven impossible to make. Finally, in the end all states regulate legal and illegal forms of competition. Which sectors and firms states decide to defend and which to demonize goes a long way to making sense of why firms in a particular society look the way they do.

Second, there was a dark side to all of this. Weber felt that large organizations were not just efficient ways to do things, but also reflected concentrations of power. He worried that large organizations would trample the rights of individuals and groups in society in order to grow and extend their power. In the case of firms, he was perfectly aware that firms would just as soon as engage in collusion and monopoly as competition.

It is useful to consider a couple of cases that directly challenge Chandler's reading of history. My own book, <u>The Transformation of Corporate Control</u> (1990) began by a reading of Chandler's <u>The Visible Hand</u>. Chandler argues in the first chapter of that book that the actions of manager to integrate their firms at the turn of the 20^{th} century was caused by the failure of markets to be able to coordinate productive activities reliably. In order to take advantage of mass markets, managers built vertically integrated firms. But, if one reads the rest of the book quite carefully, one can advance an entirely different interpretation of the emergence of the large modern corporation.

Basically, there was cutthroat competition across most of the mass markets in the U.S. from 1865 until 1895. Firms tried to control this competition by engaging in cartelization of the economy. These cartels failed because they were not enforceable as contracts. In 1890, the Federal government passed the Sherman Act which made such tactics illegal by declaring them an "unlawful restraint of trade". Cases decided under the Sherman Act swiftly concurred that cartels were illegal but that merging firms into larger entities did not constitute a restraint of trade. During the merger movement that began in 1895 and ended in 1904, large firms emerged in the core of the American economy. Chandler's interpretation of this merger movement was that it created efficient vertically integrated organization. An obvious alternative interpretation was that the largest firms were created to control competition.

In my book, I provide both historical and quantitative support for the thesis that the emergence of the largest corporations in American society was not driven by efficiency, but instead by the desperate need of the owners of firms to control competition. One of the main sources we have for what people were actually saying was based on a set of interviews done by the U.S. Industrial Commission in their investigation of the merger movement. Almost everyone who testified argued that the real goal of the merger was to consolidate the production of the industry into a few players in order to reduce competition (Fligstein, 1990).

My quantitative analysis revealed that Chandler's assertion that the merger movement produced vertically integrated firms was wrong. Only 25% of the mergers that occurred were to create vertical integration while most of the rest of the mergers involved horizontal integration, i.e. they brought firms together who were producing in the same market. My regression analyses showed the strongest predictor of whether a large merger appeared in an industry was whether or not there had been an attempt to form a cartel in the previous 20 years in the industry. Finally, I examined what happened during the same period in European countries. No European country underwent a merger movement. Instead, in response to cutthroat competition, firms formed cartels because they were legal in Germany, France, and Britain. Instead of combining, firms cooperated.

A second case study that refutes Chandler's perspective concerns the emergence of railroads in the U.S. and Western Europe. Chandler (1965), in his study of the U.S. railroads, claims that the large size of U.S. railroads was due to their efficient organization. Dobbin (1994) demonstrates that the model of railroad development used in the U.S., France, and Great Britain did not represent some idea about the most efficient scale on which to organize railroads. Instead, they differed by the way in which governments decided to organize the building of their infrastructure. The forces Chandler emphasizes in the American case are not present in Great Britain and France and as a result, we do not get the same industry structure, but a divergent structure. Here governments played a different but pivotal role in building railroads in each of the societies. These industries reflected the very different conceptions of how markets ought to work in each country.

So, what is Chandler's legacy in the sociology of organizations? It is clear that capitalism has produced the largest and cheapest amount of goods and services in the history of the world. Corporations produce new products that play an important role in this process. Alfred Chandler will forever be identified as an important scholar who pioneered the study of real corporations undergoing real transformation. But, his continuous emphasis on the efficiency and foresight of management, their ability to create markets without any help from government, and the view that their intentions were only to bring goods to market is at best incomplete and at worse, wrong.

Population ecology shows that Chandler greatly overemphasizes the role of managers in these processes. Institutional theory shows Chandler's interpretation that similarities in corporate strategies and structures are driven by efficiency is open to doubt. The examination of evidence surrounding the emergence of large American and European corporation shows clearly how pivotal were the actions of government and the attempts by firms to control competition through the creation of cartels, oligopolies and monopolies were to the creation of the large modern corporation.

In a way, we are still working with Weber's original problem in understanding modern society. On the one hand, modern capitalism produces social order and wealth. On the other hand, it creates huge concentrations of power, power which can be harnessed for rent seeking on the part of firms, governments, and organized groups. It is this dual character of capitalism that continues to fascinate business historians and organizational sociologists.

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