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CHAPTER 2

THE AMERICAN BUSINESS ELITE IN HISTORICAL PERSPECTIVE*

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1. Introduction

This chapter replicates a classic study of the American business elite. The older study, done a half-century ago, reported the composition of business leaders a century ago. I have drawn a sample of business leaders today to discover how much the composition of the American business elite has changed. As in the earlier study, the business elite is compared to a sample of political leaders. I find that democratization of the business elite has progressed only slightly in the past century, nowhere near as much as democratization of the political elite. Despite the myriad things that have changed in America in the last century, the composition of the business elite appears recognizably the same.

The chapter proceeds in three steps. The questions to be asked are placed first in the context of the literatures on social mobility and income inequality. Then the data sources and statistical methods are described. Finally the results of the new survey are compared to other inquiries into this topic.

2. Social Mobility and Income Inequality

The United States is the home of the classless society. Classes as we know them arose in the long-settled areas of Europe as a result of the need for safety during the Dark Ages. The Roman Empire had lost its ability to keep the peace, and nation states had not yet emerged. Some people specialized in fighting, others in farming. Warriors did not work with their hands; they became the nobility (Bloch, 1961).

This class distinction did not make it to the New World. Settlers in New England were not beholden to the European aristocracy. They nevertheless tried to reproduce the social and economic structure they knew from the old country (Allen, 1981). But free land, which the Massachusetts Bay Colony had in ample supply, was corrosive of the existing social structure. People's economic and social standing resulted far more from what they did than who they were, that is, to whom they had been born (Powell, 1963; Martin, 1994). It was a classless, although not an egalitarian, society. Within the confines of an agrarian society, it also was one of great geographic, economic and social mobility.

Labor conditions were very different in the southern colonies. Domar (1970) argued many years ago that it is not possible to simultaneously have free land, free labor, and a land-owning aristocracy. In New England and in the American north in general, the combination of free land and free labor made aristocracy untenable. If there is no land available at a moderate cost, then it is possible to have free labor and a landed aristocracy as in England. Ownership of the scarce land gives the aristocracy its power, but if land is freely available, the aristocracy can preserve itself only by subjugating the populace as serfs or slaves.

In the north, the westward migration of free labor precluded the development of a landed aristocracy, but the federal nature of the United States government permitted opposite economic structures within regions of a single country. In addition, the enslavement of African laborers supported the growth of a slave-owning aristocracy in the South. African immigrants, deprived of the opportunity to opt out of an unfavorable distribution of assets, were in an even worse position than the European lower classes. They formed a group that was not integrated with the American classless society for several centuries and they are not integrated into the American business elite even now.

For European immigrants, the presence of accessible fertile land far beyond the western boundary of New England set in motion a migratory and economic process that over the next several centuries preserved a generally classless American society. The growth of American cities provided yet another avenue for people to make their own way, to exist outside of class. Urban dwellers were classless, outside the traditional upper and lower classes -- or perhaps between them. When we are asked, we all respond we are middle-class.

Homo Americanus long has been typified by Andrew Carnegie. Truth, we say, is stranger than fiction. And Carnegie's biography is more inspirational than any story by Horatio Alger. Carnegie was an immigrant from Scotland, the son of a handloom weaver married to the daughter of a cobbler. He had approximately five years of schooling in Scotland. "He could read, write, and cipher, knew a little Latin and could recite a few poems" (Wall, 1970, p. 82). That was the extent of his formal education. His impoverished family immigrated to Pittsburgh in 1848 as his father's handloom weaving became an ever more marginal occupation. Carnegie found employment as a messenger, telegraph operator, and then clerk to a superintendent of the Pennsylvania Railroad. Success followed success until he became the CEO -- to use modern terminology -- of one of the largest industrial corporations of his day.

Carnegie has been used as the prime example of American openness in many history texts. Long ago, Morrison and Commager said in a classic text, "The most typical figure of the industrial age was undoubtedly Andrew Carnegie. A poor immigrant boy from Scotland, he followed and helped to perpetuate the American tradition of rising from poverty to riches" (Morrison and Commager, 1930, II, p. 143). More recent historians have echoed this view. They are not as explicit as Morrison and Commager, but they recount Carnegie's biography alone or in the company of only a few other business leaders like Morgan or Rockefeller. They give the clear impression that Carnegie was typical of a large proportion of business leaders, even if not all of them.

There are many reasons why Carnegie should be the avatar of the American experience. He came from humble origins although he became spectacularly successful (Temin, 1964). He gave it all up at the age of 65 to devote himself to philanthropy, building libraries throughout the country and working for world peace (Wall, 1970). He wrote a most engaging autobiography (Carnegie, 1920). And the ease with which Carnegie's ability was rewarded step by step as he progressed up the railroad and then the industrial ladder appears to make him the quintessential American.

De Tocqueville, already then, saw this pattern, as so many other phenomena, quite clearly. He contrasted the aristocratic peoples of Europe with the democratic people of America:

> Among aristocratic peoples, families remain for centuries in the same condition, and often in the same place. ... Since classes are highly differentiated and immobile, each becomes for its members a kind of little homeland. ... Among democratic peoples, new families continually spring from nowhere while others disappear to nowhere, and all the rest change their complexion. ... As every class comes more to resemble the others, and to merge with them, their members grow indistinguishable from and unrecognizable to each other (1966, p. 243).

More recently, Blau and Duncan (1967) reiterated these thoughts in their classic study of occupational mobility:

> The stability of American democracy is undoubtedly related to the superior chances of upward mobility in this country, its high standard of living, and the low degree of status difference between social strata. ... There is a fundamental difference between a stratification system that perpetuates established status distinctions between particular families over generations and one that perpetuates a structure of differentiated positions but not their inheritance. Industrial societies, and the United States in particular, approach the latter type (pp. 439, 441).

These authors albeit separated by almost a century and a half make the same point. The peculiarity of America is its classless character: the possibility that all jobs are open to all people. The issue is not how hierarchical the society is or how rigid occupational categories are. It is instead how open the most advantageous positions are.

Yet, there is a problem. True, American society is open to the likes of Carnegie. But how open? We need to have some sense as to whether people like Carnegie are typical of the American business elite or whether they are only exceptions to a rather different rule. We need to know whether the openness noted by de Tocqueville in the nineteenth century and by Blau and Duncan in the twentieth extends to the elites of society or whether it is confined to lower levels. This chapter attempts to shed light on these questions.

The historical and sociological literatures typified by these quotes are distinct from the economic. Economists have tended to focus on the distribution of income or wealth. Following Marx, they argue that class divisions are marked by income and wealth divisions. Class membership is a function of where you are or what you do, not where you come from. Equal income and wealth distributions, then, are good for both economic and political stability while inequality is bad.

Kuznets (1953) opened the modern discussion by examining the shares of upper income groups in income, for the United States in the first half of the twentieth century. He speculated that industrialization was characterized first by a widening income distribution and then by its narrowing (Kuznets, 1955). Further research tended to confirm the existence of such a pattern, although not necessarily Kuznets' justification for it, finding widening income distribution in various periods before the Great Depression and a narrowing trend afterwards (Williamson and Lindert, 1980).

This rough pattern was blown away by the sudden widening of the American income distribution in the 1980s. Economists' surprise that income dispersion increased at this late stage of industrialization can be seen in the voluminous literature on the topic. Articles explored the nature and causation of wage dispersion in America (Levy and Murnane, 1992).

Books explored international trends in wage structure, finding that increasing wage inequality during the 1980s was not only an American phenomenon. It was the rule rather than the exception in a wide variety of countries (Freeman and Katz, 1995).

Popular debate was kindled by a news story reporting a calculation by economist Paul Krugman demonstrating that three-quarters of the pre-tax income gain in the 1980s had gone to the top one percent of families (Nasar, 1992). Democrats seized on the issue to show that the economic expansion under Ronald Reagan had been unhealthy and dangerous to the body politic. Republicans responded, not that the concepts were wrong, but that the Democrats had the facts wrong: the widening income distribution was an illusion. But the Democrats, at least in this case, had the facts on their side.

Both sides agreed that income inequality was potentially dangerous. People talked of hollowing out the income distribution and speculated that the United States was becoming a two-class society. The middle class -- now referred to as the center of the distribution rather than everyone in America -- was disappearing. As it vanished, economists implied, mobility from lower to upper class would become almost impossible. Rising inequality became the theme of countless economic studies (Karoly, 1993; Levy, 1995).

Economists have connected income and wage inequality with economic performance. Krugman sounded a clarion call to action, arguing that current trends are “reinforcing the growing inequality of incomes and creating an even greater disparity between the interests of the elite and those of the majority.” The distribution of income, not economic mobility, is the driver in what Krugman (1996) calls a “downward spiral.” Phelps (1997, p. 1) opened his recent book by asking what will happen to America “when the pay available to the less talented and less privileged in the marketplace is so low as to leave them unintegrated with society and incapable of doing anything with their lives.” He conflated wage inequality with opportunity in his concern for society in general. Like Krugman, he seemed to deny the possibility that a Carnegie -- or many such successes -- could arise from a low-wage start.

Economists have extended their interest from the United States to economic growth around the world. There is an extensive theoretical and empirical literature relating inequality to economic growth. Many models stress that increased income inequality decreases investment and hence growth. The path between inequality and growth may go through government policies or the possibility of social and political conflict. The latter case has been extended to conflicts severe enough to affect the status of property rights. Most models treat inequality in a static sense, but some models, particularly those in which capital markets do not work for some reason, argue that decreased intergenerational mobility also is bad for growth (Bénabou, 1996).

Empirical work has tended to confirm the negative association between income inequality and economic growth. The data for this test, however, are poor; it is hard to get adequate data to measure the degree of inequality for a wide sample of countries (Perotti, 1996). Attention has been directed to gathering new data as a result (Deininger and Squire, 1996). The new data fail to show the expected negative correlation between inequality and growth, and the question of their relationship is up in the air (Forbes, 1997).

Economists and sociologists are investigating similar, but not identical, phenomenon. Inequality and mobility are connected but not interchangeable. Most obviously, inequality is a static measure of conditions at a moment of time, while mobility is a dynamic measure of changes over time. Blau and Duncan (1967) noted in the passage quoted above that mobility and inequality need not be closely connected. Greater inequality may or may not indicate lesser mobility and greater mobility may or may not be the result of greater equality. One study directed to this interaction asked where the disappearing middle class was going. It concluded that a few prime-age men and women were moving upward from the middle class while working-class families with children increasingly were not moving into it. Lack of mobility at the bottom of the middle class prevented the middle class from replenishing itself (Duncan et al., 1993).

TABLE 1
Complete Immobility
(probability of moving from initial to final category)

Initial category	Final category			
	First quartile	Second quartile	Third quartile	Fourth quartile
First quartile	1	0	0	0
Second quartile	0	1	0	0
Third quartile	0	0	1	0
Fourth quartile	0	0	0	1

A few simple tables may illuminate the problem. The data in table 1 show a transition matrix for wage or income quartiles and no mobility at all. Wherever people were in the first period, they stayed in the second. The periods often are generations -- in which case the second-period people are the sons of the first generation. This is a rigid class system -- or even a caste system. Table 2 shows the opposite case, full mobility between wage or income quartiles. In this case, each row of the table is the same, expressing the same probability of ending in each ending quartile from each starting quartile.

TABLE 2
Complete Mobility
(probability of moving from initial to final category)

Initial category	Final category			
	First quartile	Second quartile	Third quartile	Fourth quartile
First quartile	.25	.25	.25	.25
Second quartile	.25	.25	.25	.25
Third quartile	.25	.25	.25	.25
Fourth quartile	.25	.25	.25	.25

Tables 1 and 2 are compatible with the same underlying income distribution. Since they are expressed as quartiles, they are compatible with any income distribution. The distribution by itself does not tell which figure best describes mobility within it. There is a connection implicit in the literature, however, as noted above. If the distribution is very wide, that is, if there is a large income gap between two or more of the income quartiles, then it is possible that mobility across the boundaries will be limited. This presumption has been suggested, even asserted, but not tested in any systematic way. At the moment, the sociological and economic literatures stand largely isolated from each other.

This chapter examines mobility into the economic elite. It fits into the sociological literature, even though its focus on the elite distinguishes it from many studies of mobility in other parts of society. It does, however, offer an informal one-sided test of the connection between the level of inequality and the degree of mobility. Income distribution has changed several times in several directions during the twentieth century. If mobility into the business elite has not changed much at the same time, this suggests that -- at least for this part of society -- mobility and distribution are not tightly linked.

3. Data and Methodology

Miller (1949, 1950) analyzed a sample of 190 business leaders in the first decade of the twentieth century, composed of presidents and board chairmen of major corporations in manufacturing, railroads, utilities and finance. He compared these business leaders with a sample of 188 political leaders and with the American population as a whole. He concluded that these leaders were not typical of the residents of the United States, but only of a selected sub-group:

> If it be true, as leading American business men and leading American historians continue to assert, that, so to speak, anyone can become president of large business firms, it appears to be true also that at least in the early twentieth century most of the successful aspirants had certain social characteristics that distinguished them sharply from the common run of Americans of their time (1950, p. 337).

I have tried to replicate Miller's study for current business leaders. I started with the CEOs of the *Fortune* 500, the 500 largest firms (by sales) in the American economy. Following Mills (1956), they may be thought of as the power elite, or they may simply be considered as the tip of the American employment pyramid. They have the capacity to change peoples' lives and direct the allocation of massive resources. I refer to them as the American business elite.

These CEOs are not the same as the richest people in America. Only 31 of the CEOs of the *Fortune* 500 are among the *Forbes* list of the richest 400. The rich also have command of people and resources, but not in the same concentrated and structured way as the CEO of a major corporation. A successful venture capitalist or entertainer gets rich, but he or she and his or her descendants do not occupy the same place in the economy or society as the CEO of a *Fortune* 500 company.

I could not find biographical information on all 500 CEOs, and the actual sample size for most variables is approximately 400. I assume that the process that generates information is orthogonal to the demographic process I describe. As Miller did, I also collected a sample of political leaders for comparison using the 435 members of the United States House of Representatives as a comparably-sized sample of politicians who are at or near the peak of political power.

For business leaders, I obtained information from *Who's Who* supplemented by a variety of sources (*Who's Who*, 1995; Hemmingway et al., 1995; Shih, 1997; Dun and Bradstreet, [CD-ROM] 1995). Not every CEO is listed in these publications, and the treasure hunt was not always successful. It is indicated in the tables where the data were incomplete. I assume that the reason they are incomplete is unrelated to the variable being described. Informal examination of leaders in finance and real estate did not reveal any apparent differences (Gale Research, 1995). For Representatives, I obtained information from web pages maintained by Congress. The Senate is just like the House in the dimensions examined here (aside from minor variations due to small sample size).

TABLE 3
New Categories, Complete Mobility
(probability of moving from initial to final category)

Initial category	Final category			
	Elite leaders	College graduates	Less educated	The poor
Elite leaders	.00001	.25	.73	.02
College graduates	.00001	.25	.73	.02
Less educated	.00001	.25	.73	.02
The poor	.00001	.25	.73	.02

Table 3 relates these studies to the general literature on social and occupational mobility discussed in the previous section. It shows complete mobility (equal rows) with a more relevant breakdown of the groups for present purposes. The first group is the elite. The samples drawn by Miller and me hardly exhaust the category of elite occupations. But the class of these occupations cannot be very large. They contain a tiny minority of the population. The chance of any person ending up in this category is consequently exceedingly small. I have represented this chance as one in 100,000, approximating the sense of a few thousand members of the elite out of an adult American population of 200 million.

The second group consists of college graduates. They have experienced a great increase in their relative incomes in the past two decades. College graduates were a drug on the market at the end of the 1970s. The wage premium for a four-year college education over a high-school education had declined to only 14 percent but began to rise again at this point, reaching 50 percent in 1987 (Levy and Murnane, 1992). Wage dispersion grew also within these groups, but it is the dramatic rise in the dispersion between the groups that has fueled the debate about inequality in America.

The third group is the main body of workers, those with less, often far less, than a college education. Roughly three-quarters of the population belong to this group. They are the middle class that are the subject of, first as candidate and then president, Clinton’s oft promised, but never delivered, middle-class tax cut. They are the people whose wages did not rise in the 1980s. Family incomes in this group have grown only because an increasing number of wives have joined the labor force.

This division by education replaces an older division between white-collar and blue-collar workers (Blau and Duncan, 1967; Thernstrom, 1973). In an industrializing society with its great need for production workers, the transition to a white-collar occupation represented movement off the factory floor. In more mature economies, the growth of services has outstripped the growth of goods production. Fewer and fewer workers fit the traditional category of blue-collar workers. And more and more office jobs partake of the low-quality, monotonous work formerly typical of factory production workers. Some other index is needed to distinguish between types of jobs, with attendant wage rates and social status. Education appears to be the best index we have.

Finally, there is what Marx called the *lumpenproletariat* and others have termed the disreputable poor (Matza, 1966). These are the people at the bottom of the economic and social system who are not well functioning parts of either. Wilson (1996) calls their manifestation in the current United States the new urban poor, those people who are in a cycle of poverty and joblessness. They are concentrated in the inner neighborhoods of large American cities and are disproportionately black. But while they often appear in policy discussions and television news casts, sociologists have estimated they are only about 2 percent of the population (Ricketts and Sawhill, 1988; Galster and Mincy, 1993, p. 339).

Table 3 shows how unrealistic full mobility appears. The equivalent rows of the transition matrix indicate that the eventual disposition of people is unrelated to their initial location. But it is hardly likely that only one-quarter of the children of college graduates go to college, or that only 2 percent of poor children grow up to be poor themselves. While table 3 shows some kind of ideal, no actual society resembles it.

The studies of sociologists and economists described above analyze different ways in which the reality differs from table 3. The sociological literature is concerned above all with transitions out of poverty. Much of the discussion on mobility is focused on the bottom row of table 3. Do the poor replicate themselves? Do public programs designed to get them an education or a job actually work?

Economists, by contrast, have largely concerned themselves with the division between the second and third categories. They have studied the effect of education on earnings and the probability of going to college as a function of the parents' education. And while most economic studies look at the distribution of earnings, they often carry the implication that transitions between category three and two are harder if the income gap is larger. Fewer working-class children will be able to afford a college education, and high schools will continue to provide inadequate training for high-paying jobs.

Of course, some economic studies have looked directly at this transition. In fact, the standard wage function of labor economics can be seen as one-half of this inquiry. The wage equation relates wages to educational levels (and other variables). In combination with studies of the determinants of educational attainment, these studies would show one important avenue of generational mobility. Becker (1981) proposed a model of intergenerational education and income mobility, but the data fail to support it (Behrman and Taubman, 1985).

This study focuses on the first category, the elite. Table 3 exposes the problem with this focus. Since the elites are such a small share of the population, it is going to be very hard to test how near a transition probability is to .00001. If one out of 500 business leaders come from the poor, does this mean that the first column of table 3 is accurate? In fact, the expectation in a sample of 500 or 1,000 is considerably less than one poor person entering the elite. Even if no actual poor are in the sample, if there is no Andrew Carnegie today, it is hard to reject the hypothesis of table 3 from the evidence of the last row.

Instead, I approach the recruitment of the elite indirectly by means of Bayes' theorem:

$$Pr\ (E \mid X) = Pr\ (E)\ Pr\ (X \mid E)\ /\ Pr\ (X),$$

where E stands for being a member of the elite and X is some other characteristic of the population, such as being black or foreign-born. It is useful to rewrite Bayes' theorem as follows:

$$Pr\ (E \mid X)\ /\ Pr\ (E) = Pr\ (X \mid E)\ /\ Pr\ (X).$$

The left-hand side of this expression is the relative odds of being in the elite, given that a person has characteristic X. That is, it is the probability of being in the elite, given X, relative to the overall probability of being in the elite. The right-hand side of the equation is the relative odds of having characteristic *X*, given that a person is in the elite. Bayes' theorem tells us that these two relative odds are equal.

I therefore compare the likelihood that members of the elite have certain characteristics, *X*, and compare this likelihood to that in the population as a whole. For example, if none of the business elite are black, while 10 percent of the population is black, then the right-hand side of the rewritten Bayes' theorem is zero. The theorem posits that the left-hand side -- the relative probability of being in the elite if one is black -- is zero as well.

Although I cannot find the data to estimate the transition probabilities in table 3 directly, examination of several characteristics, *X*, will provide a composite picture of the recruitment of the elite. The use of Bayes' theorem provides a way to avoid trying to estimate directly whether a given probability is greater or less than .00001. Miller clearly used the same underlying methodology, even if he did not refer explicitly to Bayes' theorem.

The process that generates the probability of becoming a member of the elite, *Pr (E)*, is not specified and, in fact, is not known. Putnam (1976) surveyed a variety of models but was concerned only with political elites and did not reach any firm conclusions. I describe several possibilities to provide a background for the discussion of the results of whatever process it is. One possibility is that leaders are self-selecting. Existing leaders choose their successors without input from outside. It would not be surprising if an elite chosen this way reproduced itself in all its demographic characteristics. People drawn from different parts of the population might be less effective as members of the elite if business or political actions depend on sending and receiving subtle signals that are communicated informally and even implicitly in other actions. Or, it might be that members of the elite like to socialize with people just like themselves even though demographic characteristics have no effect at all on their effectiveness in professional activities.

A quite different possibility is that members of the elite are selected by non-leaders to be their agents in business and politics. Stockholders or voters must choose these agents based on characteristics they can observe. Their choices will be affected by the nature of the agency contract. For example, if it is hard to dismiss an agent once he or she is chosen then the principals -- those who choose the agent -- may be very cautious. If they want to minimize the possibility of a bad outcome like bankruptcy, they might want to choose a well-known agent over someone less well known -- who might be brilliant or disastrous. Similar family and ethnic background might well be a means in this case to judge potential agents. Agents that are hard to dismiss therefore might differ over time less than agents who are easier to discharge.

This brief discussion hardly exhausts the possible selection mechanisms or the factors that could affect an agency contract. It serves only to underscore the point that elites are produced by some process that is not well understood. Comparing the American business elite in two periods separated by almost a century guarantees no overlap among its members in the two samples. Some process, although not necessarily the same selected each group, and we observe the outcome. This study therefore poses questions about the underlying processes without directly inquiring into them.

4. Results

Table 4 compares the industrial composition of Miller's sample of the American business elite to mine. They are similar in their broad outlines, although my sample is heavier into manufacturing while Miller's sample was heavily into railroads. At a finer level, my sample is more diverse since Miller selected certain sectors to analyze while I started from a set of large firms independent of sector.

TABLE 4
Distribution of Business Leaders by Type of Industry
(percent)

Sector	Miller	Temin
Manufacturing and Mining	36	44
Transport, Trade and Utilities	48	31
Banking and Finance	16	25

Miller noted that there were no women or non-whites among business leaders at the beginning of the twentieth century. Although much has changed in the intervening years, this has not. There virtually are no women or non-whites among the CEOs of the *Fortune* 500. There is one female CEO among the *Fortune* 500, but she appears to be the exception that proves the rule. For this woman is co-CEO with her husband. There is no evidence that she would have been the CEO of a major firm if she had been on her own. Women make up almost half the work force, and non-whites account for 15 percent of employment. Yet the business elite continues to be composed of white males. It is true that almost 80 percent of the *Fortune* 500 have some women officers, and 10 percent of corporate officers in the *Fortune* 500 are women (Catalyst, 1996). This may indicate that the composition of business leaders is about to change, or it may signify the presence of a "glass ceiling" that keeps women from full membership in the American business elite.

The data raise, but do not answer, this question. Bayes' theorem tells us that if the probability of a member of the business elite being black is zero then the probability of a black joining the elite is also zero. However, the observation that there are no blacks among the elite is an estimate of the probability in Bayes' theorem. Its expectation is equal to that probability but there is no assurance in any specific sample, like the one I have examined, that the observed proportion equals the underlying probability. The data suggest that blacks and women cannot at this time be eligible for membership in the American business elite, but this assertion cannot be proven from these data. Indeed one woman has appeared among the CEOs of the *Fortune* 500 since the research on this paper began. Mattel's new CEO, Jill Barad, began her job on January 1, 1997. Her example shows that there is not a firm glass ceiling preventing women from joining the American business elite; it is too soon to know if her appointment is the beginning of a trend.

It is also true that other minorities are under-represented in the American business elite. Only one of the CEOs has an oriental surname, and only a very few appear to be Hispanic, that is, have a clearly Spanish surname. Only 5 percent of the American labor force is classified as non-white and non-black. While this is not a large share, they are still under-represented among the business elite. By Bayes' theorem, the chance of entering the business elite from these groups is small.

The lone Asian, Charles Wang, CEO of Computer Associates, is reminiscent of Andrew Carnegie. He immigrated to the United States with his family when he was eight, slightly younger than Carnegie. His family, like Carnegie's, was not economically successful immediately; Wang is quoted as saying, "I know what it is to be hungry." Wang also succeeded in business by harnessing a new technology. Carnegie was at the forefront of steel making; Wang, business computing. Unlike Carnegie's father, however, Wang's father had been educated at Harvard and successful in China before emigrating (Forbes, 1997).

Wang differed from Carnegie in one important respect. He went to school and college in the United States, a significant difference. As I will show later, education is an important characteristic of American business leaders. Yet he still stands, like Carnegie as an unusual American success story. He is not typical of many Asian immigrants; he is the only Asian immigrant in the sample. He also may be the lone leader who was hungry as a youth.

The political elite looked very much like the business elite in 1900, but they differ a century later. The exclusively white male composition of the business elite does not extend to the political elite. Over 10 percent of the House of Representatives is non-white. Eight percent is black; 4 percent, Hispanic; and 1 percent, Asian. These are close to the proportions in the population of labor force, and they consequently indicate great openness in the political elite. In addition, 12 percent of Representatives are women. This is far below the proportion of women in the population and labor force, but it is a great deal more than among the business elite. The political elite differs sharply from the business elite in ethnic dimensions and has begun to diverge in gender as well.

TABLE 5
Geographic Origins of Business and Political Leaders
(percent)

	1900s Business	1900s Political	1860 Population	1996 Business	1996 Political	1940 Population
New England	18	22	8	8	6	6
Middle Atlantic	37	27	22	27	17	20
East North Central	22	27	19	19	18	18
South	9	11	28	18	23	27
West	4	7	8	22	24	19
Foreign	10	6	15	5	2	10

Note: There are 332 business leaders with identifiable birthplaces.
Source: For population data, Bogue, 1959; Easterlin, 1960; Taeuber, 1965.

The birthplaces of business and political leaders then and now are shown in table 5 with the geographic composition of the population at the time the mean business leader was born. Then as now, the geographical origin of leaders was diverse. Circa 1900, the New England and Middle Atlantic regions were over-represented among business leaders. Now only the Middle Atlantic region is over-represented. Around 1900, both the South and West were under-represented among business leaders; now, only the South. It is a mark of progress toward full mobility that New England and the West have lost their distinctiveness. Bayes' theorem implies that the chance of someone born in those regions becoming a member of the business elite is now no different than in the population as a whole. The Middle Atlantic region appears to be a fertile breeding ground for the business elite, while the chance of joining the business elite from the South has remained less than average. Political leaders, at least those in the House of Representatives, come from all over the country. The apparent over-representation of the West is a reflection of the ongoing population movement to the West.

The foreign-born are under-represented both in 1900 and now. In addition, a smaller proportion of both the American business and political elites now are foreign born than were in the early 1900s. This quite possibly is the result of new immigration laws that have reduced the flow of immigrants into the United States and hence the proportion of foreign born in the population. It contrasts, however, strongly with the sense of internationalization of the world economy. Firms may conduct an increasing amount of their business across national borders, but they still select their leaders from people born in the United States. And it appears that people also elect homegrown leaders to Congress.

Miller was able to compile information on the fathers of his business and political leaders. Not only were the business and political leaders from the northeast, their paternal families came disproportionately from England and Wales. Over half of the families came from England and Wales, over 80 percent from the British Empire. This is almost twice as much as the share of the population as a whole from the British Empire. By Bayes' theorem, the chance of becoming a business or political leader was roughly twice as large as for the population as a whole if the family came from the British Empire. Also, since such people made up a large share of the national total (47 percent in 1920), the opportunities for men from elsewhere was considerably less than the national average. In fact, it was only one third as large. The prospect of becoming a member of the business or political elite consequently was six times as large for people with families from the British Empire than for others.

The British Empire included Ireland, of course. However the Irish represented among the elite were the Protestant Anglo-Irish, not the Catholic commoners. While 14 percent of the business leaders came from Irish families, only 7 percent were Catholic. And since some of these Catholics originated in other parts of the world, only a minority of the leaders' families that came from Ireland were Catholic.

Current information does not include family background. Our mythology denies its importance, and we do not inquire into it for publication. I use religion as a proxy for family background. Miller emphasized that over 90 percent of business leaders in 1900 were Protestants, and most of them were (in modern terminology) WASPS. We generally do not report our religion today. It is not considered an important characteristic by the contributors to and editors of *Who's Who* and similar publications in spite of the fact that religion and religious movements permeate the United States. Modern information consequently will not be precise.

I estimated the proportion of Catholics and Jews among the business elite in two ways. The minimum estimate is composed of those leaders who identified themselves as such. The maximum estimate is derived by the methodology of Lieberson and Carter (1979), by counting names that were obviously Catholic and Jewish. This maximum clearly is imprecise; it misses the effects of name changes and intermarriage. Even so, Lieberson and Carter found it to be reliable enough to use as a basis for identifying ethnic patterns among eminent Americans. Leaders not identified as Catholic or Jewish are assumed Protestant.

I report in table 6 the result of Miller's samples for 1900 and the results of this rough estimate for today. Looking first at business leaders, it is not possible to reject the hypothesis that the religious composition of the American business elite has not changed in 100 years.

TABLE 6

Religious Affiliations of Business and Political Leaders

(percent)

	Business elite, 1900	Political elite, 1900	Business elite, 1996	Political elite, 1996	Population, 1994
Protestant	90	94	80 – 92	65	60
Catholic	7	4	5 – 10	29	24
Jewish	3	2	2 – 10	6	2

Source: For affiliation of the population, US Bureau of the Census, 1996, Table 88.

Even more than gender and race, this finding reveals constancy in the business elite over a full century.

Although the hypothesis of constancy cannot be rejected, the data suggest that the proportion of Jews in the American business elite has increased in the twentieth century. If true, this owes a lot to the increased openness of colleges and universities to Jews after World War II. It is only an indication of openness, but the imprecision of the estimate makes the indicator suggestive rather than conclusive.

Political leaders resembled business leaders in 1900. They were white males drawn from the same northern European population. However, the two groups are not the same today; the political elite differs from the business elite in gender, race and location. I expand the comparison in table 6 with complete religious identification of Representatives. In Congress, Protestants have been displaced by Catholics, as they have been in the population at large. The final column of the table indicates that the religious identification of Representatives closely mirrors that of the population they represent. This finding is consistent with one from the 1950s that found political leaders to be more representative of the population of a whole than business leaders (Warner et al., 1963).

The college experience of contemporary leaders provides another proxy for the business elite's family background. College attendance, however, is unlike ethnicity, gender, religion, or birthplace location. A substantial proportion of the variance in college attendance is accounted for by family effects and socioeconomic background. The rest of the variance is accounted for by other influences, including the ability and drive of potential college students. It may be that attendance at college and entering the business or political elite are jointly determined by the same unobservable individual characteristics. The independent effect of attending college then may be overestimated by the simple use of Bayes' theorem.

The effect of family background on college attendance was even stronger around 1960 when only a minority of young people went to college than today. Jencks, writing shortly after most of the current business elite completed college, concluded, "the most important determinant of educational attainment is family background" (Jencks, 1972, pp. 158-9). An extensive literature on the influence of fathers' education on the education of sons reveals a clear transmission path from fathers to sons. Even now, over half of the variation in education of sons, and perhaps as much as two-thirds, can be accounted for by family effects. Over half of the family effect, in turn, can be accounted for by the socioeconomic characteristics of the families. There are extraordinary families everywhere in society, but those starting lower in the socioeconomic hierarchy clearly have more hurdles to jump to get to college (McBride, 1996). There is some indication that the influence of parental education on college attendance has been waning, as education has become more widespread. The evidence is unclear, and the family influence was very strong around 1960 in any case (Hauser and Featherman, 1976; Hauser, 1993a). College graduation, therefore, is a reasonable proxy for the family status of today's business leaders.

I was able to identify the college attended by 454 CEOs of the *Fortune* 500 companies. All current business leaders on whom I could find information attended college, and I assume that college attendance was almost, if not completely, universal among those for whom information is lacking. The leaders attended college in the early 1960s, since they were born in about 1940, and approximately only 15 percent of men aged 25 to 29 graduated from college at that time (Hauser, 1993b).

It follows that college graduates were about seven times more likely to become business leaders than others were, although there is possible discontinuity at 100 percent, as noted above for blacks and women. If all CEOs of the *Fortune* 500 have college degrees, it may be the case that a college degree is a necessary precondition for achieving that position. If so, then the proportions just calculated are misleading. Those men who did not go to college in the early 1960s were precluded from becoming part of the American business elite, not simply rendered unlikely to join. Even Charles Wang attended college after immigrating to the United States.

A degree from an Ivy League college is a far more powerful proxy for family background than college attendance at any school. The potential bias from joint determination of attendance at the Ivy League and membership in the business elite is more important for cohorts attending college recently than for those going to college a generation ago. The post-war expansion of American universities was accompanied by a change in the criteria for admission. In the early 1950s, students at Harvard, for example, had SAT scores -- that is, scores on standardized admissions tests -- that were close to those of college students as a whole. Admission to Harvard was not on merit, but on family background. Being the son of an alumnus virtually guaranteed admission. The criteria for admission began to change in the 1950s and 1960s as applications increased and admissions offices focussed more on scholastic aptitude. Students in Ivy League schools increasingly differed from other college students in academic skill as well as in the family background noted above (Herrnstein and Murray, 1994). But approximately one quarter of 1986 college freshman at highly selective universities come from families with incomes over $100,000, that is, from the extreme upper tail of the income distribution (Kingston and Lewis, 1990, p. 111). While better students attend more selective colleges, parental education and family income are significant determinants of attendance at elite colleges even 30 years after the education of most current business leaders (Hearn, 1990).

I divided colleges into three categories: elite, taken to be the Ivy League, other private, and public. The composition of colleges attended by the business leaders is shown in table 7 together with the composition of college students in these colleges around 1960. The last column confirms the obvious point that the Ivy League accounted for a minuscule proportion of college students in 1960.

Almost one-fifth of business leaders graduated from the Ivy League. It follows that attendance at an Ivy League college made membership in the business elite far more likely. A 1990 *Fortune* survey found these same CEOs came most disproportionately from the Ivy League, although not from the University of Pennsylvania, and additionally from Northwestern University (Caminiti, 1990). This evidence, while less conclusive than some presented earlier, confirms the conclusion that membership in the current American business elite was drawn disproportionately from the same part of the population that it has come from for many, many years. Political leaders are less likely to have attended the Ivy League, but they also are far more prone to have done so than random college students.

TABLE 7
Composition of College Attendance, Leaders and Population in early 1960s (percent)

	Business Leaders	Political Leaders	Attendance, 1960
Ivy League	17	5	0.02
Other Private	41	49	38
Public	42	45	62

Note: There are 454 business leaders with identifiable colleges.
Source: For college attendance, 1960, US Bureau of the Census, 1965, Table 137.

Looking at the remaining colleges and universities, leaders in both business and politics were equally likely to have attended public and private colleges, and universities. Students at this time were more inclined to have attended public than private colleges, but not by much. Attendance at public colleges was only 1.6 times as likely as attendance at private colleges. In the years since 1960, the public sector has grown enormously, and roughly four-fifths of college students now attend public colleges. But at the time the current leaders went to college, there was not a great difference (U. S. Department of Health, Education and Welfare, 1995).

An even better proxy for family background is height. It is well known that aristocrats were taller than commoners, and it is still true that people from prosperous and highly-educated families are taller than others. Height shows the effect of early nutrition and health; it is not -- like education -- affected by choices made as a young adult. The American business elite is considerably taller than other native white males born around 1940. The average for that group as a whole is just under 5’ 10’’; for the American business elite, just under 6’ 1’’. The three-inch difference is more than a standard deviation above the mean (Kurtz et al., 1989; Costa and Steckel, 1997).

The American business elite comes from elite families. But the effect of family background on height may be overstated for two reasons. The data on the elite are self-reported. If business leaders want to appear to be leaders, they may exaggerate their height. In addition, leaders may have been chosen in part because they were tall. Tall men from non-elite families may have a better chance of joining the elite than short men, and the height of the elite may be more than a marker for good family background.

5. Conclusions

This study has replicated the study of the business and political elites of a century ago performed by Miller a half-century ago. Not all the same data could be collected, but there are enough data to make comparison useful. It shows that American business leaders today are not very different in their origins than their counterparts a century ago. They are still drawn disproportionately from a small portion of the population, from families that resemble the families of previous members of the elite. There are exceptions -- Carnegie then and Wang now -- but they are highly unusual members of the American business elite.

These results can be compared, in turn, to a study done by Gregory and Neu (1962) for an earlier period. It was initiated to extend Miller’s results, and a sample of industrialists from the cotton, woolen and steel industries in the 1870s was compared to Miller’s more diverse and slightly later sample (table 4). It found some differences -- earlier business leaders were more inclined to come from New England -- but mostly similarities. Gregory and Neu (1962) summarized their conclusions as follows:

> Was the typical industrial leader of the 1870's, then, a "new man," an escapee from the slums of Europe or from the paternal farm? … He seems to have been none of these things. American by birth, of a New England father, English in national origin, ... he was rather born and bred in an atmosphere in which business and a relatively high social standard were intimately associated with his family life (p. 204).

TABLE 8
Occupations of 1930 business leaders' fathers compared with occupations of employed married men in 1880
(percent and ratio)

Occupation	Employed married men, 1880	Fathers of 1930 business leaders	Ratio of fathers to 1880 population
Unskilled Laborer	31.9	2.2	0.7
Skilled Laborer	13.8	8.6	4.4
Farmer	41.6	12.4	6.4
Clerk or Salesman	2.5	5.0	20.7
Business Man	7.4	56.7	79.0
Professional	2.8	13.4	49.8

Source: Taussig and Joslyn, 1932, p. 240.

The results here can be compared also to those found in the years intervening between Miller's and my research. A study of business leaders in the 1920s used a larger sample, interviewed by mail, but found largely the same pattern. The businessmen in the sample were asked for their father's occupation. The results are shown in table 8 where the occupations of the business leaders' fathers are compared with the occupations of married men a generation earlier. As both we and Miller found: the son of a businessman was far more likely -- two orders of likelihood more likely in this case -- to become a business leader than was the son of a laborer. Elsewhere the authors divide the sample into leaders of different-sized companies. The occupations of fathers did not vary according to the size of the son's company, showing that use of a smaller, more select sample like Miller's or mine would have generated identical results (Taussig and Joslyn, 1932, p. 213).

This conclusion also does not vary much by time period (Newcomer, 1965). Approximately two-thirds of business leaders have been the sons of business executives or professionals since 1870 (Forbes and Piercy, 1991, p. 96). The findings of this inter-war study therefore express the results of all the studies. The authors concluded from their study that it is not "permissible to speak of the present generation of business leaders in the United States as a caste-like group. Altho [sic] our data show a substantial amount of inbreeding within the class, in no case is it large enough to make it characteristic of the group as a whole" (Taussig and Joslyn, 1932, pp. 238-9). This has been true for at least a century. De Tocqueville said it was true much earlier as well.

However, the openness is only partial, as every study has found. The American business elite was and is composed almost entirely of native-born white men from prosperous and educated families of northern European extraction. The rich diversity of the United States has penetrated politics although it has not made an impact on the American business elite.

It follows that the cataclysmic changes that have taken place in the United States over the last century have had little impact on the composition of the American business elite. Wars, depression, widening and narrowing of the income distribution, all have passed by without leaving any mark on the composition and origins of the American business elite. The authors of the inter-war study followed the conclusion just quoted with the companion assertion that access to the business elite was changing rapidly. Nevertheless, despite this expectation, little has changed.

Will it change in the future? Or does a century or more of stability among the American business elite imply another century of the same? It is of course impossible to predict. Two pieces of evidence point weakly in the direction of slow change. First, as noted above, there is now one woman among the business elite as defined here. This shows that there is no absolute barrier for women, but it is too early to know if it is the beginning of a trend. Second, the data for the political elite contain the same ambiguity. There is a hierarchy within the United States Congress that operates largely by seniority. Dividing the members of the House of Representatives by their seniority reveals that there are twice as many women and blacks in the junior half of the House as in the senior half. There are two ways to interpret this evidence. It is possible that the aggregate data on the political elite mask this indication of change to come. Or it may mask evidence of the traditional elite's continuing influence within Congress. As with the business elite, it is hard to predict.

Whatever the future, the past offers a one-tailed test of the hypothesis that social mobility is a function of the income distribution. According to this view, wide differences in income make mobility unlikely. The evidence in this chapter examines only one small part of social mobility, as noted in table 3 but it shows no impact at all of the changes that have taken place in the distribution of income in America over the course of the twentieth century. It therefore supports the view that mobility and income distribution are two quite independent phenomena -- at least as far as mobility into the business elite is concerned.

The long stability portrayed here raises a question of methodology as well as of history. Explicitly and implicitly, complete mobility as expressed in tables 2 and 3 has been taken as the norm. Evidence has been marshaled in this and other studies to exhibit deviations from this ideal. Perhaps this ideal state is unrealistic, like perfect competition in economics. The access to the American business elite over the course of the twentieth century may be as open as it could be. If so, then de Tocqueville was right, as were Blau and Duncan a century and a half later, that American mobility was the standard against which to judge others.

Blau and Duncan (1967) compared American access to elite positions with European, where elite positions were defined (more broadly than in this chapter) as the highest business and professional occupations (Miller, 1960, p. 20). Access to these positions was more open in the United States than in Europe. Ten percent of workers born into the working and manual classes made it into elite occupations in the United States, while less than 5 percent did the same in any of the European countries surveyed. Twenty percent of American boys in middle class families grew up to take elite jobs, while less than 10 percent did the same in Britain, France and Germany (Blau and Duncan, 1967, p. 434).

Sadly, this American model extends to only some dimensions. The influence of family, of education, of location, may not be able to be excised in any actual society. The American experience may show what can be done in a practical, even if not a theoretical way. Even the limited openness of the elite on these dimensions does not extend to race, gender, or --

largely -- to ethnicity. The American business elite remains composed almost entirely of white males of northern European background, despite dramatic changes in the American population and workforce.

That is the bad news. The good news is that the political elite has changed over the twentieth century. In 1900, the American political elite looked like the business elite. The country was run both politically and economically by the same group of Anglo-Saxon men. Now the political system has broadened to create a political elite that resembles the population of the country more than the business elite. It is still not a random draw from the population, but the random person has a better chance of getting elected to Congress than of becoming CEO of a *Fortune* 500 company.

If the business of America is indeed business, then the composition of the business elite is critical. Studies of Atlanta, Georgia have argued that power in that city resides in the business community (Hunter, 1953; Stone, 1989). But if governments create the institutions that determine whether business succeeds or falls -- as so much new economic research asserts -- then politics is prime (North, 1981; Tirole, 1991; Sachs and Warner, 1995). More likely, both matter, and it is important to track the composition of both elites.

Note

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References

Allen, D.G. 1981. *In English Ways: The Movement of Societies and the Transference of English Local Law and Custom to Massachusetts Bay in the Seventeenth Century.* Chapel Hill, NC: University of North Carolina Press.

Becker, G.S. 1981. *A Treatise on the Family.* Cambridge: Harvard University Press.

Behrman, J. and P. Taubman. 1985. “Intergenerational Earnings Mobility in the United States; Some Estimates and a Test of Becker’s Intergenerational Endowments Model.” *Review of Economics and Statistics* 67: 141-51.

Bénabou, R. 1996. “Inequality and Growth.” In B.S. Bernanke and J.J. Rotemberg, eds., *NBER Macroeconomics Annual 1996.* Cambridge: MIT Press, pp. 11-74.

Blau, P.M., and O.D. Duncan. 1967. *The American Occupational Structure.* New York: Wiley.

Bloch, M. 1961. *Feudal Society.* Chicago: University of Chicago Press.

Bogue, D.J. 1959. *The Population of the United States.* Glencoe, IL: Free Press.

Caminiti, S. 1990. “Where the CEOs Went to College.” *Fortune,* June 18: 120-2.

Catalyst. 1996. *1996 Catalyst Census of Women Corporate Officers and Top Earners.* New York: Catalyst.

Carnegie, A. 1920. *Autobiography of Andrew Carnegie.* Boston: Houghton Mifflin.

Costa, D.L. and R.H. Steckel. 1997. “Long-Term Trends in Health, Welfare, and Economic Growth in the United States.” In R. Floud and R.H. Steckel, eds., *Health and Welfare During Industrialization*. Chicago: University of Chicago Press.

Deininger, K. and L. Squire. 1996. “A New Data Set Measuring Income Inequality.” *World Bank Economic Review* 10: 565-91.

Domar, E.D. 1970. “The Causes of Slavery or Serfdom: A Hypothesis.” *Journal of Economic History* 30: 18-32.

Duncan, G.J., T.M. Smeeding and W. Rodgers. 1993. “W(h)ither the Middle Class? A Dynamic View.” In D.B. Papademitriou and E.N. Wolff, eds., *Poverty and Prosperity in the USA in the Late Twentieth Century.* New York: St. Martin’s Press, pp. 240-71.

Easterlin, R.A. 1960. “Interregional Differences in Per Capita Income, Population, and Total Income, 1840-1950.” In W.N. Parker, ed., *Trends in the American Economy in the Nineteenth Century.* Princeton, NJ: Princeton University Press, pp. 73-140.

Forbes, J.B. and J.L. Piercy. 1991. *Corporate Mobility and Paths to the Top.* New York: Quorum Books.

Forbes, K. 1997. “A Reassessment of the Relationship between Inequality and Growth.” MIT: mimeo.

Freeman, R.B. and L.F. Katz. 1995. *Differences and Changes in Wage Structures.* Chicago: University of Chicago Press.

Gale Research, Inc. 1995. *Finance, Insurance, and Real Estate, USA*, 2nd ed. New York: Gale Research, Inc.

Galster, G.C. and R.B. Mincy. 1993. “Understanding the Changing Fortunes of Metropolitan Neighborhoods: 1980 to 1990.” *Housing Policy Debate* 4: 303-52.

Gregory, F.W. and I.D. Neu. 1962. “The American Industrial Elite in the 1870’s.” In W. Miller, ed., *Men in Business.* New York: Harper and Row, pp. 193-211.

Hauser, R.N. 1993a. “Trends in College Entry.” In C.T. Clotfelter and M. Rothschild, eds., *Studies of Supply and Demand in Higher Education.* Chicago: University of Chicago Press, pp. 61-104.

Hauser, R.N. 1993b. “College Entry Among African Americans.” In P.M. Sniderman, P.E. Tetlock and E.G. Carmines, eds., *Prejudice, Politics, and the American Dilemma.* Stanford: Stanford University Press, pp. 271-306.

Hauser, R.N. and D.L. Featherman. 1976. “Equality of Schooling: Trends and Prospects.” *Sociology of Education* 49: 99-120.

Hearn, J.C. 1990. “Pathways to Attendance at the Elite Colleges.” In P.W. Kingston and L.S. Lewis, eds., *The High-Status Track.* Albany, NY: State University of New York Press, pp. 121-45.

Herrnstein, R.J. and C. Murray. 1994. *The Bell Curve: Intelligence and Class in American Life.* New York: Free Press.

Hemmingway, D. et al., eds. 1995. *Reference Book of Corporate Management.* Bethlehem, PA: Dun & Bradstreet.

Hunter, F. 1953. *Community Power Structure: A Study of Decision Makers.* Chapel Hill, NC: University of North Carolina Press.

Jencks, C. 1972. *Inequality: A Reassessment of the Effect of Family and Schooling in America.* New York: Basic Books.

Karoly, L.A. 1993. “The Trend in Inequality among Families, Individuals, and Workers in the United States: A Twenty-five Year Perspective.” In S. Danziger and P. Gottschalk, eds., *Uneven Tides: Rising Inequality in America.* New York: Russell Sage Foundation, pp. 19-97.

Kingston, P.W. and L.S. Lewis. 1990. “Undergraduates at Elite Institutions: The Best, the Brightest, and the Richest.” In P.W. Kingston and L.S. Lewis, eds., *The High-Status Track.* Albany: State University of New York Press, pp. 105-20.

Krugman, P. 1996. “The Spiral of Inequality.” *Mother Jones* 21(6): 44-9.

Kurtz, D.L., L.E. Boone and C.P. Fleenor. 1989. *CEO: Who Gets to the Top in America.* Lansing, MI: Michigan State University Press.

Kuznets, S. 1953. *Shares of Upper Income Groups in Income and Savings.* New York: National Bureau of Economic Research.

Kuznets, S. 1955. “Economic Growth and Income Inequality.” *American Economic Review* 45: 1-28.

Levy, F. 1995. “Incomes and Income Inequality.” In R. Farley, ed., *State of the Union: America in the 1990s*, Vol 1, *Economic Trends.* New York: Russell Sage Foundation, pp. 1-57.

Levy, F. and R.J. Murnane. 1992. “U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations.” *Journal of Economics Literature* 30: 1333-81.

Lieberson, S. and D.K. Carter. 1979. “Making It in America: Differences Between Eminent Blacks and White Ethnic Groups.” *American Sociological Review* 44: 347-66.

Martin, J.F. 1994. *Profits in the Wilderness: Entrepreneurship and the Founding of New England Towns in the Seventeenth Century.* Chapel Hill: University of North Carolina Press.

Matza, D. 1966. “The Disreputable Poor.” In N.J. Smelser and S.M. Lipset, eds., *Social Structure and Mobility in Economic Development.* Chicago: Aldine, pp. 310-39.

McBride, J. 1996. *The Color of Water: A Black Man’s Tribute to his White Mother.* New York: Riverhead Press.

Miller, S. M. 1960. “Comparative Social Mobility.” *Current Sociology* 9: 1-89.

Miller, W. 1949. “American Historians and the Business Elite.” *Journal of Economic History* 9(2): 184-208. Reprinted in W. Miller, ed., 1962. *Men in Business.* New York: Harper and Row, pp. 309-28.

Miller, W. 1950. “The Recruitment of the American Business Elite.” *Quarterly Journal of Economics* 64(2): 242-53. Reprinted in W. Miller, ed., 1962. *Men in Business.* New York: Harper and Row, pp. 329-37.

Mills, C.W. 1956. *The Power Elite.* New York: Oxford University Press.

Morrison, S.E. and H.S. Commager. 1930. *The Growth of the American Republic.* New York: Oxford University Press.

Nasar, S. 1992. “The 1980s: A Very Good Time for the Very Rich.” *New York Times*, March 5: A1.

Newcomer, M. 1965. *The Big Business Executive: the Factors That Made Him, 1900-1950.* New York: Columbia University Press.

North, D. 1981. *Structure and Change in Economic History.* New York: Norton.

Perotti, R. 1996. “Growth, Income Distribution, and Democracy: What the Data Say.” *Journal of Economic Growth* 1: 149-87.

Phelps, E. 1997. *Rewarding Work.* Cambridge, MA: Harvard University Press.

Powell, S.C. 1963. *Puritan Village: The Formation of a New England Town.* Middletown, CT: Wesleyan University Press.

Putnam, R.D. 1976. *The Comparative Study of Political Elites.* Englewood Cliffs, NJ: Prentice-Hall.

Ricketts, E.R. and I.V. Sawhill. 1988. “Defining and Measuring the Underclass.” *Journal of Political Analysis and Management* 7: 316-25.

Sachs, J.D. and A. Warner. 1995. “Economic Reform and the Process of Global Integration.” *Brookings Papers on Economic Activity* 1: 1-95.

Shih, C. ed., 1997. *Corporate Yellow Book.* New York: Leadership Directories.

Stone, C.N. 1989. *Regime Politics: Governing Atlanta, 1946-1988.* Lawrence, KS: University Press of Kansas.

Taeuber, I.B. 1965. *Population Trends in the United States, 1900 to 1960.* Washington, DC: GPO.

Taussig, F.W. and C.S. Joslyn. 1932. *American Business Leaders: A Study in Social Origins and Social Stratification.* New York: Macmillan.

Temin, P. 1964. *Iron and Steel in Nineteenth Century America: An Economic Inquiry.* Cambridge: MIT Press.

Thernstrom, S. 1973. *The Other Bostonians.* Cambridge: Harvard University Press.

de Tocqueville, A. [1835] 1966. *Democracy in America.* New York: Harper and Row.

Tirole, J. 1991. “Privatization in Eastern Europe: Incentives and the Economics of Transition.” In O.J. Blanchard and S. Fischer, eds., *NBER Macroeconomics Annual 1991.* Cambridge: MIT Press, pp. 221-59.

US Bureau of the Census. 1965. *Statistical Abstract of the United States*, 85th edition. Washington, DC: Government Printing Office.

US Bureau of the Census. 1996. *Statistical Abstract of the United States*, 116th edition. Washington, DC: Government Printing Office.

US Department of Health, Education and Welfare, Educational Division. 1995. *Digest of Educational Statistics*. Washington, DC: Government Printing Office.

Wall, J.F. 1970. *Andrew Carnegie.* New York: Oxford University Press.

Warner, W.L., P.P. Van Riper, N.H. Martin and O.F. Collins. 1963. *The American Federal Executive.* New Haven: Yale University Press.

Who's Who in Finance and Industry. 1995. New Providence, NJ: Marquis.

Williamson, J.G. and P.H. Lindert. 1980. *American Inequality: A Macroeconomic History.* New York: Academic Press.

Wilson, W.J. 1996. *When Work Disappears: The World of the New Urban Poor.* New York: Knopf.

Electronic Sources

The *Fortune 500* companies and CEOs were taken in July, 1996, from web page: http://pathfinder.com/@lDuKqwQAorcaFIr9/fortune/fortune500/.

Congressional List, Party, and District obtained from web page: http://clerkweb.house.gov/members/OALMFram.htm "Alphabetical List of Members - 105th Congress."

All other data on Representatives obtained from web page: http://www.congress.org.

Forbes Magazine, "Charles B. Wang." in *400 Richest People in America*, from web page, http://www.forbes.com/richlist/7105.htm

Dun's Million Dollar Disc [CD-ROM]. 1995. Bethlehem, PA: Dun and Bradstreet.