BUSINESS AND MARKET CHALLENGES AND THEIR EFFECTS ON THE FOUNDATIONS AND TRAJECTORY OF U.S. BROADCAST POLICY

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ABSTRACT This article argues that the origins of U.S. radio policy, and the reasons for the differences with European nations, were driven by general industrial development policies, by previous decisions involving communications industries, by national financial and economic conditions, and by business and geographic challenges. These factors combined to create a policy environment in which the interests of private enterprises became predominant in developing radio and radio policy. It asserts that much of the existing literature on broadcasting policy is disconnected from preexisting policies, market conditions, economic and social history, and business strategy and that it ignores the important roles those played in setting the conditions under which policy was made and creating constraints for those constructing the policies.

KEY WORDS: policy, broadcasting, economic aspects, business issues, national development, industrial policy

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The origins of U.S. broadcast policy remain relevant today because contemporary policy is based on fundamental principles put into place in the 1920s and these continue to influence debates over spectrum allocation, station ownership, and public interest requirements. Yet to many, the economic and business rationales for early policy development are unclear, and the roles of private companies in their creation are misunderstood. Some observers, particularly in Europe, continue to wonder why the U.S. took a different path from European nations regarding broadcasting structure and operation.

Although significant political, economic, and cultural differences existed among European countries, their policies toward emergent broadcasting in early 20th century relied primarily on creating either state broadcasting or state-related public service broadcasting—two significantly different paths than chosen in the U.S. The development of European broadcasting in most cases trailed the U.S. in temporal terms, and radio for public use emerged at different speeds in various countries. Despite the differences among European nations, policy makers eschewed the privately owned, commercially funded, and light regulatory approach pursued in the U.S. This article does not make a comparative policy analysis between U.S. and European nations, but it seeks to provide market-based evidence of why the U.S. took a separate path.

Literature on the establishment of U.S. radio policy—later expanded to broadcasting as a whole when television appeared—has tended to approach its development from political history and political economy approaches, focusing on political philosophies, political debates, and the exercise of political power by the large commercial firms that created the new communications technology (McChesney, 1993; Napoli, 2001). Although those are salient factors, this article argues that the development of radio and radio policy were far more complex and were driven by a difficult and multifaceted business milieu that induced policy makers and the managers of radio firms to make choices that led toward the policy path that was ultimately implemented and maintained throughout the 20th Century.

Much of the existing literature on the history of broadcasting and broadcasting policy presents the policy debates as disconnected from general governmental industrial development policies, market conditions, economic and social history, and business strategy and history. Consequently much of the literature ignores the important roles those played in setting the conditions under which policy was made and creating constraints for those constructing the policies.

This article reexamines the origins of U.S. policy using a different set of lenses than those predominantly employed to interpret its development and thus focuses attention on significant economic and business factors underpinning its construction. It uses industrial development and business perspectives to assert that U.S. radio policy did not represent a unique policy development, but was driven by a history of previous policy choices involving industries as a whole and by previous decisions involving other communications industries. It further argues that national financial and economic conditions and business and geographic challenges created a policy environment in which the interests of private enterprises became predominant in developing radio and that radio policy emerged by default rather than by grand design.

The article then uses organization theories from management and sociological literature, particularly institutional theory (and its renaissance as new institutionalism) and structuration theory, as theoretical lenses through which to view the development of radio and radio policy and why the continuation of radio and television policy throughout the twentieth century maintained the policy approach long after the industrial and market conditions that led to its introduction disappeared.

Institutional theory posits that structures are built for organizations and their personnel to operate within, that these accommodate the routines, rules, and norms of practice that become institutionalized, and that these inhibit changing established practices (DiMaggio & Powell, 1983; March & Olson, 2005). In this view organizations can influence the development of these structures, processes and norms through state and social actions that institutionalize their goals and favorable practices (Meyer & Rowan, 1977). However, new institutionalists argue that the extent to which they do so is constrained by irrationality in organizational structures and processes caused by cultural, social and psychological factors (Powell & Dimaggio, 1991; Scott, 2001). Structuration theory argues that organizational structures are further influenced and constrained by their personnel and the routines and practices they embrace (Giddens, 1984).

One avenue of theory posits that institutional persistencies develop that create path dependencies that direct choices and behavior long after their initiation. Thus, organizational evolution and values influence how organizations operate and make decisions. This produces structural inertia because the norms and routines stabilize organizational structures and practices and direct strategies and choices. Structural inertia creates persistencies in how an organization responds to new circumstances or changes in the environment (Hannan & Freeman, 1984; Arthur, 1994; David, 1995; Scott, 2001). Over time, they create path dependencies that narrow the ability to take alternative actions.

This body of literature applies well to understanding the development and continuation of U.S. broadcast policy. Kay (2006) notes that "past policy decisions act as a constraint on the options available to current policymakers" (p.2) because they accumulate over time, creating path dependencies that constrain the political and economic choices. Although policy path dependencies create benefits in terms of stability and increasing returns, they create switching costs, entrench inefficiencies, and create policy trajectories that are difficult to alter.

The roles such persistencies have played in communications policy have been been recognized by Cherry and Wildman (1999 and 2000), who argue that the necessity to work through private entities in the U.S. has lead policy to support creation of markets, incentivize economic investments, and support market viability. Policy legitimacy and political feasibility create sustainable policy and policymaker "views are influenced by their perceptions of prior policy choices and the impact on economic behavior of parties" (Cherry, 2006). Consequently, policy trajectories tend to endure and most change is incremental.

POLICY CHALLENGES AT BROADCASTING'S CREATION

Communication policy mechanisms and principles were largely absent as radio developed, creating a green field in which major companies played a significant role in developing policy. Three primary philosophical and economic questions faced policy makers: 1) To whom do the airways belong? 2) Who should get to use spectrum? 3) How should broadcasting be financed? (Coase, 1959; Mander, 1984). Radio companies had self-interests that could be helped or harmed by the answers selected, so they vigorously participated in the processes designed to establish those policy answers.

Whereas European nations developed civilian radio as government or quasi-governmentally funded initiatives, that option was not practical in the U.S. because the financial resources and capabilities of European and U.S. governments varied considerably. European countries typically had longer histories of centralized governments—whether in the form of monarchies, military governments, or democracies—and all had a variety of well-established forms of taxation that supported these governments. In the U.S. at that the time, however, much governing power was decentralized into the states rather than located in the federal government because of the principles of federalism (Beer, 1998; Johnson, 2006). The U.S. federal government was small, under-funded, and had a relatively narrow governance scope by comparison to European counterparts. Its expenditures were primarily for defense and transportation purposes and for overseeing activities among the states, in which most sovereign power was vested. In 1920 the total federal budget (adjusted to current dollars) was approximately 36 times smaller than it is today[1] and amounted to only about seven percent of the gross domestic product.

One important reason for the U.S. government's small size was that it had received the constitutional right to levy income taxes only seven years before the institution of general radio services in 1920. Individual and corporate income tax rates were extremely low—only about one-half of one percent. Consequently, the U.S. government had relatively little money, little contact with the population, and offered few services to citizens in 1920. It offered no old age pensions and no health care. The most common direct service that citizens received from the federal government was that offered by the Post Office. If the federal government wanted to establish government-financed broadcasting at the time, it would have faced huge financial hurdles, and it had few precedents to justify providing radio as a public service because it provided so few public services of any kind at the time.

U.S. industrial development policy as a whole was influenced by these financial and governmental scope and scale limitations. Consequently, the federal government relied on the use of land grants and other non-

[1] The federal budget in 1920 was $6.4 billion (United States, 2008). The author calculated the inflation adjustment using a standard inflation calculator and then divided it by the last budget to achieve the comparable figure.

financial incentives in the nineteenth century to promote western expansion and the development of railways, canals and waterways, and communications systems (Sanborn, 1899; Thompson, 1947; Mercer, 1982; Lubrano, 1997). The subsequent industrial revolution brought increasing wealth to the nation and the federal government forged friendly links with industrialists and major firms to further promote business and national development (Becker, 1981; Galambos & Pratt, 1989; Klein, 2007).

The limitations on government financing for the creation and development of broadcasting pushed radio policy towards promoting and protecting private investment—supported by government incentives—as had previously been done with tax incentives and land grants to those who built railways and telegraph and telephone services (Goldin, 1947; Mercer, 1982; Dobbin, 1997). General Electric and other firms used such incentives and other support for industrial research and development in creating radio technology and its patents (Reich, 2002).

This approach to radio policy synchronized well with other policies that generally supported private enterprise and encouraged investments in new businesses. Noble (1977) shows that industrial policy in the U.S. throughout the twentieth century promoted cooperation, consolidation, and reorganization of industries to spur economic growth. Those factors also played significant roles in the development of broadcasting.

The 1920 presidential election put Republican Warren G. Harding in the White House and gave him a Republican majority in the House and Senate. The landslide election was seen as a repudiation of Woodrow Wilson's policies, which included creating the Federal Reserve to reduce the power of private banks over the economy, strengthening of antitrust laws, and control of many industries and businesses during the First World War. Harding vowed to create a climate favorable to business and business development, underscoring his views in his inaugural address: "I speak for administrative efficiency, for lighten tax burdens, for sound commercial practices, for adequate credit facilities, for the omission of unnecessary intervention of government with business…." (Harding, 1921). Harding appointed Herbert Hoover as Secretary of Commerce. Hoover expanded the scope of the department, established trade offices overseas, created a business friendly environment, and elevated the status of the department within the federal hierarchy.

Only rudimentary broadcast regulation existed before 1920 and it was originally undertaken by the Department of the Navy. In 1912 the Navy persuaded Congress to regulate private users, primarily amateur broadcasters. Congress gave the Secretary of Commerce authority to issue licenses and to regulate some spectrum use.

Douglas (1987) argues that the military was uncomfortable controlling civilian uses of radio, that Congress provided limited guidance in developing the industry, and that Secretary of Commerce Hoover—in whose dossier radio regulation was placed—favored promoting industry-government cooperation in many industries and thus created conditions in which the interests of major companies involved in radio became the foremost influences in creating the basis of broadcast policy.

As amateur use of radio began to give way to commercial development, leading manufacturing and broadcasting companies played extensive roles in the annual Washington Radio Conferences sponsored by the Department of Commerce during the 1920s to discuss how to structure and finance radio (Douglas, 1987; Slotten, 1993). Secretary of Commerce Hoover had a sympathetic ear because he perceived his role in the Department of Commerce as not only organizing, but also promoting development of the new industry.

Although policies could have required payments from broadcasters for use of radio spectrum—similar to payments already in place for use of public lands by ranchers and oil, timber, and mining companies (Coase, 1959 and 1965), the Department of Commerce and Congress were persuaded by broadcasters that free commercial use with limited regulation should be pursued. As commercial radio developed further, disputes over the degree of regulation emerged and courts subsequently ruled that the Secretary of Commerce's authority was highly limited, leading Congress to establish the Federal Radio Commission with new and expanded powers in 1927. It extended even more authority to regulators when it established the Federal Communications Commission seven years later (Coase, 1959), but none of these altered the fundamental policies on which radio broadcasting was constructed.

The policy trajectory established in the 1910s and 1920s attempted to solve the wide range of policy, business, and geographic challenges by creating a commercialized system, in which broadcasters were protected from significant competition, and in which government influence was limited (Minasian, 1969; Hazlett, 1990). The decisions to follow the route were the result of the weakness of the federal government, the strengths of the private companies developing the industry, the business risks those companies faced, and other challenges that made the prospect of government or quasi-governmental broadcasting extremely weak.

The general perceptions of how policy should be implemented, the norms of previous governmental policies toward industry generally, and previous practices used in supporting developing of transportation and communications were thus transferred to radio. These developments thus support the institutional and structuration theories that posit perceptions, practices, and norms remain in place when new phenomena are encountered and create persistencies in organizational choices and paths followed.

Geographic and Technical Challenges

The geography of the United States presented conditions and challenges experienced by no other nation developing radio at that time and they played a significant role in the creation of the independent, local radio system that emerged in policy.

In 1920 the U.S. had 2,787 incorporated cities and towns, 400 with populations over 25,000. The 100 largest cities combined were the home of less than one-third of the U.S. population (U.S. Department of Commerce, 1921). By comparison to the United Kingdom, the U.S. had a population two and a half times larger, and it was spread over an area 35 times larger.

The geographic spread made it difficult for policy makers or radio companies to contemplate creating an effective unified, nationwide broadcasting system in any form. It was impossible to cover the country from a single transmitter, and a system of re-transmitters was impractical because the country was relatively unconnected and no system could reach the bulk of the country or its population. The capabilities and capacity of the telephone system that would have to be the backbone of such a broadcasting structure were highly limited. Although one in five homes had a telephone, few had long distance service. In fact, the first transcontinental phone call had been made only five years earlier and most cities had no connection to transcontinental services (Fischer, 1994).

Under such conditions it would have been difficult to create a centralized national broadcaster, whether as a state broadcaster or a quasi-governmental public service broadcaster, because universal service could not be offered. These challenges, combined with the lack of federal financial resources, steered policy toward the establishment of privately operated independent local broadcast stations throughout the country.

Ultimately, as commercial radio developed, a business model for linking these independent local stations in national networks emerged, but it also faced the geographic and technical challenges. Efforts to develop networks of stations were slowed by the speed of development of the national telecommunications infrastructure. Even AT&T, which operated a network of radio stations and distributed programs through its land lines, was able to connect only 26 cities and stations by 1925 (White, 1947).

The creation of the locally driven radio system to overcome geographic and technical challenge created a policy practice and norm that could have been altered when nationwide telephony was extended to rural towns in the 1930s and 1940 and created an environment that provide near-universal telecommunications service to American cities and towns. However, localism remained a foundation of broadcast policy until the end of the twentieth century, revealing the strength of path trajectories in public policies.

Business and Market Challenges

Business and market challenges in the development of radio also had a significant influence radio policy making and industry structure.

The general economic conditions of the market were significantly affected by the First World War, in which large amounts of the productive capacity of the nation were diverted to production of goods for sale to allies and then ultimately to the U.S. military after the U.S. entered the war. In the aftermath of the war, inflation, high unemployment, and labor unrest plagued the nation and reduced consumptive capacity. These factors made business investments in the development of a new consumer medium highly risky.

In the years leading up to the 1920s, radio technology was pioneered by the Marconi Wireless Telegraph Co., Westinghouse Manufacturing, General Electric, and AT&T (Sterling & Kittross, 1978; Baker, 1998; Rudel, 2008). The primary customers for their products were governmental agencies and maritime firms. The potential for commercial broadcasting presented intriguing opportunities, but also entailed great risk, so economic incentives for private investment were desired by the firms. To establish commercial radio broadcasting, the radio companies needed to finance investments and incur significant operating losses in the belief that their longer term business interests would benefit if success was achieved.

Broadcast stations faced great risk because of uncertainty over whether there would be consumer demand for broadcast services and whether consumers would be willing to invest in the price of receivers. This was compounded by the joint product characteristics of broadcasting—consumers would not buy receivers unless there were broadcasts to receive and stations could not be maintained without some sort of revenue. When David Sarnoff wrote his "radio box" memo outlining its commercial opportunities for Marconi Wireless Telegraph Co. in 1916, these challenges and other considerations ultimately led the company to reject the idea at that time (Benjamin, 2002; Archer, 1938; Benjamin, 1993).

How broadcasters would pay operating costs for stations presented a significant challenge. Manufacturers and distributors of receivers began to cross-subsidize the earliest commercial broadcasters with revenue from receiver sales, but it was a highly risky business proposition because the price for receivers was relatively high compared to consumer income. In 1920 per capita wealth of U.S was only $2,689 and the average family spent less than $600 annually on food (United States, 1923). With an average radio set costing $50, it roughly equated with the costs of feeding a household for one month.

Radios were also being introduced at a time when households purchased relatively few finished consumer goods, so buying a receiver required a significant change in consumer outlook and behavior. Most food was acquired fresh and unprocessed. Family members bought little clothing, making much of it at home instead. Most households did not have automobiles, refrigerators, or washing machines. Purchasing a radio, then, was not merely a matter of expending money but a willingness to engage in what was becoming a change in consumerism—buying finished goods and goods for purposes other than subsistence. Radio kits were available and allowed early adopters to receive broadcasts on rather crude receivers and speakers (often in the form of earphones), but they required some technical ability and did not provide the fuller listening experience that came with manufactured sets so they were not a full substitute.

Another particular market challenge was that radio use required electricity. Although electrification was taking place, it was not widely available when radio was being introduced. By 1920 only about 35 percent of all household had electrical service (Kyvig, 2001) and most rural areas—where half the population lived—had no electricity at all. Consequently, the prospects of selling radios to households in rural areas where the majority of the population lived were rather low. Some battery powered radios were available in the period, but the batteries were very expensive, unwieldy for most home use, and needed recharging from an electrical source that might be miles away.

The decision to manufacture and offer radio sets for sale thus had to be made under conditions of high commercial uncertainty and without access to many households.

Figuring out how to pay for operations of broadcasting also introduced complex challenges. Taxes, license fees, subscription fees and advertising for paying station operating costs were suggested, but all carried significant uncertainty and risks. These same considerations were encountered in European nations, as well as the reality that commercial broadcasters would want to serve only cities from which economic benefit could be obtained (a form of market failure). This led many to choose to establish broadcasting as a governmental or quasi-governmental service and to provide universal service.[2]

In the U.S. the lack of policy consensus and clear financing opportunities produced governmental inaction. Radio companies were forced to endure the high business risk of cross-subsidizing broadcasting

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2 Many observers are unaware that the differences between the U.S. and the U.K. approach to radio development were not initially apparent, however. Radio in the U.K. initially developed in the same pattern as in the U.S., with its origins and operations guided by a consortium of American and British radio and electrical appliance manufacturers that established the British Broadcasting Company in 1922 (Coase, 1947; Curran, 1972; Briggs, 1985). The U.K. operations faced the same problem that receivers could not be sold if broadcast signals were unavailable and broadcast signals were useless if no one received them. As in the U.S., the companies in the U.K. were less interested in operating stations and more interested manufacturing because there was little money in the content side. U.K. policy was based on principles of limiting the number of actual broadcasters (creating monopoly) and attempting to provide universal service throughout the nation. The business arrangements required that only British-manufactured sets be sold and provided for broadcast income through a royalty payment on sets sold and part of the license fee paid government to possess a receiver (Jome, 1925; Coase, 1947). The commercial broadcasting company operated for four years and was successful in receiver sales and a developing a the radio audience, but income from broadcasting was limited. This occurred in a period in which Conservative government regained power and concerns over the increasing organization and radicalization of workers rose. That concern peaked with the Great Strike of 1926 and the government's imposition of martial law. Anxious to help preserve public order and ensure a moderating influence over the public, the government essentially nationalized the private broadcasting company, establishing the British Broadcasting Corporation which began operating in 1927. In the transformation, the private radio and manufacturing firms gave up their broadcasting operation with little argument because they still owned the most lucrative potion of the business—manufacturing and selling receivers—and because their shares in the commercial broadcaster were purchased at face value. The lack of resolute commercial opposition toward the change can be seen in the fact that John Reith—who led the private company—was asked to lead the new quasi-governmental enterprise.

with receiver sales. However, they concurrently pursued strategies to reduce business risk and make the choice to enter and stay in the market more palatable.

In 1919, the Radio Corporation of America was created by the leading firms, with General Electric having controlling interest. The firm acquired patents from the Marconi Wireless Telegraph Co. of America and made patent cross-licensing agreements with Westinghouse Manufacturing, AT&T, and other firms that were minority owners. The companies agreed to divide segments of the industry, effectively creating a cartel in which GE and Westinghouse manufactured sets, RCA distributed and sold sets, and AT&T made and sold transmitters (Gleason, 1938 and 1939; Sobel, 1986).

The economic benefits from the reduced competition due to these market divisions, and their joint dominance of the industry, combined to help create beneficial conditions and public policy to help reduce the business risk in establishing the commercial industry.[3] Nevertheless, that risk remained particularly high in 1920 and 1921 when receiver sales were low and many commentators dismissed radio as a passing fancy. Throughout the 1920s the national economy gradually improved, creating better market conditions for both set sales and advertising. The manufacturing sector grew significantly and national productivity increased by two-thirds. Nevertheless, the economic situation for households did not improve equally, and real wages actually declined ten percent in the decade.

The sales climate was dampened by a recession in late 1921 and early 1922. In 1922, however, 100,000 consumer radios receivers were sold and the following year that number reached half a million. By 1925, five million households had radio sets (Barnouw, 1966). By 1930, sixty percent of households had purchased radios.

Although radio sets were being rapidly diffused in the 1920s, the business models for broadcast stations and networks developed more slowly. Although they had listeners, broadcasters still struggled to create workable revenue streams and still relied on cross subsidies from manufacturing operations. Those challenges began to diminish as national radio advertising developed in the last part of the decade. In 1927 radio

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3 The cartel was not without its critics, however. AT&T's control of high quality retransmission lines—and its refusal to let other broadcasting competitors use them—brought the complaints from other broadcasters and generated interested from antitrust authorities. In 1926 the company left the broadcasting part of business to avoid antitrust action, but it kept the radio transmission business and offered it to other broadcasters. Nevertheless, the monopolistic tendencies remained in radio set manufacturing and national broadcasting—and later television manufacturing and national broadcasting--until the last decades of the twentieth century.

advertising expenditures were only $4.8 million, but by 1930 had boomed to $40.5 million (Stirling & Kitross, 1978). Although this clearly reduced the limitations on financial resources, radio expenditures still represented only about one percent of total advertising expenditures by 1930.

The limitations on the market for receivers and radio services during its first decade, combined with the reliance on private companies to fund its development, created the need for large companies with significant capital to be involved, promoted cross-subsidization between receiver sales and content provision, and led to the creation of a cartel to reduce business risk. These developments underpinned the notion that the industry needed structural protection to protect its investments and major companies used this rationale in arguments to steer policy toward that effect.

That policy trajectory remained in place for nearly 80 years, supporting institutional and structuration arguments about difficulties of changing norms and practices once they become entrenched.

POLICY DECISIONS AND STRUCTURAL DEVELOPMENTS

The wide array of challenges discussed above led to the establishment of the radio policy path that relied upon private investment for development of the industry and market-based financing of operations. Because of lack of government resources and a general public distrust of centralized power in government, acceptance of the idea that radio should be privately operated, as the telegraph and telephone services were, emerged. In this environment electrical engineers played major roles in developing the broadcasting system by promoting technical policies based on technical pragmatism (Slotten, 2000). Electric appliance companies promoted policies that would develop the radio receiver businesses (Barnouw, 1966). Concurrently, the public's distrust of centralization of power in companies led policy makers to diffuse radio station ownership and ensure that no single private operator dominated broadcasting.

Radio broadcasting policy thus came to be guided by several fundamental principles: 1) radio should be locally oriented and locally owned; 2) stations should be established in as many localities as possible; 3) investments made in radio by private firms should be protected; and 4) the number of stations in each market should be increased whenever possible without harming pre-existing commercial broadcasters.

Regular audio broadcasting in the U.S. began in 1920, when KDKA began broadcasting in Pittsburgh as the first licensed commercial broadcaster (Hilliard & Keith 2004). The number exploded in the years following. By 1930, 618 stations were in operation and by 1940 the nation had 765 broadcasters (Stirling & Kittross, 1978). The broadcasting system that the policies produced essentially meant that these stations relied primarily upon locally produced programming, combined with some daily programming from a few major national providers and syndicated programming from a second tier of independent production companies.

During the 1920s and 1930, three important networks began providing national programming: National Broadcasting Company, Columbia Broadcasting System, and Mutual Broadcasting System.

In additional to the commercial operators, the government authorized a special class of educational radio stations, typically operated by universities and other institutions of learning. In the earliest operations, these were a continuation of experimentation in broadcasting, but then they became non-commercial stations providing educational programs, farm reports, and local weather. Later they added some music to their programming. In many cases educational stations were founded in areas where commercial broadcasting was not yet present or viable, but over time commercial stations were widely founded and a mix of educational and commercial stations coexisted.

The availability of broadcasting stations spurred the sales of radio receivers as manufacturers had hoped. They led to the introduction of radio sets for use in home and commercial locations and models that ranged from functional to decorative. By 1923 RCA offered receivers manufactured by General Electric and other companies that ranged in price from $75 to $420 with a 200 to 300 percent markup over manufacturing cost (Douglas, 1991).

The structure of the radio industry created by the combinations of policy and business choices remained clearly in place throughout the twentieth century. However, when television appeared, Congress and regulatory authorities faced very different technical, business, and market factors than had been present four decades earlier, and they could have potentially established different policies. Instead, they extended the fundamental policies and regulatory approaches adopted for radio to the audiovisual medium, so its development followed a similar trajectory: private, independent local broadcasters, providers of national programming, and contractually created networks of stations, supplemented with local educational television broadcasters.

When extending radio policy approaches to television, policy makers did not adapt it to changes in market conditions. The fundamental challenges of geography and the lack of technical capability for reaching population throughout the nation had faded making choices other than localism possible. The role of government in public life had changed and its size and financial resources had grown making public broadcasting options possible. Market challenges had diminished because majority of the country was electrified and because urbanization, wage earning, and rising wealth had increased spending on consumer goods. Consequently, the business risks faced by companies in establishing television were lower than when radio was established. Advertising as a whole was well established when TV developed and realistically could be seen as providing resources for broadcasters, thus reducing the need for cross subsidization that had existed when radio appeared.

Nevertheless the fundamental policy elements created a quarter a century earlier remained in place despite rising complaints that broadcast policy was hampered by the continuing path trajectory of early policies appeared in the second half of the twentieth century. The continuing reliance of policy makers on radio policy principles set in the 1910s and 1920s can be seen as a form of path dependency that made alternative principles and policies appear to be outside the norm and thus undesirable.

Two significant economic arguments about the need for change were made by Coase, who asserted that the "root cause of the poor performance of both the FCC and the American broadcasting industry is the result of the way in which two basic economic questions have been handled: these are the allocation of frequencies and the method of finance of the broadcasting industry" (1965: 162), and Steiner, who showed that the established radio policies limited station availability and program choice (Steiner, 1979). The two argued that the policy system created inefficient distribution of radio spectrum and program provision: Coase urging sale of spectrum to broadcasters and Steiner promoting less localism and more concentrated ownership.

Without arguing the merits of their views, the fact that two such noted economists could assert those positions and policy remain relatively unchanged until the end of the century shows the influence of the early path trajectories. Their criticisms were joined by a host of media and social critics, many of whom urged more non-commercial radio and television broadcasting—including public service broadcasting—to limited effect because the institutionalized policy persistencies remained in place.

Consequently, the fundamental policies changed little throughout the 20th century, By the 1990s, however, changes in the communication landscape and a more market oriented regulatory approach led to passage of the Telecommunications Act of 1996 that removed two significant elements of the policy that had existed for three-quarters of a century. It removed the elements that ensured protection of existing stations, allowing the market rather than regulators to decide how many stations a locality could support and it effectively ended localism by allowing the creation large non-locally owned broadcast firms (Telecommunications Act, 1996). This latter factor might have been opposed by local owners except that it rapidly increased demand for those stations and enriched them though higher sale prices.

The durability of fundamental policy principles put in place in the early twentieth century supports the views of institutional and structuration theory scholars that persistencies of norms and practice create path dependences and trajectories that are difficult to alter even when the underlying conditions that led to their emergence are changed.

DISCUSSION

This article has shown that geographic, governmental, market, and business conditions played significant roles in the development of broadcast policies and that institutional and structuration theories thus provide significant explanation of the durability of the policy trajectories since their establishment.

It is clear that key early players in the radio industry sought to influence policy to establish their vision of what radio should be and how it should be operated through their participation in the Radio conferences, lobbying efforts, and implementation of business plans. They did so—and received public policy support—because geographical, technical, governmental, market, and business conditions limited alternative courses of action that would lead to a timely development of radio. The efforts of companies helped establish the prevailing norms of ownership and operation. The roles they played underscore the view of Meyer and Rowan (1977) that state and social mechanisms are used by business organizations to institutionalize their interests and goals.

The division of manufacturing, distribution, retailing, and broadcasting activities among the leading firms created separate market segments. Indeed, radio receiver manufacturing is almost nonexistent in the U.S. today, long having been given up to Asian manufacturers. Distribution and retailing of radio receivers has likewise left the hands of radio firms and is now primarily in the hands of electronics and audio and video firms. The broadcasting portions of most of the firms (or their business firm successors), however, still remain active.

The decisions to drop manufacturing and retailing took place as the high costs of manufacturing in the U.S. and consumer preferences for large electronics retail shops, combined with the growing profitability of the broadcasting stations, made it rational to exit the other two segments of the industry in the second half of the twentieth century. This choice was made easier because the early agreements to pool patents and coordinate activities within the broadcasting industry created institutional change and institutionalized separation of radio manufacturing and broadcasting (Leblebici, Salancik, Copay & King, 1991). Had they remained intertwined, it would have been much more difficult for contemporary firms to shed the business segments that were no longer needed to cross-subsidize broadcasting and whose value was declining.

The longevity of policy and broadcasting industry structures established nearly a century ago is clear. Streeter has observed that "the basic structures developed in the 1920s at commercial broadcasting's birth—advertising, the network system, government licensing in the public interest—remain in place today. Those structures survived the Great Depression, a world war, and at least one complete technical metamorphosis (the shift from radio to television)" (Streeter, 1996).

Clearly organizational persistencies and path dependencies have been evident in both policy making and firms, and the institutional view of these arrangements holds true. As Coase observes, "the history of regulation in the broadcasting industry demonstrates the crucial importance of events in the early days of a new development in determining long-run governmental policy" (1959: 40).

The development of U.S. radio policy, and its path trajectory that continues to affect broadcasting policy to this day, were driven by a unique set of circumstances that narrowed the available choices for policy makers and ultimately persuaded them to create a commercially based broadcasting system. Governmental, technical, market, and business limitations constrained the ability to make other choices. Today, however, those limitations have been ameliorated through a century of economic development, modern communication systems, and contemporary roles and strength of the federal government. Most of the technical, market, and business conditions that induced establishment of the fundamental policy approaches are no longer applicable. Thus, the capability and opportunity to choose a different path exists, if there is political will to do so and the bonds created by the institutionalization of policies and broadcasting norms, path dependencies, and structural inertia can be broken.

Significant pressure to break those bonds is being brought by Free Press, Grade the News, Media Access Project, and other media policy lobbying organizations that see merit in reducing corporate control of communications and promoting more pluralistic ownership. They are doing so in an environment in which broadcasters are much more commercialized, are economically stronger than when the original policies were introduced, are better organized, and are willing to undertake fewer public interest obligations than when the policy trajectories were established.

Whether changes are warranted is not the point of the article, but it appears unlikely that significant change will occur in the short- to mid-term because the cases they are making must break the well-institutionalized bonds, because the policy trajectories and persistencies are well established, because there is significant support from media firms for keeping them in place, and because government policy suffers from regulatory capture by the industry and is still fundamentally oriented to support its business and economic development.

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