The Institutional Construction Of Organizations

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12

The Origins of Economic Principles

Railway Entrepreneurs and Public Policy in 19th-Century America

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FROM THE PERSPECTIVE OF THE LATE 20TH CENTURY, American economic history appears to many as a monument to the principle of the free market. Yet the U.S. economy followed very different principles for most of the 18th and 19th centuries. Up to the time of the Civil War, regional governments played active roles in promoting development. Economic historians have dubbed this the period of "rivalistic state mercantilism." Between the end of the war and about 1900, economic life became less localized, governments eschewed participation in development, and price fixing became widespread. Industrial cooperation through business associations, cartels, and trusts characterized this period. Only at the end of the 19th century did Washington attempt to enforce price competition, and only then did the "free market" come to dominate economic practice and thought. In this chapter, I argue that these three patterns of economic organization were produced in large measure by industrial policies. Focusing on the rail industry, I show that each of three successive policy regimes produced distinct business strategies, and each led actors to infer a different set of "universal" economic principles.

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The Institutional Construction of Efficiency

For much of the 20th century, neoclassical economists made teleological assumptions about American economic institutions. Macro and micro institutions were subjected to parallel assumptions. At the macro, institutional level, antitrust law was taken to exist because it was the optimal solution to problems posed by competition and collusion. At the micro, individual level, competitive pricing was taken to exist because it led to optimal prices and efficient production. The functionalist premise underlying economic theory led analysts to neglect questions of *why* these particular institutions had emerged and *whether* these institutions were optimal, and instead to deduce theories of *why they were* optimal. Economic historians were largely taken in by the functionalist premise, even the best of them (e.g., Chandler, 1977).

Three tendencies that emerged from these assumptions had unfortunate intellectual consequences. The first was that American economic institutions were presumed to have followed a single logical trajectory that led inevitably to the outcome we see today. Periods of government leadership and industrial cartelization were read, post hoc, as anomalies that proved the rule of market efficiency. Each new economic institution was taken to be a functional response to a potential problem, such that each was explained by its apparent consequences. Because the United States enjoyed unparalleled growth, it seemed plausible that America's economic customs were optimal.

Thus the second unfortunate tendency was that of treating institutional changes as driven by their putative effects rather than by social and historical factors. Antitrust law, which was adopted to protect economic liberties (Wilson, 1980), was interpreted after the fact as the only way to reinforce the natural selection mechanisms that were key to growth. Never mind that no other successful country adopted it. In the face of unprecedented economic growth, Americans concocted stories to explain why each and every one of their economic customs was optimal. At best, Americans derived unnecessarily narrow laws of causation from experience (e.g., antitrust alone can produce growth); at worst, they mistook coexistence for causation.

Third, the presumption that extrasocietal economic laws govern the universe led analysts to treat economic principles that were drawn from experience as *causes* of social institutions rather than *results* of them. For instance, when federal law encouraged price fixing, analysts had dubbed the rail industry "naturally cooperative." Yet after federal law outlawed cartels and enforced price competition, leading railroads to merge to escape rate wars, analysts dubbed the industry "naturally monopolistic" and predicted eventual consolidation. Instead of drawing the lesson that government anticartel law made merger a sensible business strategy, analysts drew the lesson that economic laws produced antitrust legislation and competitive pricing alike. In short, by beginning with the premise that policy choices are driven by extrasocietal economic laws, analysts naturalized policies and hence presumed that they did not need to be explained.

HISTORICAL INSTITUTIONALISM VERSUS ECONOMIC FUNCTIONALISM

If social practices are not products of transcendental economic laws that are revealed to humanity through experience, a different epistemological approach to economic life is needed. We should be searching not for the regularities in economic behavior that reveal fundamental economic truths, but for the properly institutional origins of behavior patterns and the processes by which actors glean general laws from those practices. In short, if economic behavior is structured by social factors rather than by transcendental laws, then its explanation must lie in social life.

There is wide agreement in the social sciences that in rationalized societies, actors search for general economic laws with which to guide their behavior. At issue is whether the laws they identify represent ultimate truths or simply glosses on experience (Berger & Luckmann, 1967; Geertz, 1983; Weber, 1968). A growing number of social scientists have taken the second view. They have explored national industrial and economic policies at the macro level, and business strategies at the micro level.

Institutional students of comparative politics seek the origins of industrial and economic policies in history (Hall, 1993; Katzenstein, 1985; Zysman, 1983), countering the view that differences among nations can be put down to differing functional demands (Gerschenkron, 1962). The new institutionalists in politics take a view that is broadly consonant with the views of Alexis de Tocqueville (1945, 1955) and Andrew Shonfield (1965). They insist that institutional history explains much of the character of national policies even though policymakers may self-consciously try to orient policies to economic universals. These analysts take the view that public growth policies, like other social customs, can only be explained socially and historically.

Comparative studies of policy confirm that, far from conforming to narrow, universal precepts, economic practices and beliefs vary dramatically across developed nations. Analysts trace policy decisions in part to the structural and conceptual constraints imposed by prior policy and constitutional choices (Krasner, 1984; Scott, 1994b; Thelen & Steinmo, 1992). Thus, for instance, U.S. rail policy options in the 19th century were severely delimited by America's weak federal structure (Skowronek, 1982). In general, history explains growth policies better than economics. Once institutionalized, public policies tend to persist because they become integrated with wider economic institutions and ways of thinking (Dobbin, 1993; Hall, 1986; Krasner, 1984; Thelen, 1991; Zysman, 1983).

Neo-institutionalist organizational theorists (e.g., DiMaggio & Powell, 1991; Dobbin, 1994a; Meyer, 1994; Meyer & Rowan, 1977) operate at a lower level of analysis but subscribe to many of the same tenets. Ideas about efficiency are socially constructed from economic experience and thus will vary over time and space as wider institutions vary. The policies that political institutionalists study figure prominently as independent variables in these organizational studies. Neither public policy nor business practice is overdetermined by economic exigency. Policies shape business strategies and ultimately affect economic thought by structuring the economic environment. In one of the few such studies that extends far back into history, Neil Fligstein (1990) has shown that the Sherman Antitrust Act of 1890 made mergers the favored business strategy at the dawn of the 20th century and popularized a new theory of the firm that reinforced horizontal integration. Then after World War II, the Celler-Kefauver Act, amending Sherman, made diversification the favored American business strategy and helped to popularize finance management and portfolio theory.

Unlike Fligstein, most organizational institutionalists have sought to show that even *within* the antitrust policy regime, seemingly modest shifts in the policy environment can produce major changes in business strategy (Abzug & Mezias, 1993; Baron et al., 1986; Dobbin, Edelman, Meyer, Scott, & Swidler, 1988; Edelman, 1990; 1992; Mezias, 1990). In this chapter, I go back to before America's antitrust policy regime to explore three starkly different policy regimes and their effects on business strategy and economic thought. One goal is to highlight a point that economic historians have frequently made: Early U.S. industrialization occurred under policies antithetical to today's antitrust, procompetition, policies (Fallows, 1994). Another goal is to trace the origins and consequences of the antitrust policy regime, which Americans so often treat as neutral—noninterventionist—in the belief that it merely reinforces natural economic conditions. My broader goal is to show the striking effects of public policy on business strategy and economic ideas, even within a single country and industry.

In each of the three periods examined below, public policies generated business practices and attendant economic theories. To tap changes in business practice I use primary and secondary historical sources. To chart emergent changes in economic thought, I examine the writings of railroaders and industry observers, drawing on such sources as Thomas Cochran's

(1965) vast compendium of letters written by industry leaders: *Railroad Leaders 1845–1890: The Business Mind in Action*. For each period, I also sketch the contemporaneous experience of Britain to show that the policies adopted in the United States were by no means inevitable and to show that where different policies were pursued, entirely different kinds of business practices ensued.

WHERE DO BUSINESS STRATEGIES COME FROM?

My argument builds on historical studies that have shown two things. First, in the modern world, actors derive rationalized economic principles from experience and employ those principles to guide their own actions. The collective identification of such principles is termed "the social construction of reality" by Peter Berger and Thomas Luckmann (1967). As Andrew Shonfield has said of early British efforts to draw rules from experience: "Classical economics, which was largely a British invention, converted the British experience—or rather what the British hoped would eventually emerge from the trend which they had detected in their own story—into something very like the Platonic idea of capitalism" (1965, p. 71). Today actors constantly scan the environment for new empirical evidence and new theories of efficiency that might explain that evidence.

Second, the experiences actors glean economic principles from are very much shaped by public policy. Karl Polanyi (1944) argued that the idealized "free market" of modern economics was, in Britain, created quite deliberately through public policy during the 18th and 19th centuries. It was the outcome of the *presence* of a wide range of public policies rather than, as the rhetoric goes, the complete *absence* of public policy. Or, as Harry Scheiber (1981) describes America's early economy: "[T]he wonderful abstraction called the 'market' had structure and distribution of advantage defined in large part by conscious political decision-making" (p. 104). The contrary idea, that perfect markets exist in the complete absence of state institutions, shaped early British economic tracts as well as political rhetoric. From 1830 the rhetoric of laissez-faire reinforced the idea that economic institutions were given structure by transcendental laws rather than by human agents and governments. As Leon Lindberg and John Campbell (1991) put it, "The very notion of intervention perpetuates the imagery of a clear separation of state and economy where markets, for example, can, or at least did, once upon a time, exist in a truly laissez-faire condition, completely autonomous of the state's influence" (p. 356).

In this chapter I focus on the effects of policy changes on business strategy and economic thought. In each period, I explore the business practices generated by public policies and the economic principles railroaders derived from their experiences. For present purposes, I treat policy choices as exogenous. How did Americans arrive at the conclusion that rivalistic state mercantilism was the most effective means to growth? How did they come to believe that approach was wrong, and support cartels? How did they decide to crush cartels and enforce price competition? I address these questions in a book that explores the historical construction of industrial strategy in the United States, Britain, and France (Dobbin, 1994b). These questions are frequently asked by political historians, because powerful railroads often lost political battles they had invested heavily in. The short answer is that the American polity contained an exceptional, and highly institutionalized, antipathy toward the appearance of concentrated power. Policy shifts occurred when observers perceived illicit concentrations of power in the hands of government agents, as when corruption brought an end to public financing; or private actors, as when price fixing brought a reluctant Congress to regulate rates. Actors certainly pursued their own interests in the course of waging battles to curtail apparent abuses of power, but they did so in the context of arguing that centralized authority was antidemocratic and inefficient.

For now, the key question concerning the origins of public policies is this: Were these policies the inevitable products of the natural economic evolution of the industry? That is, were policy shifts functional responses to industry evolution? Recent studies suggest that they were not. Colleen Dunlavy's (1993) study of Prussian and American rail policies highlights stark cross-national policy differences that had lasting effects on the industry. Gerald Berk's (1994) study of the options the United States faced demonstrates that U.S. policy might have taken an alternative track. In this chapter, the sketches of British rail policy that appear at the end of each historical section highlight how very different policy was even in the country most frequently compared to the United States.

Business Strategy Among Railroads, 1825–1906

Railway strategy was extremely volatile between 1825 and 1906, and policy analysts trace changes to legislation and case law. In the terms of economic sociologists, policy shifts brought about different *varieties of markets* over time (White, 1988; Zelizer, 1988). Writing in 1975, Harry Scheiber characterized the period before 1870 as one of "rivalistic state mercantilism." Regional rivalry produced what I will call an *organic market* between 1825 and 1870; pricing was monopolistic and firm structure was unitary because firms seldom sought mergers. Railroaders described interregional, rather than interfirm, competition as the organizing principle of the modern economy. Writing in the late 1880s, Charles Francis Adams (1893) noted that the industry first changed radically at the beginning of the 1870s, at about the time states stopped aiding railroads, began to regulate prices, and encouraged cartelization. Rate regulation and procartel policies produced what I will call a *cooperative market* between 1871 and 1896; railroads set prices in groups, and firms sought loose business combinations with other railroads. Railroaders argued that price cooperation and interfirm coordination were natural in this industry, because market entry was discouraged by industry characteristics. Writing in the early 1990s, Robert Dawson Kennedy (1991) noted that the industry next began to change at the end of the 1880s, at about the time Washington tried to enforce price competition. Case law enforcing price competition from 1897 produced what I will call a *competitive market* between 1897 and 1906; railroads practiced predatory pricing to destroy their competitors, and they sought formal mergers to create large integrated systems. Railroaders described the industry as naturally monopolistic and depicted consolidation as inevitable because of the industry's high fixed costs.

Local Government Activism and the Organic Market, 1825–1870

Between 1825 and 1870 the U.S. economy was highly localistic. Most firms served local markets exclusively and faced little or no competition from firms in other regions. State and local governments actively promoted economic growth through massive projects to build needed infrastructure and manufacturing enterprises (Callender, 1902; Hartz, 1948; Lipset, 1963). The conception of economic life underlying this public policy regime conflicted with the laissez-faire ideals that then prevailed in Britain. Although Americans eschewed unwanted government meddling with industry, they saw public capitalization of industry as a way for the local community to pursue collective purposes. British ideas about growth, as exemplified in Adam Smith's work, depended on multitudes of small competitive firms in each industry. In the United States, by contrast, the difficulty of transport and the relative isolation of most communities led to a more organic conception of growth. Each community sought to establish at least one rail link, at least one miller, at least one blacksmith. The aim was to create a self-sufficient economy comprising all vital components. The axis of competition was between integrated regional economies rather than between firms within industries (Goodrich, 1949). The theory of macroeconomic growth that emerged was that prosperity would result from the collective, competitive efforts of entire communities.

Early regional economies were isolated for obvious reasons. First, large distances and the high cost of transport made trade difficult. Before the end of the 1860s, the railway system was not sufficiently integrated to facilitate transshipment between regions. Before the first Pacific railroad was opened in 1869, goods exchanged with the West Coast and the Orient traveled by wagon or boat at great cost. Second, the financial system was disarticulated. Before the passage of the National Banking Act, in 1863, the existence of thousands of different bank-issued currencies thwarted interregional trade and finance. Before New York rose as America's finance center in the 1870s, American firms had no central capital market.

Public promotion of railroads initially produced monopolistic pricing, for public promotion led to a proliferation of exclusive routes. Later dualistic pricing became popular, with monopolistic rates for exclusive routes and competitive rates for competitive routes. Railroad experts and economists surmised that dualistic pricing was natural, and that it advantaged all customers by maximizing rail income. Public promotion also favored unitary firm structures, which would allow communities to retain control over the railroads they had sponsored. Railroaders concluded that as part of competitive organic economies, it was natural and efficient for railroads to remain in local hands and to retain their unitary structures.

THE PROMOTIONAL POLICY REGIME

State and local governments played large roles in economic life before 1870. States competed to win business in agriculture, manufacturing, commerce, and transport. Every state with a major port on the eastern seaboard sought to establish a transport route westward that would make it the East's commercial and transport capital. Competitive state mercantilism transformed state and local governments into active entrepreneurs in the pursuit of local development: "The elected official replaced the individual enterpriser as the key figure in the release of capitalist energy" (Lively, 1955, p. 81).

Although regional governments were reticent to introduce controls over private enterprises, they were not at all reluctant to contribute money and in-kind assistance to firms (Shonfield, 1965, p. 303). Like the British, Americans believed in minimizing governmental interference in private affairs, but Americans did not oppose government activism per se, so long as activism displeased no one. As the governor of Massachusetts argued in 1828 of proposed legislation to commission private railroads to the Hudson and to Providence: "Here then is a measure of encouragement to domestic industry within our own control—a system of internal improvement, opposed to no constitutional scruples, *of which no interest can* *complain*, and by which all interests will be promoted" (General Court of Massachusetts, 1828, pp. 25-26; emphasis added).

The state-business relationship that emerged was highly mutualistic. Government policy was oriented to ensuring the establishment of a diversity of firms to serve every vital function locally. Where demand for glass, beer, twine, or canvas went unfilled, states and localities schemed to attract entrepreneurs who would build manufactories to serve the need (Hartz, 1948). They used financial incentives of all sorts, from stock subscriptions to tax incentives to outright subsidies (Handlin & Handlin, 1947). The railway industry benefited handsomely from this public largess, as states and towns competed with one another to win rail depots that would link them with the world. "No ambitious town could stand idly by and see a new railroad go to a rival place. There was no option but to vote bonds" (Ripley, 1912, p. 38).

Down to about 1870, every major rail project won public subsidies. Estimates of the total governmental contribution toward railroad construction vary, but antebellum public aid may well have exceeded 50% of total outlays (Dunlavy, 1993; Goodrich, 1960). States and localities saw it as their inalienable duty to finance industries that would become the building blocks of local economies. As late as 1871 the Massachusetts Board of Railroad Commissioners would write: "It now seems to be generally conceded that some provision for the construction of a certain amount of railroad facilities is, in this country at any rate, a matter of public charge" (1871, p. viii).

BUSINESS STRAGEGY

Public activism designed to create self-sufficient local economies, by establishing key industries, had important effects on business strategy among railroads. Across industries, this policy regime discouraged the establishment of enterprises that would compete with existing firms, by directing capital to needs that were unmet and sectors that were underdeveloped. In the rail industry, it created an incentive for entrepreneurs to find unserved routes and win public construction aid for them. One result was that most early routes were monopolistic, even routes between major cities, and hence rate making was monopolistic. A second result was that mergers were rare and unitary-form firms remained the norm.

Monopolistic and Dualistic Pricing. Monopolistic pricing was common at first. Down to about 1850, most railroads held service monopolies to all points on their routes and hence could charge what they pleased. Dualistic pricing became popular thereafter. Railroads charged high rates to isolated towns where they held monopolies, but low rates to large cities where they faced competition. Thus a railroad that terminated in two major cities might charge 10 cents a ton for goods shipped from one terminus to the other, but 20 cents a ton for goods shipped only half that distance to an intermediate town. John Blair, president of the Warren Railroad, summed up the new rate prescription in a letter to another railroad president in 1858: "Our duty is to discriminate where we have competition and get our share and meet the trade, and whenever we can and there is not competition make it up—this we must do at every station be it large or small" (quoted in Cochran, 1965, p. 262).

Firm Structure: The Unitary Form. In 1825 the closely held family firm was far and away the dominant corporate form in the United States and throughout the world (Chandler, 1990). Mergers were rare in part because large firms would have demanded managers, and the idea of hiring managers to replace owners in day-to-day affairs was all but untested (Chandler, 1977); in part because mergers that implied joint ownership were incompatible with family control of firms; and in part because the high cost of transport made it difficult to achieve economies of scale via mergers in most sectors. By 1825 some textile firms had achieved fairly large size (Dalzell, 1987), but they grew through internal expansion rather than merger.

Between 1825 and 1870 most railroads retained their original unitary forms in part, then, because there was little precedent for merger. The typical railroad was controlled by a small number of investors or a single family. Two elements of the early policy regime discouraged mergers. First, because public promotion policies generated a proliferation of lines to serve different regions and discouraged the establishment of competing lines, early railroads seldom faced the kinds of direct competition that fostered mergers among rivals. Second, state and local governments that chartered and capitalized railroads treated them as integral parts of the local economy that were vital to manufacturing, agricultural, and commercial interests. Governments, as both shareholders and chartering authorities, resisted proposals to merge railroads, because mergers might take this public good out of local hands. Thus, before the end of the 1860s, when Jay Gould and his Erie associates sought to buy up failing railroads to create an interregional system, mergers remained extremely rare.

THE ECONOMIC PRINCIPLES DRAWN FROM THE ORGANIC MARKET

These economic conditions produced a vision of economic life that was collaborative, mutualistic, and organic. American states and localities competed as communities and saw their main competitors as other communities that sought to become centers of commerce, transport, and manufacturing. These ideas are evident in early policy discourse. In 1823 a committee of the Pennsylvania legislature proposed that the state inquire into the effects of New York's nearly complete Erie Canal, arguing that unless Pennsylvania sponsored a competing route, "her career of wealth will be less progressive than that of other states, and instead of regaining the high commercial rank she once held, she will be driven even from her present station in the system of the Confederacy" (quoted in Bishop, 1907, p. 172). Individual entrepreneurs perceived their destinies to be linked to the destinies of the communities in which they operated and thus came to see interregional competition as paramount.

The prevalence of dualistic rate structures, in which low long-distance rates coexisted with high short-distance rates, led railroaders to describe as natural and fair rates based on the presence or absence of competition, rather than on distance. They argued that dualistic rates were efficient and thus advantaged all customers. Where business could be increased by dropping rates, it was in the interest of railroads *and all of their customers* to reduce rates. As John Brooks, president of the Michigan Central, pointed out in 1859, railroads would increase their aggregate income by charging low rates on competitive routes. Clients on noncompetitive routes would ultimately benefit from dualistic pricing: "Every possible accommodation should be given to business from competing points. . . . It is neither wrong nor unjust to the people along the line that the foreign traffic should be done at lower rates, provided it is not done at less than cost" (quoted in Cochran, 1965, p. 273). Railroaders did not worry that although dualistic rates might maximize railroad income, they would put certain shippers from isolated regions at a competitive disadvantage. They only saw that monopoly and competitive routes had emerged naturally, and thought it natural that railroads should make the best of both kinds of routes.

Between 1825 and 1870 jointly held firms were popularized, in part as a result of such legal conventions as limited liability law (Coleman, 1990; Creighton, 1990); however, mergers among existing firms remained rare. The organic conception of economic life, in which interregional competition dominated intraindustry competition, led communities to conceive of their railroads as local enterprises built to transport goods and people to a regional metropolis. The idea of combining separate firms did not fit into this conception of economic life. Even where branch lines were built to connect secondary towns with main rail lines, founders—who sometimes included stockholders of the main lines—usually established separate companies to operate the branch lines. The closely held unitary firm continued to be the prototypical corporate form.

BRITAIN, 1825–1870

Were public promotion and the business strategies it produced inevitable? In Britain, policy, strategy, and economic thought were quite different. Parliament provided railroad charters, complete with rights to expropriate private lands, but otherwise remained stridently anti-interventionist (Dobbin, 1994b; Parris, 1965). Because public capital was never part of the calculus of railroad founding, railroaders focused on building railroads that would see healthy returns. They frequently duplicated popular routes that were already being served. In turn, competitors often set prices collaboratively. Long before 1870 railroad pricing had become cooperative on many routes. Long before 1870 railroads had pursued mergers to prevent rate wars. By 1870 British railroad leaders were describing price cooperation and merger as natural in the industry (Chester, 1981, pp. 177-179).

The comparative reliance of U.S. railroads on public financing has often been put down to capital availability. British railroaders, it has been argued, had ready access to capital. In fact, British railroads had little access to bank loans because British industry had financed expansion internally, and therefore London banks had scant experience with long-term industrial loans. When British rail entrepreneurs sought capital for their projects, they frequently had to establish regional stock markets that could attract local investors (Bagwell & Mingay, 1970, p. 28; Gourvish, 1980, p. 17). Although American railroaders had to win public subsidies to attract sufficient capital, British railroaders had to establish new financial institutions.

THE DEMISE OF THE PUBLIC PROMOTION MARKET

This first sort of market came to an end in about 1870, when public policy changed in two important ways. First, local, state, and federal governments foreswore future aid to railroads as a result of widespread corruption in the administration of public aid. Americans took instances of graft as evidence that excessive economic powers had been concentrated in the hands of government. By the end of the 1860s, 14 states had passed constitutional amendments either prohibiting or severely limiting future government aid to railroads and other private corporations; in 1872 the Credit Mobilier scandal tarnished more than a dozen senators and congressmen, and two vice presidents, bringing an end to congressional land grants (Cleveland & Powell, 1909, pp. 237-240; Dunn, 1913, p. 9). Second, most states regulated rates to prevent rate dualism. Americans took rate anomalies as evidence that too much power had been concentrated in the hands of private railroad entrepreneurs. By the end of the 1860s, state railroad commissions had been established across New England to prevent price inequities; by 1871 the Granger movement—farmers and ranchers opposed to rate discrimination against rural regions—began to win commissions to regulate rates across the Midwest and the South (McCraw, 1984, p. 57; Stover, 1970, p. 91). Many of these states regulated prices through short haul/long haul laws, stipulating that railroads could not charge more, in absolute terms, to ship goods short distances than they charged to ship them longer distances *over the same track*. These commissions made illegal the prevailing dualistic pricing strategy of charging low rates for competitive routes and high rates for noncompetitive routes.

Procartel Policies and the Cooperative Market, 1871–1896

THE PRICE REGULATION POLICY REGIME

After about 1870 American railroads faced a new policy regime. Two dramatic changes occurred almost simultaneously: Railroad prices were regulated through antidiscrimination laws, and public financing came to an end.

Meanwhile, state and federal governments began to encourage price fixing. In the 1870s voluntary price fixing was perfectly legal. Federal legislation from 1866, facilitating collaborative management and equipment sharing among railroads, seemed to signal federal acquiescence to railroad cooperation in rate setting (Kennedy, 1991, p. 145). By the mid-1870s states were encouraging price fixing as a remedy for unchecked price wars. Real competition had never existed in the industry, Massachusetts's commissioners argued. The most Massachusetts had seen was "fierce contests and violent fluctuations of very short duration," which destroyed firms but did not reduce rates in the long run (Massachusetts Board of Railroad Commissioners, 1875, p. 41). The commissioners concluded from this that the industry was not naturally competitive. Because interfirm cooperation was inevitable, they reasoned, the public would be best served by government oversight: "[A]n open and reasonable combination would probably be found far less fruitful in abuses than a secret and irresponsible one. One or the other must exist under the circumstances of the case" (Massachusetts Board of Railroad Commissioners, 1875, p. 41). Other states offered similar encouragements to price fixing.

Thus, with one hand state legislatures undermined the dualistic pricing strategy that railroads had come to depend on, and with the other they advocated price fixing to quell the rate wars that had emerged.

BUSINESS STRATEGY

The end of public capitalization made life difficult for the numerous railroads that had routinely returned to governments for new capital infusions. The Baltimore and Ohio, for instance, received $500,000 from Baltimore at its inception in 1827. The B. & O. won another $500,000 from Baltimore in 1828, $500,000 from Maryland in 1833, $3 million in bonds from both Baltimore and Maryland in 1836, $1.5 million from Baltimore in 1839, and $500,000 from Wheeling, West Virginia, by 1853 (Goodrich, 1960, pp. 80-82). After states made public financing unconstitutional in the 1860s and 1870s, railroads could not draw public funds to cover construction costs and operating losses. Meanwhile, the new antidiscrimination laws eliminated railroads' lucrative pricing strategy of offsetting low competitive rates with high monopolistic rates. On top of this, a 3-year economic recession hit America in 1873. Railroads scrambled to find business strategies that would return them to profitability.

C. F. Adams (1893) concludes that between 1869 and 1975, the combined effect of the antidiscrimination laws and the economic downturn produced cutthroat competition and scores of failures among railroads. For the first time, railroads engaged in price wars in the hope of bankrupting their competitors. As the Boston and Albany Railroad's annual report stated in 1875, the recent decline in railroad receipts was "due exclusively to the unprecedented competition that has prevailed during the greater part of the year, by which the rates of transportation to and from the West have been forced to the lowest point known in the annals of railroading" (McCraw, 1984, p. 39).

Cooperative Pricing. One result of the new rate competition was a novel rate-making strategy. As early as the 1850s, the freight agents of competing railroads had fixed prices informally. As physical links between rail lines were perfected and completed during the 1860s, the potential for competition skyrocketed, and railroads found it increasingly difficult to enforce common rates through informal agreements. Before rate regulation, railroads had made up for competitive losses by raising rates on short-distance monopolistic routes. Antidiscrimination law put an end to this by requiring that short-distance rates be lower than long-distance rates. It now became vitally important that railroads not only participate in but also abide by pricing agreements.

By 1874 the recession had caused the volume of rail traffic to decline significantly, sparking increased competition for the traffic that remained. Rates fell to levels that were not remunerative. "This resulted," wrote the Commissioners of Massachusetts, "in what was known as the 'Saratoga Combination' of 1874, through which the managers of the railroad lines attempted not only to establish common rates, but to make those rates binding upon each party to the combination through a central executive organization" (Massachusetts Board of Railroad Commissioners, 1878, p. 65). The enforcement of rates was the key to this strategy. The Saratoga Combination was followed by the Southern Railway and Steamship Association in 1875, the Eastern Trunk Line Association in 1877, and a series of other regional associations (Fink, 1979b). Albert Fink, the mastermind of these associations, insisted that they aimed to achieve public purposes: the "establishment and maintenance of reasonable and non-discriminating transportation tariffs" (Fink, 1979b, p. 22).

Firm Structure: Loose Integration. Unitary firm structure gave way to loose integration in the 1870s for two reasons. First, because pricing agreements were not legally enforceable, cartels collapsed whenever a participant faced a crisis that led him to cut his rates. Closer ties among railroads promised to prevent the breaking of pricing agreements.

Second, the new antidiscrimination laws precluded a common strategy for winning business: rate discrimination against customers of competing firms. Take the case that spurred the establishment of the Rhode Island rate discrimination law. The Boston and Providence railroad conducted the only rail service between those two cities but owned one of many shipping companies connecting Providence with New York. By cutting the rate on Boston-Providence rail service for customers who used their Providence-New York steamboat service, they could win all of the Boston-New York traffic for their steamboat. The B. & P.'s owners won steamboat business not by reducing steamboat rates but by discriminating against the customers of other steamboats wishing to use their rail service. The new law prevented discounting on one leg of a journey to win business on another.

Given these constraints, rail managers hoped that informal integration would help to discipline competing railroads. Pools, whereby railroads apportioned traffic or profits at a predetermined ratio, were the least constraining and most popular form of combination, but railroads soon employed more formal types of combination: joint stockholding arrangements, leasing agreements, holding companies, and trusts (Cochran, 1965, p. 136). Many firms pursued several of these strategies simultaneously. By 1880 virtually all of America's important railroads had at least joined pools that divided traffic or profits.

THE ECONOMIC PRINCIPLES DRAWN FROM THE COOPERATIVE MARKET

Analysts soon drew the conclusion that although competition among entrepreneurs had been needed in the industry's construction phase, economic realities rendered competition irrational in the next phase. Interfirm cooperation was to be the principle that guided the rail industry. There was no doubt, wrote Massachusetts's Commissioners of Railroads in 1878, that competition "furnished the great stimulus through which a succession of what would otherwise have been looked upon as impossibilities has been accomplished in railroad development," yet there was no denying that this very competition had produced harsh and unjust discrimination (Massachusetts Board of Railroad Commissioners, 1878, p. 78). Although some analysts had expected competition to prevail in the mature rail industry, the commissioners pointed out that recent experiences led to the belief that "uncontrolled competition is but one phase in railroad development and must result in some form of regulated combination"—their term for cooperation under state oversight (Massachusetts Board of Railroad Commissioners, 1878, p. 80).

Railroad entrepreneurs increasingly expressed the belief that price competition could only produce instability, bankruptcy, and ultimately exorbitant rates. As Robert Harris, president of the Northern Pacific, wrote in October of 1887: "*There was never a more fallacious idea than that low rates could best be acquired by competition.* This principle applies to almost all kinds of business but it does not apply to Railroads and other Highways" (quoted in Cochran, 1965, p. 362). For C. F. Adams (1893, p. 26), the theory of competition was "an economic theory misapplied" to the rail industry. "[W]hile the result of other and ordinary competition was to reduce and equalize prices, that of railroad competition was to produce local inequalities and to arbitrarily raise and depress prices" (Adams, 1893, pp. 119-120).

Adams found to be ludicrous the premise, underlying arguments for competition, that new competitors would enter the market should prices be out of line with costs. Those who championed rate competition held the unrealistic belief that "railroads were not monopolies. There was nothing to prevent the organization of new companies to construct parallel and competing lines of road. Here was the remedy through competition." Adams concludes: "the mere statement of it revealed its utter absurdity" (Adams, 1893, p. 130). Market entry was discouraged by two factors. First, the cost of entering a rail market was extremely high. Second, entrepreneurs could expect existing railroads, who invited market entry by charging high rates, to quickly undercut the prices of a new competitor. Moreover, when two viable competitors had been established, they invariably colluded to fix prices, with the knowledge that new competitors were unlikely to emerge.

According to Albert Fink, the mastermind of the early trunk line pricing agreements who has been called the "father of railway economics," the railway industry did not operate under truly competitive conditions. As a result, competition did not produce properly regulated prices. Price regulation could only be achieved by railroad cartels with the force of the law behind them. "A proper distinction should be drawn between healthy competition, regulated by natural laws upon correct principles, and competition which is merely the result of mismanagement. The natural laws of competition do not regulate changes in [railroad] tariffs" (Fink, 1979b, p. 9).

When it came to firm structure, railroad experts concluded that the industry demanded interfirm arrangements for coordinating traffic and stabilizing prices. As Charles Perkins, president of the Chicago, Burlington, and Quincy, wrote in 1879, railroads would naturally group themselves into cooperative systems of some sort. "This law, like other natural laws, may work slowly, but it is the law nevertheless" (quoted in Cochran, 1965, p. 433). C. F. Adams argued that the finite number of competitors on each route; the high costs of entering the market, and the fact that market entry would create overcapacity, overinvestment, and bankruptcy made some sort of collaboration inevitable. "When the number of those performing any industrial work in the system of modern life is necessarily limited to a few, the more powerful of those few will inevitably absorb into themselves the less powerful through trusts, pools, and other arrangements" (Adams, 1893, p. 121). Wherever the number of potential competitors is limited, "the effect of competition is . . . to bring about combination and closer monopoly. The law is invariable. It knows no exceptions. The process through which it works itself out may be long, but it is sure" (Adams, 1893, p. 121). Because the industry was naturally cooperative, government prohibitions against price fixing and integrated management would merely stimulate bankruptcies that would lead the industry toward monopolization.

In this second period, price theory and the theory of the firm changed. The idea that dualistic pricing was natural and just gave way to the idea that collaborative rate making, which would produce rates that were both proportional to distance and stable, was natural in the rail industry. Collaborative pricing took hold in other industries, such as steel and hardware, as well (Chandler, 1990, pp. 72-75). The idea that the unitary railway firm was part of an organic local economy, and was hence inherently independent, gave way to the idea that railway firms were part of a larger market that held many possibilities for competition. Informal integration between railroads in different regions came to be seen as efficient.

THE DEMISE OF THE COOPERATIVE MARKET

Anticartel sentiments ran high in the United States, largely because cartels represented just the sort of concentrated economic control that American state institutions vilified. As a result, the earliest agreements had incited fears of abuse in the public (Adams, 1893, p. 151). The problem, in essence, was that Americans saw economic concentration as inherently evil and as antidemocratic (Dobbin, 1994b, 1994c; McCraw, 1984). "The combination of railroads, it is claimed, is unrepublican,—through it the dynasty of the 'Railroad Kings' is insidiously asserting itself. This argument is of the kind which sets refutatior at defiance" (Adams, 1893, pp. 212-213). The huge powerful firms that dominated the rail industry in the 1880s represented, for Americans, an "evil tampering with the natural order of things. They were not merely economic freaks but also sinister new political forces—powers that had to be opposed in the name of American democracy" (McCraw, 1984, p. 77). The Interstate Commerce Act of 1887 forbade pooling and all forms of price fixing. The Sherman Act of 1890 outlawed trusts and other forms of combination designed to restrain trade.

Although it would be a decade before the Supreme Court ruled the Interstate Commerce Act's antipooling clause to be constitutional, public anticartel fervor and the passage of the Commerce Act marked the beginning of the end of the cooperative market.

BRITAIN, 1871–1896

Was this brief phase of cartelization in the rail industry inevitable? Was its demise inevitable? Between about 1871 and 1896, the American rail industry came to look more like the British, in that it depended on cooperative pricing and informal integration (Williams, 1885, p. 453). Parliament actively encouraged cartelization in the 1850s and 1860s by giving the force of law to cartel agreements. From 1860 Parliament condoned regular national rate-fixing conferences. New legislation in 1888 gave the Railway Commission a formal role in the establishment of common rates (Armitage, 1969; Davies, 1924). British policy differed in that, from the early 1870s, Parliament forbade selected mergers and sent the message that it opposed mergers in general (Bagwell, 1974, p. 164; Cleveland-Stevens, 1915, pp. 59-60). Thus Parliament followed the course C. F. Adams proposed of regulating cartels and discouraging mergers in order to protect the public interest and prevent the rise of monopolies. The British, like their American counterparts, came to see the industry as naturally cooperative and divined economic principles that followed a new cooperative theory that has been dubbed "laissez-collectives-faire" (Grove, 1962, p. 28). In Britain, as in the United States, cartels emerged in a number of industrial sectors, but in Britain the legislature did not subsequently quash cartels to restore price competition. The cooperative rail market survived until Parliament reorganized the industry in 1921.

Antitrust Law and the Competitive Market, 1897–1906

From 1897, when the Supreme Court upheld the antipooling components of the Interstate Commerce and Sherman acts, relations among railroads changed substantially. Rate associations failed, and railroads were forced to return to price competition to sustain market share. Railroad managers soon articulated a new vision of how the industry would operate. Now that price fixing was outlawed, railroad leaders espoused predatory pricing, or below-cost rates designed to drive competitors from the market. Now that informal integration was outlawed, railway analysts declared the industry naturally monopolistic and prescribed both end-to-end mergers that would create integrated long-distance service and regional mergers that would eliminate local rivals.

THE MARKET-ENFORCEMENT POLICY REGIME

The intent of both the Sherman Act of 1890 and the Commerce Act of 1887 was clearly to prevent "restraints of trade" in order to guard the economic liberties of consumers, competitors, and potential competitors. By outlawing price fixing and pooling agreements that would dampen free price competition, Congress sought to guarantee free and fair trade to all.

Railroads initially sought to circumvent the antipooling clause of the Interstate Commerce Act. In the decade after 1887, the Morgan clan encouraged railroads to adhere to collectively set prices (Cochran, 1965, p. 171). Rather than disbanding, the eastern and southern associations drew up new agreements in the hope of using the act for their own purposes. The Morgans, whose financial empire included substantial railway holdings, claimed that a clause in the act calling for "just and reasonable rates" gave railroads authority to collectively set fair rates (Chandler, 1977, p. 171). In December of 1888, Charles Perkins of the CB & Q proposed that the ICC be given the power to authorize price agreements: "How would it do to provide simply that when two or more railroads wish to form a pool they shall submit the agreement to the Interstate Commission" (Cochran, 1965, p. 199). The proposal failed, but some industry leaders continued to believe that pooling would eventually be deemed constitutional.

Railroaders fought the act for a decade, but the Court held, in *United States v Trans Missouri Freight Association* (166 U.S. 290, 1897) and *United States v Joint Traffic Association* (171 U.S. 505, 1898), that railroad agreements violated the antipooling clause of the Interstate Commerce Act as well as the prohibition against "restraint of trade" in the Sherman Act

(Kennedy, 1991, p. 154; Kolko, 1965; Skowronek, 1982, p. 158). Pooling and price fixing were now unambiguously illegal. Railroad managers soon predicted all-out price wars.

The Supreme Court's decisions had dramatic effects across many industrial sectors. Mergers reached an all-time high in the United States between 1897 and 1902.

BUSINESS STRATEGY

Predatory Pricing. Although many railroaders sought to circumvent the Interstate Commerce Act in the late 1880s, others believed that the intent of the law was perfectly clear and took actions right away to expand market share and capture their competitors. Rate wars reemerged. Charles Perkins wrote to the editor of the *New York Evening Post* on February 25, 1888: "The Interstate Law is responsible for the existing rate war. Pooling, or self-regulation, has been prohibited and nothing provided to take its place" (Cochran, 1965, p. 447). Under the predatory strategy, railroads dropped their rates to levels they hoped would drive their competitors out of business. For a railroad that faced a single rival, the ideal solution was to drive the competitor into bankruptcy and purchase his assets for a fraction of their value. This would leave the first company with a monopoly and with minimal capital obligations.

Firm Structure: The Merger Mania. The incidence of mergers and acquisitions skyrocketed, partly because of predatory pricing but also partly because formal integration became a positive business strategy, not merely an approach to escaping receivership. Annual railroad mergers in the United States had held steady at about 35 a year between 1890 and 1896. Suddenly, in 1897, they jumped to nearly 80 and in 1900 reached nearly 130 (Ripley, 1915, p. 458). The new theory of the firm called for integrated interregional railroads that could monopolize service on key routes. The idea of a self-sustaining system that would not face price competition, either in local or interregional markets, caught on. As Thomas McCraw concludes, of the effect of government efforts to undermine pooling: "Denied the opportunity to pool their traffic, American railroads devised an alternative method of imposing order on chaos. Each of the major lines began to build, purchase, or acquire through merger what one prominent executive called a 'self-sustaining system' " (McCraw, 1984, p. 51).

A number of railroads built systems by constructing new lines that closely paralleled those of their competitors in a particular region, but key financiers such as J. P. Morgan did what they could to promote mergers in place of new construction, which typically produced overcapacity. Morgan's organization was "prepared to say that they will not negotiate, and will do all in their power to prevent negotiation of any securities for the construction of parallel lines" (quoted in Chandler, 1977, p. 171). Morgan and his cronies did not always prevent parallel construction, but they did promote the idea that it was better to buy out potential rivals than to build competing lines. Paradoxically, then, although the Commerce Act was designed to undercut the concentration of power found in the cartel, it actually increased concentration through mergers, for cartels were illegal but mergers that produced monopolies were not, even if they were designed to restrain trade (Fligstein, 1990, p. 35).

THE ECONOMIC PRINCIPLES DRAWN FROM THE COMPETITIVE MARKET

At the end of the 1880s, American business and political leaders operated without clear principles for guiding economic and policy decisions. As the economist Henry Carter Adams wrote in 1886: "[T]he present generation is without principles adequate for the guidance of public affairs. We are now passing through a period of interregnum in the authoritative control of economic and governmental principles" (1954, p. 66). Before 1870 state and local activism in economic life had generated remarkable progress, but by about 1870 the idea of government activism had been thoroughly discredited by graft. In the 1870s and 1880s governments replaced activism with weak regulation for industries such as banking and railroading, but the result was unprecedented economic concentration that seemed to threaten the foundation of democracy. From the perspectives of government and business alike, both of the familiar strategies had proven disastrous.

From the 1890s, railwaymen explained the industry's peculiarities with ideas about fixed versus marginal costs that had been put forth by Albert Fink. Fink may have been influenced by the marginal revolution inspired by W. S. Jevons, Karl Menger, and Alfred Marshall. Marginal cost theory offered railway analysts an explanation of the industry's rate problems.

Thus, rate theory changed dramatically. Albert Fink's theory of fixed costs in the rail industry was at the heart of his ideas about pricing, competition, and combination. Fink made a clear distinction between the "fixed or inevitable expenses which attach to the operation of railroads, and which are the same whether one or many trains are run over a road" and the (marginal) costs associated with operation (Fink, 1979a, p. 39). "In the consideration of the subject of the cost of railroad transportation it is of the greatest importance to discriminate between the expenditures which vary with the amount of work performed and those which are entirely independent thereof" (Fink, 1979a, p. 39). The failure to comprehend this distinction frequently led railroads to charge below-cost rates unwittingly. A more general problem in the rail industry was that fixed costs were high, and this led troubled firms to set prices below their costs. Instability was inherent in such a system. Fink and his cronies did not blame public policies that prevented dualistic pricing for this problem, as they might well have, for they had come to accept antidiscrimination law as natural.

The enforcement of price competition also led to a new theory of the firm. Faced with competition, railroads must lower rates to just above costs: "If the obtainable rate exceeds cost, no matter how little, it becomes his interest to accept the terms offered. The important question to be decided is what is the minimum cost" (Fink, 1979a, p. 54). Because minimum costs were difficult to calculate, and because troubled railroads faced an incentive to offer below-cost rates, the rational railroad manager would seek to merge with his rivals in order to eliminate the possibility that he would have to compete with below-cost rates. Thus, Fink's economic theory explained why formal integration was desirable. In an industry such as railroading, in which competition can lower prices to unremunerative levels, stability can be achieved only through centralized rate making. Given that rate setting *among* companies was illegal, the only viable alternative was centralized rate setting *within* integrated companies.

Economies of scale distinguished the rail industry from many others, according to Henry Carter Adams. Where economies of scale obtain, enforced competition is destructive and self-defeating (Skowronek, 1982, p. 132). Such industries are inherently monopolistic, and the government can only check their monopolistic tendencies by subjecting them to public controls. Adams's theory of increasing returns to scale explained the inevitability of consolidation.

In sum, in this third period, legislation that had been adopted explicitly to protect economic liberties, rather than to increase efficiency, nonetheless led to a new vision of economic efficiency (Wilson, 1980). Natural selection gradually became the metaphor for macroeconomic efficiency.

BRITAIN, 1897–1906

Was legislation that imposed price competition on the industry inevitable? Americans quickly came to believe that it was. Antitrust discourse soon suggested that procompetition legislation merely reinforced the economic conditions found in the state of nature, yet other countries took very different views of cartels. In Britain, the Railway Clearing House had set rates nationally from the 1840s. By 1872, a member of Parliament reported, "I do not think that at this moment there is a competitive rate existing in the kingdom" (Fink, 1979b, p. 16). In 1888 Britain's Railway and Canal Traffic Act gave the Railway Commission authority to forge national rate agreements among the country's railroads (Dobbin, 1994b). Germany and other Continental nations likewise enforced rate agreements among railroads, rather than treating them as illicit (Chandler, 1990, p. 56).

Historians agree that the business strategies of predatory pricing and formal merger that prevailed after 1897 were stimulated by railway regulation and antitrust law. Alfred Chandler (1990) writes, "If interfirm agreements on rates, allocation of traffic, and pooling of profits had been legally enforceable in the courts, as they were in other countries, a powerful incentive for system-building by acquisition, merger, and new construction would have disappeared" (p. 57). In Britain, different policies eventuated in different business strategies. The combination of (a) antimerger policies, (b) procartel policies, and (c) strict antidiscrimination laws to stop predatory pricing led British railroads not to seek mergers at the turn of the century, but to continue to check competition through pools, cartels, and other sorts of interfirm agreements (Channon, 1983, p. 59). One result was that a cooperative market, like that which emerged in the United States in the 1870s, survived in Britain. A competitive market never arose there. Hence, between 1872, when Parliament began to discourage mergers, and 1921, when Whitehall consolidated railroads into regional monopolies, industry concentration changed little. Britain's largest railroads at the turn of the century held no more than 1,000 miles of track, but American railroads held as much as 10,000 miles (Chandler, 1990, p. 253).

Conclusion

Business strategy among American railroads went through three distinct phases during the 19th century. Pricing was at first monopolistic, then cooperative, then predatory. Firm structure was at first unitary, then informal integration, then formal horizontal and vertical integration. Different economic laws were articulated to accompany each of these strategies. The idea that economic growth and individual prosperity would result from local organic economies actively pursuing progress was articulated during what I have called the organic market that operated between about 1825 and 1870. The idea that intraindustry competition was normally efficient, but that the rail industry constituted an exception because of high entry costs, was articulated during the cooperative market that operated between the early 1870s and the late 1890s. The idea that high fixed prices and economies of scale made the industry naturally monopolistic, and thus that efficiency would be achieved as monopoly was approached, was articulated during the competitive market that operated after about 1897.

Was it public policy that produced these changes over time in the American rail industry, or were these stages inevitable because of the economics of rail transport? Comparisons with the British case suggest that public policy played a key role in shaping business practices and economic ideas. In the first period, American regional governments financed railroads, but British government left entrepreneurs to their own devices. An organic interregional vision of competition emerged in America that never appeared in Britain. In the second period, American governments ended public aid, outlawed dualistic pricing, and encouraged cartels. British policy looked similar. In both settings, cooperative pricing practices and informal integration emerged. In both settings, railway economists dubbed the industry naturally cooperative. In the third period, when the United States outlawed price fixing and *informal* integration, Britain instead promoted price fixing and discouraged *formal* integration. In consequence, the United States saw predatory pricing and mergers, and Britain saw ever-stronger rail cartels. American economists soon dubbed the industry naturally monopolistic, but their British counterparts continued to view it as cooperative.

The history of American rail policy, business strategy, and economic thought underscores important insights from neo-institutional organizational theory. First, public policy played a key role in constituting the economic environment, even when policymakers viewed their actions as merely restorative of natural economic conditions. Whereas most institutional studies have examined changes within the U.S. antitrust, procompetition, policy regime that has been in force since late in the 1800s, by looking at a different slice of history, I have shown that policy shifts can completely alter the ground rules of economic life. Second, new business strategies were constructed under each policy regime, and they came to be embraced by the industry as a whole. Although the diffusion of business strategies has not been the focus here, as it is in many neo-institutional studies, we saw some direct evidence from each period that railroaders actively constructed collective business prescriptions. Third, new policies and the business strategies they generated led to entirely new ideas about economic efficiency. In each period, a new theory emerged to explain the efficiency of macro policy institutions and of micro business strategies simultaneously. In the first period, for instance, the theory held that macroeconomic growth would occur as regional firms banded together and competed with other regions, and microeconomic efficiency would result from collaboration among regional firms in different sectors. Economic ideas, then, were abstracted from experience in each period, and experience was manifestly shaped by industrial policy.

Finally, American rail history reinforces arguments by political institutionalists that public and private institutions become mutually reinforcing over time. Recent studies have shown that policy institutions are reinforced by the private institutions that surround them (Scott, 1994a; Thelen, 1991; Zysman, 1983)—that policy inertia is not a result of internal processes alone. In the railway industry, during each period railroaders adapted to the policy environment by developing business strategies that would operate in tandem with public policies. During each period they also articulated economic theories that made both public policy and business strategy rational. These private-sector processes served to reinforce public policy. The policies of the first two periods were abandoned not because they lacked private-sector reinforcement—in fact, railroads resisted both major changes. Rather, early policies were altered because they appeared to conflict with institutionalized precepts of American democracy, which defined concentrated power as both antidemocratic and inefficient.