

The Rise of the Competition State: The dynamics of British & American Telecom and Electricity Regimes

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"Regulation and competition are rhetorical friends and deadly enemies: over the doorway of every regulatory agency... should be carved: Competition Not Admitted" (George Stigler, 1971)

Change, global or local, is an omnipresent phenomenon nowadays: it leaves its mark everywhere and challenges us to study it both empirically and theoretically. One of the most challenging lines of inquiry, in the study of change, is Giandomenico Majone's notion of the transformation of the positive (interventionist) state into a regulatory state. In Majone's conceptualization, the past is represented by the "Positive State" but the future belongs to the "Regulatory State" - with its new structure of governance and its new political strategies (Majone, 1997). While the nature and timing of change have varied a good deal from country to country, the changes are compelling and far-reaching (Majone, 1997, 143). The transformation from a positive state to a regulatory state is expressed in a shift: from taxing and spending to rule making; from centralized bureaucracy to autonomous agencies; from party and parliamentary politics to legalistic and professional politics; from corporatist to pluralist political culture; and from direct to indirect political accountability. Majone's conceptualization is especially intriguing because it integrates insights and knowledge from public administration, public policy, and theories of political economy (See also, Majone, 1990; 1991; 1994; 1996).

Majone characterizes the positive and regulatory states by their major policy tools. The positive state is characterized by policies of intervention, taxing, and spending, and by emphases on "redistributive policies and discretionary management of aggregate demand". According to Majone, these policies represent the "social democratic consensus about the beneficent role of the positive state - as planner, direct producer of goods and services, and employer of last resort" (Majone, 1997, 141). The positive state is, according to Majone, a post-war phenomenon, and he

sometimes also calls it also an interventionist state. The importance of redistributive policies and discretionary management of demand is revealed by the similar label of the Keynesian Welfare State. The economic crisis of the 1970s was the turning point in the shift towards a new form of political-economic order, characterized by the privatization of public corporations on the one hand and the rise of regulatory structures and tools on the other. Regulation, it seems, is not perceived as a positive policy tool; it is adopted not on its own merits but as a protective and defensive tool. It is a substitute for macroeconomics, stabilization policies, and redistribution policies (the three main types of public intervention in the economy) that are less viable in today's Europe. The regulatory state is identified with rule making and the correction of "various types of 'market failure': monopoly power, negative externalities, incomplete information, insufficient provision of public goods" (Majone, 1997, 141). The rise of regulation as a mode of governance is promoted by regulatory competition between states with the effect of "limiting the role of the interventionist or positive state" (Majone, 1997, 140).

There are direct positive relations between strategy and structure in Majone's conceptualization of the changes. Concentration of several basic strategies such as privatization, liberalization, and deregulation (regulatory reform) result in the creation of a new political structure, namely the regulatory state. This formulation of the relation between political strategies and political structures follows Alfred Chandler, who argued that "structure follows strategy and... the most complex type of structure is the result of the concatenation of several basic strategies" (Chandler, 1962, 14). In other words, the result of the liberal strategies is the creation of regulatory structures, which are liberal rather than social-democrat and which are aimed to the correction of market failures rather than at the administration of direct provision of services. Majone's thesis of the transformation from positive to regulatory is applied to Europe but is inspired by American terminology and particular trajectory of state formation. Specifically, his analysis draws on the fourth edition of *Politics, Position and Power: From the Positive to the Regulatory State*, which deals with the administrative reforms in the US (Seidman and Gilmour, 1986).

While Majone provides an important insight into the dynamics of change - especially the emphasis on the growth of regulatory policies and the existence of "regulatory

competition" between nations - his analysis should be refined in regard to four important issues. Firstly, Majone's conceptualization of change is more acceptable when he deals with *strategies* (deregulation, privatization, liberalization, etc.) and less so when he deals with *structures* (the institutional setting in which these strategies occur). This paper aims to present an alternative conceptualization of the relations between strategy and structure, which draws on historical institutionalism (Steinmo, Thelen and Longstreth, 1992). Secondly, while Majone grounds his analysis in the American regulatory experience, his terminology - particularly the notion of rise of the regulatory state on the national level - excludes the American trajectory of change, and especially some important commonalities and processes of policy emulation across the world. The United States, after all, has been *the* Regulatory State since the late 19th century. Thus, comprehensive conceptualization of change - one which can deal with the divergent state trajectories in US and Europe - cannot take the past simply as a positive state and cannot conceptualize current changes in the United States simply as the rise of a regulatory state. This paper's suggestion is to characterize the British experience (and in this regard also the European developments) as a change from a Service-provision state to a Competition state. The American experience of change in the last century is best characterized as a change from a Regulatory State to a Competition state.

Thirdly, this paper suggests that there are intimate and positive-sum relations between regulation and competition as well as between the rise of regulatory state and the rise of the Competition State. The competition state, critically relying on regulation-for-competition, may be as interventionist as past state structures. This point is not clearly emphasized by Majone and is in clear disagreement with the rhetoric of deregulation that characterizes the Anglo-American discourse of change and is reflected in the citation of George Stigler cited at the beginning of this paper.

Fourthly, unlike Majone this paper characterizes the regulatory state as a positive (interventionist welfare-oriented) state. It is argued that the rise of ordered competition (that is, competition critically sustained by regulation) may result in the same or even better social welfare than in the case of etatist regimes (interventionist, state monopoly over public goods). Social achievements of etatist regimes are only partly challenged, the outcomes of these challenges are not necessarily pre-

determined, and most important, the new regimes open new social options. This is one essential reason why the conceptualization of today's "global change" should be of a "change within the state" and not a "change of the state". The regulatory institutions that govern the current regulatory regime may achieve the same social goals but by different means. Instead of direct supply of services by the state, the same and potentially better services can now be supplied by private actors who are regulated by state institutions. The state is not on the retreat, its regulatory machine is stronger than ever, and the new regimes of "ordered competition" may ensure that the regulatory state will continue to be also a "positive state".

A historical perspective on the politics of change is offered through the study of the sixteen regimes for the governance of telecom and electricity since the very beginning of their commercialization (about 1880). The historical development of these industries in the United State and the United Kingdom is contrasted for the last 120 years. These two networks are ideal for comparison (to the extent that we can achieve our ideals) not only because they have developed in the same historical period, but also because they enjoy some common important characteristics. They are both important public services; they have characteristics of natural monopolies; they are network industries (organized around grids - which critically determine their natural monopoly characteristics); and they have similar life cycles in terms of ownership and competition. Variations in the extent of technological innovations that have fostered incentive for regulatory reforms, in the two networks, provide evidence of the political nature of the changes and demonstrate its comprehensiveness.

The two countries studied here belong to the "Anglo-Saxon" type of polity and policy making. They are commonly characterized as one of the same type of state: early industrialist, pluralist, liberal, or weak. But as will become evident immediately, their approach to the governance of telecom and electricity have differed remarkably since the 1880s. The British were quick to exert tight political control over telecom and electricity, and later moved to create first a mixture of public-private regime and then to nationalize the industries. The Americans, by contrast, took steps to control the two industries in an effective way on the federal level only in the mid-1930s, and in doing so they generally eschewed public ownership and put their trust in the regulation of private monopolies. Since the 1980s both the British and the Americans have moved

towards what may be termed ordered competition and the consolidation of the "Competition State". Through various and complex strategies of regulation, deregulation, reregulation, privatization, and liberalization they created another layer of state institutions which was embedded in the old structures of the state.

The paper starts with analytical distinctions of several ideal types of governance regimes for telecom and electricity. These distinctions help in distinguishing strategies and structures and in differentiating sixteen different regimes for the governance of telecom and electricity in the US and Britain. The second part of the paper presents a comparative analysis of the dynamics of change in the US and the UK. It deals with the structures (regimes) rather than the sources of change in its aim to conceptualize the dynamics of change in these two countries rather than to explain why they happened. The third part of the paper is an examination of the dynamics of social and economic intervention in the two countries and in the different regimes. The fourth part addresses the rise of competition state and presents some of its highly interventionist characteristics. The process that leads towards convergence in the "competition state" in the US and the UK, it is argued, concurs with the creation of new divergencies with effects that are still less eye-catching than those of convergence (on these new divergencies, see Eberlein's paper in this volume).

I. Governance Regimes for Telecom and Electricity

Governance regimes are structures that reflect a sticky (and therefore stable) political, economic, and technological order, sustained by political norms and institutions and a certain balance of power in the sector's policy community. A sectoral regime, such as that for telecom and electricity, may exist on various levels of governance, for instance, the municipal, regional, national, and international. The sectoral regime itself is an amalgamation of "micro-regimes" that govern different aspects of the sector. For example, the electricity regime may be an amalgamation of the regimes for generation (production of electricity by generators), transmission (the transport of electricity over high-voltage grids for long distance), distribution (the diffusion to clients), and interconnection (the economic and technical terms for connecting different grids). Likewise, the telecom regime may include different micro-regimes

for foreign investment, equipment, interconnection of networks, international telephony, etc. The extent of state control, ownership, or competition in one part of the sector or micro-regime (e.g., generation, international telephony) is not necessarily the same as in the other parts of the sector (e.g., distribution). Sectoral regimes are autonomous entities with rules, institutions and policy communities of their own. Their autonomy however does not mean that they are independent: they are affected by (and they affect) more general, economic, legal, political regimes on both the national and international levels.

Below, some ideal types of liberal, social, and etatist regimes are presented. Table 1 presents ideal types of municipal regimes for both telecom and electricity and helps to distinguish national from municipal (and regional) regimes. The municipal regimes are characterized by municipal control over critical issues such as digging the streets and erecting electricity and telecom poles. They are also characterized by municipal control over the granting of franchises and the determination of the terms of these franchises. Municipal control can be a matter of local decision, based on common law, or grounded, like in the British Electricity Supply Acts of 1882 and 1888, in national legislation. These regimes may take one of two forms, social or liberal, depending on the patterns of ownership, the terms of the franchises, and the extent to which a monopoly is grounded in law. The table presents the "ideal types" of social and liberal regimes, and in fact one finds a mixture of social and liberal micro-regimes especially in Britain, where debates over the desired regimes for telecom and especially electricity went on for decades.

Social-Municipal Telecom Regime	Social-Municipal Electricity Regime	Liberal-Municipal Telecom regime	Liberal-Municipal Electricity Regime
Franchise and right-of-way are controlled by the municipality. The municipality has the monopoly over the supply of telecom services.	Distribution, generation and transmission (to the extent that it is developed) are all in the hands of the municipality, which also controls the franchises and right-of-way	The municipality controls franchises and right-of way. It transfers them to profit-motivated companies. Franchises are usually long-term (over 20 years) & right-of-way is guaranteed to the holders of the	Franchises and right-of-way are in the hands of the municipality, which transfers them to profit-companies. Franchises are usually long-term (over 30 years) & right-of-way is guaranteed to the holders of the

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Table 1: Not all telecom and electricity regimes are national regimes

Some traces of municipal and regional regimes for the governance of telecom and electricity exist even today (more in electricity than in telephone). However, towards the mid-1890s in telephony and the 1920s in electricity, organization on larger scale gradually created regimes on larger scale, and notably pushed towards the creation of national and international regimes for telecommunications. Although both telephony and electricity are network industries, telecom as a "two-way" network is different from the "one-way" electricity network. The value of the telephone network for each user grows in direct proportion for the number of subscribers to the networks and its geographical spread. This is not the case in electricity, where the consumption of electricity by a user is not necessarily dependent on the number of other consumers (although more electricity consumers may improve the terms - tariffs and reliability - of all consumers).

The creation of national regimes for telecom and electricity led to the creation of two types of regimes, etatist and liberal. In the case of telecom, etatism was reflected in a very strict state control over the supply of telecom, but more importantly in the transfer of the responsibility for the provision of services to the hands of the state. In many cases, and most definitely in Europe, this led to the creation of the Post-Telegraph-Telephony complex (PTT), where one ministry was responsible for the provision of all these services (Noam, 1992). In the case of electricity, similar phenomena occurred, although the provision of services was usually a matter for a state corporation rather than a ministry. The alternative to the etatist regime was the liberal regime of private regulated monopoly. The distinction between the two was not in the extent of competition but in the form of ownership. In liberal regimes telecom was under private ownership, so the provision of services, which was a matter for private ownership, was clearly distinguished from the roles of regulation and policy making, which were the domain of the state. The geographical scope of the monopoly varied in such regimes and across the two sectors. In some countries there was one company that dealt with all forms of telecom and electricity supply, in others

there were a few companies that had regional spheres of provision with de facto or legal demarcation lines.

Etatist Telecom Regimes	Etatist Electricity Regimes	Liberal-National Telecom regimes of private-regulated monopoly	Liberal-National Electricity Regimes of private-regulated monopoly
Franchises & rights-of-way are governed by the state. Telecom services are provided by the state. Policy making, regulatory functions and ownership are in the hands of one state agency.	Distribution, generation, and transmission are all in the hands of the state. Special laws explicitly express the monopoly of the state in this sphere, covering franchises and rights-of-way also.	Franchises and rights-of way are under state control. These rights are transferred to profit-motivated companies. Franchises are usually long-term (over 20 years) & rights-of-way are guaranteed to the holders of the franchises.	Franchises and rights-of way are under state control. These rights are transferred to profit-motivated companies. Franchises are usually long-term (over 20 years) & right-of-way is guaranteed to the holders of the franchises.

Table 2: Not all monopolistic regimes are etatist

While monopoly was the common form of organization, the extent of regionalism differed between telecom and electricity. Telecom has more national and international features and is organized across a much larger geographical range than electricity. In fact, telecom is the first technology to require an international form of governance. As early as 1865 the provision of telegraph and telephone calls across borders made it necessary to create the International Telegraph Union (ITU, today the International Telecom Union), which is the oldest existing international institution.¹ Liberal-national regimes for the provision of telecom and electricity were characterized between the 1930s and the 1980s by private ownership on the one hand and the regulatory role as the dominant role of government (planning and ownership were much less important public goals than the regulation of tariffs and services). While the government took control over franchise and right-of-way from municipalities and regional bodies (and in the US, from the states), it supported and even promoted the private provision of these services.

Since the late 1970s the terms of liberal telecom and electricity regime have acquired new meaning. Liberalism has come to be identified not only with private ownership but also with the promotion of competition in these industries, which had been widely

perceived as natural monopolies. The introduction of competition to the telecom and electricity regime created two forms of liberal regimes, laissez-faire and "ordered competition". The laissez-faire regime emphasizes minimum regulation (strategy of deregulation) and reliance on general laws of competition. The regime of "ordered competition" emphasizes the creation of regulatory structures that will maximize competition (economic re-regulation) through the creation of regulatory regimes that actively promote competition. Unlike the protection of competition, practiced by laissez-faire-oriented regimes, the regime of ordered competition actively promotes competition. In addition, unlike the laissez-faire regime, which leaves the maximization of social welfare to the market, the regime of ordered competition creates industry-specific balances between economic and social goals through social regulation of private activities (rather than public ownership).

These ideal types of telecom and electricity regime allow us to present in the next part of this paper the dynamics of change in the American and British telecom and electricity regimes.

Laissez-faire Telecom Regime	Laissez-faire Electricity Regime	Telecom Regime of Ordered Competition	Electricity Regime of Ordered Competition
Privatization and deregulation of telecom networks and airways. Entry and exit are matters for economic decision making by private entities. General competition laws are applied to the sector. Public policy making and public regulation have minimal role in the function of the network.	Privatization and deregulation of generation, distribution, and transmission grids. Entry and exit are matters for economic decision making by private entities. General competition laws are applied to the sector. Public policy making and public regulation have minimal role in the function of the network.	Sector-specific rules and independent regulatory agency. The major aim is the promotion of competition through the arrangement and enforcement of interconnection agreements and numbering schemes. High discretion of the regulatory agency including the option of asymmetrical regulation. The regime is carefully designed to accommodate economic and social regulation	Sector-specific rules and independent regulatory agency. The major aim is the promotion of competition through the arrangement and enforcement of open and equal access to the grids. High discretion of the regulatory agency including the option of asymmetrical regulation. The regime is carefully designed to accommodate economic and social regulation

Table 3: Not all “for competition” regimes are “laissez-faire” regimes

II. Regime Change in the Governance of British and American Telecom and Electricity

Different trajectories of governance are clearly evident in Britain and the United States. This part of the paper offers historical perspective on the dynamics of governance, which allow us to understand better both continuity and change. It serves to portray the British case as a change from a Service-provision state to a Competition state and the American case as a change from a Regulatory State to a Competition state.

The Municipal Regimes

The first regimes for the governance of telephony and electricity were municipal both in the United States and in Britain (see table 4). The power to grant franchises to erect poles and to determine their conditions was in the hands of municipalities. Internal disputes within the British state, in particular between local and central government, over the control of these systems resulted in restrictive policies towards the private operators of telephony and electricity. Such policies resulted in a slower diffusion of telephony and electricity than in the United States, where the political climate was much warmer towards telephone and electricity companies. For example, when Thomas Edison pursued a franchise to lay the distribution system for the first electricity supply station in Pearl Street New York City, he hired a special train that brought the mayor and the aldermen to his laboratory in Menlo Park. The extravagant electricity display that he organized helped to persuade the council to grant the concession despite objections of gaslight and lamplighters interests (Hughes, 1983, 30). Frequently electricity and telephone companies had to deal with corrupt officials at the local municipality (see, for example, Insull's experience with the "Gray Wolves: Anderson, 1981, 34) but despite these obstacles private for-profit telecom and electricity companies had a favorable political environment.

By contrast, the British tended to see telecom and electricity as legitimate spheres for public action. When the Bell and Edison telephone companies established the United Telephone Company in 1880 to offer telephone services in London, the government (the Post & Telegraph authorities, The Postmaster General) went to court and argued that it was the exclusive right of the state to offer telephone services.² When the court

decided in favor of the government, but it was clear that neither the Parliament nor the Treasury would allow the Postmaster General to invest in telephone communication, a compromise was reached. The Postmaster General granted the company a license for the provision of telephony in exchange for waiving its right to appeal the court decision, and a royalty payment of 10%. This was not an isolated event. A similar pattern of early politicization in Britain is evident in electricity. So quick was the British Parliament to move to examine the subject that already in 1879, few years before electricity was first offered on commercial basis, a parliamentary committee studied the subject (Poulter, 1986, 26-27). The first Electricity Lighting Act, most probably the first of its type in the world, soon followed in 1882.

Differences in political climates between Britain and the US were followed by divergent approaches towards ownership rights. In 1889 the municipality of Bradford became the first municipal authority in Britain to open its own electricity supply station (Poulter, 1986, 27). By 1900 more than 50% of the 250 suppliers were owned by municipalities. Municipal ownership was widespread in the United States also (Schap, 1986, 9-10). But the American municipal undertakings were on a much smaller scale than their private competitors, and they were "dwarfed by the major urban systems controlled by Edison companies and other investor-owned utilities" (Hannah, 1979b, 578). By 1902, when 815 municipal systems had been already formed, their combined capacity accounted for only 9.3% of the total (Hirsh, 1989, 22).

Municipal ownership in electricity was a stronger and a more widespread phenomenon than in telephony all over the world. Yet, the forces of municipal socialism in the 1890s were so strong in Britain that even in the case of telephony there were considerable political efforts not only to protect the regulative powers of the municipalities but also to promote municipal ownership. Under considerable pressure and with widespread political support by the press, a law authorizing localities to open their own telephone exchanges was approved by the parliament (The 1899 Telegraph Act) (Meyer, 1907, 7). This effort was an utter failure and the only current evidence of its impact is the municipal telephone exchange of Hull. Yet the existence of the Hull exchange reflects more the failure of British municipal socialism in telephony than its vitality.³ The British effort to create social-municipal telephone

regime is especially puzzling since the telephone was a luxury back then (unlike electricity). Moreover, with the development of long-distance technology, networks transcended the local boundaries and acquired regional and national scope so technology and economy did not support functional organization on the basis of municipal boundaries. Municipal ownership of telephony was a rarity in the United States as well (Schiller, 1998, 402; Glaeser, 1957, 446). With the exception of British electricity, the municipal regimes were based on the power of municipalities to regulate wayleaves rather than on public ownership.

Telecom		Electricity	
US	UK	US	UK
1878-1907 Municipal Liberal Regulatory Regime	1879-1896 Liberal Regime with Restrictive Regulation by both the Municipalities and the State	1882-1907: Municipal Liberal Regulatory Regime	1882-1919: Social-Liberal Municipal Regime
1907-1934 State Regulatory Regime of Private Monopoly (dual service competition; 1894 to 1924)	1896-1911 Hybrid regime of mixed ownership and restrictive competition	1907-1935 State-regulatory regime of Private Monopolies and limited Competition	1919-1948 The National Regime of Mixed Ownership and Restrictive Regulation
1934-1984 Federal Regulatory Regime of Private Monopoly Regime and very limited competition	1911-1982 The Etatist Regime (Post, Telegraph and Telephony Industrial Complex)	1935-1992: Federal-State Regime of Regulate Private Monopolies	1948-1983 The Etatist Regime
1984-1996 Private Regulated Monopoly with Limited Competition	1982-1997 Private Regulated duopoly with Limited Competition	1979-1992 Regime of Private Regulated Monopolies with very limited Competition	1983 –1989 Regime of Private Regulated Monopolies with very limited Competition
1996- Regime of Ordered Competition	1997 - Regime of Ordered Competition	1992- Regime of Ordered Competition	1989 - Regime of Ordered Competition

Table 4: The Dynamics of Telecom and Electricity Regimes in the US and the UK

Away from Municipalism: The New British and American Regimes

While municipal ownership of electricity supply continued to be a widespread phenomenon in the UK, political governance structures were transformed to higher political levels. This happened in British telephony around 1896 and in electricity after World War I. In telephony, the process started with a move by the British

government in 1892 to acquire the long-distance lines of the private National Telephone Company. Negotiations with the company on purchase terms and on the relations between local and long-distance telephony continued for more than three years, and only in 1896 did the Post Office become the de facto provider of long-distance services. While the new regime did not give new regulatory powers to the government it made it a critical player in the field of telephone supply. As before, local authorities retained their right to veto wayleaves; and as before, they often used their rights in a way that obstructed the spread of the technology (Meyer, 1907, 57). It is interesting to note that these early moves to state ownership and the creation of a national telephone regime in Britain were not followed by any corresponding regime change in the United States. Instead, that country evinced interesting internal changes, which resulted in growth of competition to an extent and scope not observed elsewhere in the world up until the 1990s (see Mueller, 1997; Bickers, 1991).

A movement away from municipalism is observable also in the British electricity regime. The necessity of some form of national coordination was already fairly evident in the 19th century for the country to enjoy the benefits of economics of scale. But it was politically very difficult to establish control over the hundreds of electricity undertakings of the municipalities on the one hand and the private suppliers on the other. The Electricity Act of 1919 established a national regulatory regime with a limited coordinating role for the government in ownership and development of the national high-voltage transmission network. In addition, the Act established the Office of Electricity Commissioners, who were supposed to promote voluntary agreements between electricity suppliers to ensure the economic benefits of large-scale generation. The failure of the electricity commissioners in this led in 1926 to a new legislation that created a public corporation, the Electricity Board, which took over the development and ownership of the high-voltage grid (Hannah, 1979a). In addition, a national coordination system of generation was established, putting into service the most efficient generators and thus achieving efficiency on the national level.

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The Consolidation of State-level Regulatory Regimes in the US

Regulatory structures for the governance of American telephony and electricity started to evolve rapidly from 1907 on state level. Before 1907, eight states regulated the telephone. Forty-two states and the District of Columbia had regulated telephony by 1920 (Cohen, 1991, 57). A similar process, in the same period, was observable also in the field of electricity. As with telephony, A few states created a regulatory regime for electricity relatively early (in 1887 Massachusetts had extended the power of its Board of Gas Commissioners to include electric lighting). But the turning point came in 1907, when New York, and shortly afterwards Wisconsin, created the prototypes of the modern public service commission (McCraw, 1971, 13). By 1913, the total number of states that had their own regulatory commissions was 29 (Anderson, 1981, 56). Since 1910 there were also considerable attempts to move telecom and electricity regulation to the federal level. Yet despite the weakness of the state-level regime these efforts ended up with very limited results. In the case of telephony, an amendment to the Mann-Elkins bill (1910) which originally was intended to regulate only railways, transferred interstate telephone traffic to the jurisdiction of the Interstate Commerce Commission (ICC). In 1921, Congress gave the ICC the power to oversee mergers and acquisitions of telephone companies (Cohen, 1991, 63-4). Still, the ICC contribution to the institutionalization of effective regulatory regime at the federal level was marginal (Gabel, 1969, 357). In 1913 the Justice Department filed suit against AT&T and compelled the company to offer the "Kingsbury commitment". Under this commitment AT&T was obliged to dispose of its interests in Western Union Telegraph, to stop the practice of purchasing its competitors, and to allow interconnection of competitors' networks to its own network (Brooks, 1975, 132-7).

In the sphere of electricity the first major move toward federal regulation was in the sphere of hydroelectric schemes. In 1920 Congress passed the Federal Water Power Act that gave an ex-officio commission⁴ the authority to set the terms for the use of such sources for the public benefit (Glaeser, 1957, 148-9). In 1927 the Supreme Court held that state authority to regulate electric rates was limited to matters of local distribution, thus implying that federal regulation was required for moving electric energy across state lines (Glaeser, 1957, 149; Berlin et al., 1974, 53). These early indications of some functional need to transfer authority to a higher level of

governance were not acted on until the crisis of the great depression and the New Deal.

In contrast to the considerable variation between telecom and electricity in Britain, the American regimes presented much more coherent patterns of development. The American approach to ownership was similar for both telecom and electricity. Their shift from municipal to state-level governance, as well as the early signs of federal-level regulations, all reflected a similar approach and appeared almost concurrently. The British, however, at that time, adopted a different approach to the governance of telecom and electricity. An early significant move was the nationalization of the long-distance telephony network in 1896, and then the creation of an etatist regime with the nationalization of the entire telephony network in 1911. This led to the birth of the Post, Telegraph, and Telephony complex, which dominated the British communications regime for more than 70 years and for most of the telephone era (Noam, 1992, 103-132). True, the Americans experienced nationalization of the telephone network as well. In 1918 the progressive administration of Wilson presented a bill for the nationalization of the telephone and telegraph systems. Congress unenthusiastically approved it, but a year later, when telephone rates were raised by the government, it passed a joint resolution requiring the telegraph and telephone administration to be return to private control (Bickers, 1991, 90-1).

The Federal Regimes for Telecom and Electricity

The 1930s were a critical period in the development of the American regimes, as regulatory structures at the Federal level for both telecom and electricity were constructed. These regimes were on one hand highly regulated: industry was subject to strict rate, service, and merger and acquisition regulations. On the other hand, they served to legitimate the private monopoly of telecom and electricity supply. The new telephone regime was institutionalized by the Federal Communications Act of 1934, which created the Federal Communications Commission with authority over the regulation of interstate telecommunications. The act only consolidated various laws in the hands of one authority (the FCC), which since then has served as the locus of state authority in the field of communications. The FCC however did not replace the states' utility commissions and thus a two-level regulatory structure was institutionalized.

Similar developments are observable in electricity, although unlike telecom, the creation of a federal regime for electricity was the grounds for one of the most extensive battles between progressives and conservatives (McCraw, 1971; Anderson, 1981). The new regime had two main components. The first was the federal regulatory structure that was imposed on investors-owned electricity suppliers, and the other included the promotion of electricity schemes (primarily the development of hydro-power resources, and also the diffusion of electricity to rural areas). The most dynamic component of this regime seemed to be the large-scale hydroelectric and irrigation scheme promoted by the Tennessee Valley Authority from the second half of the 1930s. However, by the early 1950s it had become clear that government entrepreneurship in hydroelectric projects in particular, and in electricity in general, was stagnating; hence, regulation again came to be perceived as the most important component of the regime.

In 1930 Congress institutionalized the ex-officio Federal Power Commission that had been established in 1920 by giving it concrete a organizational structure to be run by five commissioners. But it was only in 1935 that an effective and comprehensive federal regulatory regime was created. The Federal Power Act of that year expanded the jurisdiction of the Federal Power Commission by giving it power to regulate the rates and service of electric and natural gas utilities when the transactions were in interstate commerce (in addition to federal hydroelectric power). The commission was also given control over national defense issues, accounting, and consolidations of electric utilities. In addition it was empowered to make special investigations of electricity rates and interstate transmission of electricity (Glaeser, 1957, 149-150). The 1933 Securities and Exchange Commission Act and the 1935 Public Utility Holding Company Act further strengthened the federal regulatory regime. These acts governed particular aspects of the finance (debt and equity capital) of the electricity utilities and their organizational structure (mergers and acquisitions) (Berlin et al., 1974, 80). Like the Federal telecom regime, the federal electricity regime is a two-level regime where there is (often uneasy) division of labor between the federal regulatory structure and the state-level structure.

The second component of the electricity regime is based on promotional policies. The Rural Electrification Administration order of 1935 and the Rural Electrification

Administration Act of 1936 created an extensive program of rural electrification (Clayton, 1980). Rural electrification programs were supported by state entrepreneurship. The most important program, economically and symbolically, was the creation of the Tennessee Valley Authority in 1933. While its establishment was justified on grounds of flood control, job creation, and rural development, its central objective from the outset was to supply electricity for consumers cooperatives in rural areas (Brennan et al., 1996, 24). In 1937 the Bonneville Power Administration was created to coordinate the supply of hydroelectric power generation from Columbia River system. The dynamic development of this component of the American electricity regime stagnated in the post-war period. In 1950s, the heyday of electricity nationalization all over the world, President Eisenhower suggested that the TVA should be privatized. While, the suggestion was rejected by Congress, eagerness for direct state development projects was no longer visible. The basic structure was however stable, with few only few modifications that did not change this basic structure. In 1954 the Atomic Energy Act created the Atomic Energy Commission, with a dual role as promoter and regulator of nuclear power (Berlin et al., 1974, 83). In addition, after the Northeast blackout of 1965, utilities began forming regional coordination mechanisms to improve to reliability of supply. In 1968 the National Electric Reliability Council (NERC) was formed as a self-governed organization of the Utilities, but with the non-voting right of participation by federal and state-level commissioners (Berlin et al., 1974, 73-4).

Convergence on etatism - The British Telecom and Electricity Regimes

From about 1911 and until 1947 the British had two distinct governance regimes for telecom and electricity. While the state Postmaster General was the exclusive provider of telecommunications in Britain (international communications was supplied by Cable & Wireless), private and municipal undertakings were the dominant suppliers of electricity. True, since 1926 the state had been the owner of the electricity transmission grid and played an important coordination role, but the difference from the state monopoly over telecom was significant. The Electricity Act of 1947 eliminated the sectoral differences. Responsibility for electricity generation and high-voltage transmission was transferred to the government while distribution was assigned to regional electricity authorities which were owned by the government; this

represented a transfer of ownership from the municipal to the national level. At the center of the etatist regime stood the Central Electricity Generation Board, a public corporation, which in addition to the transmission network also controlled all the generation facilities. Never before in the history of British electricity had such a concentration of power to decide and implement existed in one institution.⁵ A web of forces that seemed invincible supported these etatist regimes, which endured intact until 1980s with little sign of change. Public managers, labor unions, and court-suppliers of equipment stood at the center of what may be called the electricity/telecom industrial complex.

The Provisional Telecom and Electricity Regimes of the 1980s

From the end of the 1970s and throughout the 1980s the telecom and electricity regimes in both the US and the UK experienced significant pressures for change, which resulted in the creation of provisional regimes that lasted about a decade. Compared with the old regimes, they were more liberal. They were for promoting radical privatization plans (telecom and electricity in the UK); reducing entry barriers (telecom and electricity in both countries) and enforcing divestiture of the dominant players (AT&T, and later, in Britain, the Central Electricity Generation Board). The first change is observable in the American electricity regime, which became subject to the new federal legislation of the Public Utilities Regulatory Policies Act (1978).⁶ The act created a category of private electricity suppliers that were exempted from rate regulation. The private regulated utilities were *obliged* to purchase electricity from these new independent suppliers (Gilbert and Kahn, 1996, 199-200). The terms of the transactions were left largely to the discretion of state-level commissions that could determine the price at a level that did not exceed the avoided costs⁷ of new capacity (Brennan et al., 1996, 29). Important provisions of the new regime were aimed at reducing uncertainties for new entrants that derived from the economic power of the incumbent operators. These provisions made sure that new entrants would get attractive prices for their electricity. The success of the regime in encouraging new entry was remarkable: by 1991 independent power accounted for almost 9% of all electricity sales (Gilbert and Kahn, 1996, 204). Their share in new generation capacity grew from 20% in 1986 to over 60% in 1994 (Brennan et al., 1996, 30).

Similar provisions to encourage new generators were made also by the designers of the new electricity regime in Britain, which was created by the 1983 Energy Act. The Act removed statutory constraints on the entry of private generation companies and required the regional distribution boards to purchase their electricity from the cheapest available source and at prices based on their avoided costs. However, while the goals of this regime were similar to those of the 1978 American regime, the outcomes, in terms of newly independent competitors, were disappointing (OECD, 1997, 218). Somewhat similar disappointing results were experienced in the British telecommunications, although in this case a more radical move was carried out. While the British government hesitated to privatize electricity, in 1981 it moved to privatize Cable & Wireless, and in 1984 to privatize 51% of British Telecom (the remaining public stake was sold in 1990 and 1993) (Thatcher, 1999, 94). The privatization of British Telecom was accompanied by the establishment of the Office of Telecommunications (OFTEL) and the nomination of an industry watchdog, the Director General of Telecommunications. In keeping with a new "duopoly policy", an additional national telecom provider, Mercury Communications, was licensed in 1982. The monopoly over terminal equipment was terminated (with the exclusion of the first telephone set) and so was the monopoly over the value-added services. The new regime, however, avoided the divestiture of British Telecom, declined to accept recommendation to open British Telecom to third parties, and committed itself to a restrictive licensing regime until 1990 (Hulsink, 1999).

The divestiture of AT&T in 1984 is one of the most notable achievement of antitrust laws in the US and elsewhere. To some extent it reflects the most critical landmarks in the changing of the world's telecom regimes. Yet this "earthquake" event was less ambitious in the restructuring of the telecom regime than the regime that followed it about a decade later. The divestiture of AT&T was aimed at increasing the competition in the long-distance market for telephony, which was perceived by the Department of Justice as potentially competitive.⁸ The decree was signed in 1982 and originated from an antitrust suit filed already in 1974 and implemented in 1984. It radically transformed the structure of the American telecom market without transforming the legal foundations and the governance structure itself. By 1984 AT&T's vertical ownership was restructured, and the company had to give up its 22

local monopoly companies. By radically separating the long-distance arm of AT&T from the local services, the decree aimed at ensuring that AT&T would no longer be able to place obstacles before competition in long-distance telephony. The local monopolies were required to provide access "equal in type, quality and price" to all long-distance companies.

Regimes of Ordered Competition for Telecom and Electricity

In the 1990s The British and American regimes for electricity and telecom moved towards a significantly more pro-competitive structure. These new regimes, which still have to be consolidated, are aimed at restructuring generation, transmission, distribution, and supply of electricity. In addition, they seek the creation of choice among electricity suppliers for both businesses and private consumers of electricity. This implies extensive restructuring of the sector, far more ambitious than the goal of competition in generation that characterized the preceding regime. Similarly in telecom, competition goals were extended from the equipment and long-distance markets to local telephony while opening the telephone markets to cable companies (and vice versa) and the long-distance market to local telephony providers (and vice versa). Competition rules have been devised for virtually all parts of the telephony and electricity sector, with growing sophistication of the regulatory regimes compared with the past.

A move towards the creation of a regime of ordered competition was first observable in British electricity. In 1989 a White Paper on electricity privatization led to a new electricity act, which promoted a far-reaching plan for restructuring the industry (Thomas, 1996). While in telecom (1984) and gas (1986) privatization was the major feature of the change, in electricity it went much farther. The proposals of the White Paper were aimed at changing the rules of the game and at structuring the market. The Central Electricity Generation Board was divided into four parts: two fossil-fueled generators (PowerGen and National Power), one nuclear power generator (Nuclear Electric) and one high-tension transmission company (National Grid). The 12 local distribution companies in England and Wales, now to be known as Regional Electricity Companies (RECs), were privatized at the end of 1990.⁹ By mid-1991 the system had been completely transformed, undergoing the most radical restructuring

since nationalization at 1947. At the center of the new regime stood a new regulatory agency, the Office of Electricity Regulation, a watchdog that enjoyed wide authority in respect of the natural monopolists in transmission and distribution. The duties of regulator included both the promotion of competition and the protection of consumers. Consumer freedom to choose suppliers was extended gradually, starting first with the large business consumers, next moving to a category of medium-level consumers, and finally to include households and other small consumers (Newbery and Green 1996). The central element of this micro-regime, which ensured the freedom to choose a supplier, was the obligation of the natural monopolists to transfer electricity from any source and upon demand of the customer at prices and conditions closely monitored by the regulator.

The creation of a regime of ordered competition in the US by the 1992 Energy Policy Act gave the Federal Energy Regulatory Commission (FERC) new powers. The FERC had the power to determine the terms of access to the transmission grid and to force transmission-owning utilities to deliver power at reasonable, non-discriminatory, and cost-based rates. In April 1996 the FERC issued guidelines and procedures for implementation. The act, however, did not impose competition, and left much discretion in the hands of the state commissions. The result is a bottom-up approach for the creation of a competitive regime, in which some states have led the way and are moving fast to create state-level regimes of ordered competition, while others are taking a much more passive approach. However, the option of bypassing the utilities network by self-generation and co-generation is becoming increasingly realistic and creates incentives for an America-wide regime of ordered competition (Gilbert and Kahn, 1994, 197). Action by Congress may well be necessary to implement full retail competition (Brennan et al., 1996, 7-8).

The creation of a British regime of ordered regulation advanced very slowly. Unlike the "big bangs" of electricity restructuring, the privatization of BT and even the American Telecom Act of 1996, the movement towards a regime of "ordered competition" was critically a matter for the discretion of the regulator, the Director General for Telecommunications. This was so even though the British Telecom Act of 1984 does not specifically make it the duty of the regulator to promote competition (Prosser, 1997, 74). Signs of change towards the extension of competition from

customer equipment, value added services, and duopoly to a more comprehensive conception of competition came with the duopoly review of 1991 (Thatcher, 1994). In consequence, the regulator encouraged cable television companies and other potential competitors to provide telecom services in direct competition with BT. A system of asymmetric regulation was constructed. British Telecom was subjected to levies such as the access deficit contribution, and was prohibited from providing video services. At the same time, the new entrants were exempted from both the levy and the prohibition of joint provision of telephone and video (Collins and Murrioni, 1996, 475-6). The point of no return in the institutionalization of the new regime was the setting of rules for the interconnection of micro-regimes, which were announced in March 1994 (Prosser, 1997, 75). However, only in July 1997 were the final proposals for interconnection regime set, to be effective from October 1997 (only a few months before the final date set by the EU Interconnection Directive). The interconnection regime allowed the subscribers of new entrants to connect with the network of the incumbent, thereby establishing the economic and technical terms for effective competition. Without an interconnection regime, and considerable regulatory safeguards, competition will be much less feasible; therefore, interconnection should be conceived as a central component of the newly created regime of ordered competition.

The American regime of ordered competition in telecom was created by the 1996 Telecom Act. While the former (provisional) regime created the conditions for limited long-distance competition between long-distance telephone operators, it retained the local monopolies of Baby Bells. The local operators were prohibited from providing long-distance telephony, and the long-distance operators were prohibited from providing local telephony. In addition, the old regime restricted competition by prohibiting entry of the Baby Bells into the equipment market and making it impossible for telephone operators to own cable networks. While all these prohibitions were fixed at the time in order to make a level playing field for competition, in the 1990s they came to be perceived as outdated. The Telecom Act of 1996, passed by a Republican-dominated Congress, formulated the general rules for communication-wide competition. The new act, which replaced the 1934 legislation, covers several hundred pages and should be perceived, despite the deregulatory rhetoric, as a true manifestation of the positive-sum relations between regulation and

competition in regimes of ordered competition. Not only does the legislation favor more competition with more rules (cf. Vogel, 1996) but it is "the FCC's task to ensure that interconnection, service and network element prices developed by the established [telecommunications operators] are just and reasonable, non-discriminatory, and fashioned without resort to cross-subsidization" (Bolter, 1996, 453). How far the new regime relied on regulations became even clearer when the FCC issued its regulation in August 1996. They included not less than 668 pages of guidelines! (Curwen, 1997, 177). A significant place in these guidelines is accorded to the interconnection regime. The provisions in this regard are currently being challenged in court, and it will take a number of years more until actual competition in the local loop will become effective.

III. The Regulatory State as a Positive State

The analysis of the telecom and electricity regimes in the two countries may serve to identify the social implications of the different state trajectories in the last century. Especially important are the questions of whether British etatism until the 1980s was socially superior to the American regulatory regime of private monopoly; and whether today's convergence on ordered competition implies a decline in the positivism of these states. Starting with the old regimes, it seems that despite nationalization of telecom and electricity in Britain, and despite the more protective political culture of the British (than the Americans), neither telephony nor electricity were supplied for free, or even below cost. On the contrary, electricity consumers subsidized coal and nuclear energy, and often telephony revenues were used to subsidize the post. In fact, the rationale for the nationalization of these services in Britain and for their regulation in America was only marginally their diffusion for the poor and/or periphery. More important were the issues of tariffs and service control for *all* users. State provision of telecom and electricity sometimes implied tariff reduction, but not necessarily, and at times public ownership is inferior both economically and socially. In addition, the advantages and disadvantages of regulation versus public ownership should not be a

matter for static policy calculations but should be seen in dynamic terms and from a historical perspective. Rural electrification has proceeded extremely slowly in the United States, compared with Europe, for half a century (Nye, 1990, 287). Only with the state entrepreneurial activity in the form of the Rural Electricity Administration was a breakthrough possible (Fischer, 1992, 258). It seems very convincing that the private regime of electricity provision in America in that period was socially inferior to the European, yet this does not imply directly that one should continue to support rural electrification by state agency nowadays.

Moreover, while the American welfare state indeed lags behind the British, it enjoys some advantages in telecom and electricity that reflect on the social value of regulatory regimes, particularly the ability of these regimes to balance social and economic regulations. For example, in telephony the American regime allowed cross-subsidies between long-distance and local services, and even between different states, in order to promote general coverage and affordable telephone rates (Blau, 1997, 249). In electricity, in the setting of the 1970s energy crises many states institutionalized sector-specific subsidies for low-income households (Anderson, 1981, 135-165). Similar programs were devised in the 1980s for telephony to offer low monthly subscription rates (in some places, as low as \$1.00 per month for limited local service). The Link-Up American program waived telephony deposit fees and allowed payments for connection charges to be spread out over long periods (Blau, 1997, 250). The life-line programs made special subsidies available to many households; the limits on their growth were not policy deficiencies of regulation as a mode of governance but political opposition by conservatives and capitalists.

The issue of universal service is highly illuminating in this regard. The terminology of universal service originated in the United States and reflects some contradictory notions. In the beginning of the 20th century it was used by Theodore Vail, the architect of the AT&T hegemonic telephone order in America, to justify the existence of one public telephone network that would connect all users (Mueller, 1997, 8). In the post-war period the notion of Universal Service acquired a new social meaning which was broader than Vail's notion. It meant that telephone services should be offered on an affordable basis to all Americans. Examining British notions of post-war access to the telephone, Hills found that compared with social welfare, education

or health, over which until the 1980s there was a post-war consensus in favor of provision on a universal basis, no such consensus has existed in telecommunications (Hills, 1989). While one may argue that telecom services are less socially critical than health services, unemployment benefits, or education, one should still note that the goal of universal service in telephony is more consensual in the USA than in Britain (Hills, 1993, 186). This difference indicates that regulatory regimes sometimes allow the development and the promotion of social policies under regulatory regimes.

Paradoxically, perusal of the early regulatory regimes in Britain before the era of nationalization shows that Britain led the way in the design of industry-specific social regulations. British regulation has a long history, wrote Prosser, so long that it would be more accurate to see the period of nationalization as the exception amidst longer periods of regulatory controls (Prosser, 1997, 32). For example, the duty to connect people to the water networks was enforced in Britain as early as 1847 (Prosser, 1997, 40). The Electricity Act of 1882 required the laying of distribution mains for general supply on request (subject to certain conditions) and the supply of premises within 50 yards of such a main. It also limited disconnection from the electricity network to cases where there was not a *bona fide* dispute (Prosser, 1997, 149). Unfortunately, we lack comparative studies of the disconnection policies regarding unpaid bills in the United States and Britain for that period, yet there is no evidence that the private American corporations were quicker to disconnect than the state-owned distribution companies in Britain. Indeed, suggestions exist that centralization of policy and regulatory and service administrations into the hands of one central agency may create a friendly environment for management and labor but not for consumers. The clearer separation between private monopolies and the agency that which regulates them in the US may permit a louder voice for diffuse interests than the intimate network of a centralized ministry, which serves as both the policy maker, the regulator, and the service provider.

While common wisdom identifies nationalization with the rise of social-democratic and Marxist ideologies, this is only partly justified. While the entry of both the British and the American governments into the direct provision of electricity sometimes exerted important social effects - the rapid diffusion of electricity to rural areas - it is not the case in telecom. The gradual nationalization of the long-distance telephone

network in 1896 and then the overall nationalization completed by 1911, were not aimed at social goals such as rapid diffusion and affordability. Back then the telephone was a luxury, a toy for the rich households and a tool for commercial businesses. When one could spend £20 to employ a maid for a year, or to pay the annual household expenses on electricity, coal, and wood, having unlimited telephone use for £17 did not seem a bargain (Perry, 1977, 78).¹⁰ Why did the British government decide to nationalize telephony already in 1911, while it decided likewise for electricity only in 1947. While this is not the place to open the issue of reasons for nationalization, it is clear that nationalization was not motivated necessarily by the social welfare of the poor (cf. Millward, 1997).

The British and American regimes of ordered competition, especially in electricity, are too new for a summary of their social balance. The cry of “Delaware effect”¹¹ seems, however, exaggerated at least as regards the principles of regulation itself. Some signs of improvement in regulatory standards in electricity and telephony are telling in this regard. Telephone disconnections for debt by British Telecom stood at the amazing figure of 800,000, out of 20 million residential lines. Oftel's policy paper set the target for reduction of the number of disconnections at 50% per annum at least for the years 1998-1999 (Oftel, 1997). It also required British Telecom to offer to its customers a limited service of incoming calls only when a customer agreed on the repayment of her debt. Successes have already been recorded in electricity disconnections. Before privatization, disconnections were running at the rate of 70,000 a year. Disconnections since then have exhibited a certain steady and remarkable decline. In 1995-6 only 674 customers were disconnected for non-payment of bills. While some of the reduction was the result of a shift to prepayment electricity meters, most of it was due to policies of the electricity regulator (Prosser, 1997, 173). While the major beneficiaries of electricity liberalization are still the managers of the utilities and the big industrial and commercial consumers (MacKerron and Watson, 1996) there is reason to believe that these benefits can be extended to small consumers also. Problems of regulatory failure, such as the windfall profits of the utilities, can be fixed by special taxes, as was proved by the Labor Government (Doern and Wilks, 1998, 11-12).

The design of the regimes of ordered competition in telecom reveals clearly the potential of integrating social with economic regulations. The questions of Universal Service were part of the regime design in both the UK and the US. The integration of universal service provisions to the new telecom regime was aimed to ensure that increasing competition in the urban areas will not end up with increasing prices for the (geographic as well as social and economic) periphery. For this purposes the regulations in both the UK and the US moved to ensure the establishment of "equalization" Universal Services funds. The Americans went even further and are currently institutionalizing a regime for rate-subsidies of broadband services for schools, libraries and rural health care providers (for tele-medicine applications). True, the achievements in this sphere are less ambitious then what was hoped for by public interests groups, but this is the outcome of a right-wing dominated Congress rather than a problem of regulatory capacities (Drake, 1997). In addition, the increasing importance broadband services¹² - in the context of information society and information economy - means that in order to avoid widening gaps between info-rich and info-poor, special provisions to make these service affordable are necessary. In neither country do universal service provisions deal with this problem at the moment. Yet the potential for a more developed universal service regime is a possible outcome of more socially aware regulatory regimes, without necessary recourse to nationalization.

Thus, the common wisdom that places a higher social value on etatist provisions of regulatory services than on regulation is based on misleading generalization. This common wisdom reflects a concrete historical development in which welfare regimes were developed in Britain and Europe more rapidly and comprehensively than in the United States. The fact that at the same time that the Europeans created their welfare regimes they also nationalized extensively does not *necessarily* suggest that nationalization was motivated by social goals and definitely that these social goals could not be maximized by other methods of governance. The rise of current regulatory regimes as a solution for market failures should not be identified too closely with the particular (and exceptional) experience of the American State-formation. While the current regimes of ordered competition are still consolidating we have no definitive evidence that they supply socially inferior results (except for the employees) than those of the monopolistic regimes.

IV. The Rise of the Competition State

While both telecom and electricity have experienced considerable changes, it is electricity, far more than telecom, that demonstrates the strength of the forces shaping today's political order. This may sound surprising as electricity is moving slower towards competitive order.¹³ Yet when one considers the technological incentives for competition in telecom, it becomes clear that the political will to transform electricity is the more impressive.¹⁴ In electricity, despite innovations such as the combined cycle gas turbine, which decreased the economics of scale, the incentives for competition were much more limited than in telecom. First, economically feasible alternatives to the copper wire of telephony are available to an extent that does not exist in electricity. Mobile telephony, satellite, and cable telephony provide alternative networks to wire and may serve as competitive systems. Second, technology offers new options for using electricity grids for the transmission of telecom data (packet-switching) and new options to electricity (and railway) companies to use their internal communication systems (and right-of-way) to supply telecom services. It is possible to use the electricity grids to transfer telecom but not the reverse. This implies that telecom companies may face competition from electricity companies that will use their grids and rights-of-way as strategic resources. Third, electricity transportation is sensitive to distance in a way that is unknown in telecom.¹⁵ Transmission losses and the considerable costs involved in the construction of electricity transformers facilitate competitive pressures from distant generators. Fourth, the transportation of electricity requires grids that cost about ten times more than the transportation of telecom. This strengthens the sensitivity of electricity to distance and reduces the extent to which it can be traded economically (Levi-Faur, 1999b, 141-143).

The relatively weak technological and economic incentives for competition in electricity make the change so meaningful for political scientists. The autonomy of politics is paradoxically demonstrated better in this sphere, which is only slowly moving towards competition. It is in the sphere of utilities - water, gas, electricity,

telecom, and railways - that countries converged on nationalization (Foreman-Peck and Millward, 1994, 8). Governments have grown bigger in this economic sphere more than in any other, so here the trends towards new governance regimes are the most telling. To the extent that the change identified in this paper is evident, what we see is a rise of new political order, namely the competition state (Levi-Faur, 1998). The competition state is an amalgamation of regimes of ordered competition in different spheres of economic and social activity and it is accommodated and embedded in the wider institutional setting of the nation-state. International governance structures that make competition laws and sector-specific regulation a matter for international agreements make the competition state a European and global rather than an Anglo-Saxon phenomenon (Akbar and Mueller, 1997; McGowan and Wilks, 1995; Nicolaidis, 1997; Scherer, 1994).

While the term "competition state" may be used synonymously with "liberal state" (e.g., Cerny, 1990; 1997) this is not the meaning that it carries here. The competition state is highly interventionist and represents a new renaissance of the nation-state rather than its retreat. The history of the American telecom regime, particularly the period of dual service competition of 1894-1924, is indicative. The comparison between the role of the state in that period and its role nowadays reveals the highly interventionist nature of the current political order. The expiry of Bell's patents in 1893 and 1894 was followed by the emergence of thousands of "independent" telephone companies. From 1900 to 1915 at least 45 percent of the US cities with populations over 5,000 had competing non-interconnected telephone exchanges. During the peak of this competitive period, between 1902 and 1910, the percentage was more than 55 (Mueller, 1997, 7). By 1907 the Bell system had less than 50% of the telephones in the United States (Bickers, 1991, 86). The competition took mainly the form of "dual service", namely the existence of two independent networks. Thus, subscribers who joined one system could not call subscribers of the other - unless, as happened about 13% of the time - they subscribed to both systems (Mueller, 1997, 7).

The obvious solution to the existence of two networks was the creation of interconnection agreements that would allow the subscriber of one network to interconnect with the subscriber of the other. However, the interests of the dominant Bell system in interconnection were hardly identical with those of new entrants to the

telephone market. As the value of a telephone network grows in direct relation to the number of subscribers, the importance of interconnection for a small network to a bigger one is much greater than the reverse. In other words, AT&T had no incentive to connect its network to the networks of the independents, and usually did not do so even for areas where it did not offer services (Gabel, 1969, 341). The situation called for an interconnection regime in which a third party would enforce interconnection and determine its technical and economic terms. Some considerable efforts were made at the time in this direction, and while in 1910 only ten states had statutes regulating interconnection by 1919 this number had risen to 34 (Cohen, 1991, 60-61). Still, the form of interconnection at that time reveals the low capacities of the state commissions to create an effective regime. Interconnection legislation was under state rather than a federal jurisdiction, was challenged often at the courts as "confiscation of property", was very often restricted to the long-distance component (and not to local competing networks), and did not determine the technical and economic conditions of interconnecting the networks.

The differences from the interconnection regime that was devised by the 1996 Act and by FCC regulations tell much about the active role of the state in promoting telecom competition nowadays. The regulatory regime for interconnection is now a federal responsibility. This regime encompasses not only long-distance calls but also local exchanges. But perhaps the most important features in regard to the extent of state intervention are the requirements to unbundle the services at any "technically feasible point" and the mandate that the FCC has acquired as to the tariffs of interconnection. The requirement to unbundle means that competitors don't have to build their own network but can largely rely on each other's equipment. Digital exchange networks are highly expensive systems, which provide a wide variety of services such as advance signaling, diagnostic and testing procedures, switching, and transport. Telephone operators may ask to buy services from a competing operator (e.g., switching but not transporting, or signaling but not switching) and the legislation determines the duty to supply. More important, the FCC has the authority to set the benchmark prices of these different services. It thus has extended its regulatory role from retail to wholesale prices of telecom services. An equivalent regulation in the field of the car industry, just to give an example, would be the duty of Honda to sell any part of its engines to GM at prices determined fair by the Federal

Trade Commission. Telecom regulation, therefore, goes here deeper and farther in determining what is technically feasible and economically desirable than ever before.

The interventionist nature of these so-called "deregulatory" reforms is not limited to telecommunications. Regulatory policies in electricity are now aimed at building a similar regime in electricity. Open access on demand for all to the transmission and distribution grids implies that the property rights of an operator are limited in the name of competition. Electricity suppliers will be able to compete with incumbents using their strategic assets. Moreover, as in the case of telecom the economic and technical conditions for interconnection will be under the discretion of regulatory agencies. This implies a different relation between regulation and competition from the one portrayed by George Stigler in the early 1970s. According to Stigler, "Regulation and competition are rhetorical friends and deadly enemies: over the doorway of every regulatory agency... should be carved: Competition Not Admitted"¹⁶ This paper's account of the reforms in telecom and electricity presents a contrary picture. Regulation-for-competition is a necessary condition for the existence of competition in the telecom and the electricity sectors. It is not that Stigler's maxim doesn't capture the reality of the postwar regime; but it captures only it. Today's relations between regulation and competition are positive-sum, and over the doorway of every regulatory agency the term "Regulation-for-competition" should be carved. While much of the intellectual power for the regulatory reforms came from the Chicago economists, the result - regimes of ordered competition - is not necessarily what they had in mind.

The regimes of ordered competition are the product of various and sometimes conflicting political strategies such as privatization, regulation, deregulation, and reregulation. In contrast to the Chandler-Majone's thesis, the structures that represent the outcome of these strategies are not necessarily a direct outcome of the strategies. This is due to the fact that (a) these reforms involve policy learning and policy innovation, (b) unexpected obstacles and results are always part of the policy process, and (c) policy making and policy implementation are conducted over a relatively long period. The initiator of policy change is not necessarily the one who carries it to its completion. But maybe the most important reason that liberalization is not identical with deregulation is the critical role of reregulation in these reforms. This is the

component that gives so much power to the regulators and brings the state back in. Moreover, the sectoral regimes have to be accommodated to older state structures and institutions. This is why, despite the common characteristics of regimes of ordered competition, one may expect divergencies in the design of the regimes and in their outcome in terms of social and economic achievement. As with the study of divergencies in the welfare state, we will most probably have to study divergencies in the development of the competition state.

V. Conclusions: The Rise of the Competition State

Unlike Majone's conceptualization of change - from the positive to the regulatory state and which examines the European developments in isolation from the American experience, this paper offers an alternative that captures both experiences and suggests the rise of the competition state as the best manifestation of the present-day change. Such a comprehensive framework of analysis is important, especially in view of the growing tendency to make the study of European politics a sub-discipline of the profession rather than an area study. The creation of regimes of ordered competition in telecom and electricity across countries and continents helps to put the EU regulatory developments in context, hence to distinguish its novel and exciting features from the more mundane.

The paper also points to the new structure of governance - that of ordered competition, which is not what economic liberals had in mind. Structures are not simply the results of strategies but also the institutions that shape strategies. Outcomes are not only reflections of the balance of power between competing political agents with deliberate and premeditated strategies. They are also reflections of institutional, economic, and technological constraints, which are revealed only during the policy process. These regimes of ordered competition demonstrate the positive-sum relations between competition and regulation. In addition, they suggest a skeptical perspective towards predictions that the transformation from public ownership towards a

regulated monopoly is leading the telecom and electricity regimes towards socially inferior results.

The study of the dynamics of American and British telecom and electricity regimes demonstrates the breadth of change in the architecture of the nation-state. The extent of change differs from sector to sector and country to country, yet often it is that difference that tells the most. While telecom has changed more than electricity and has become the symbol of the new information economy, it is the electricity reform, much less induced by technological incentives, that best exemplifies how comprehensive and politically-inspired these changes are. At the cross-national level, the British state has experienced the most striking changes. Privatization on the one hand and the creation of newly semi-independent regulatory agencies on the other represent a radical change from the past. Yet while Britain has experienced these most radical changes, the fact that the American telecom and electricity regimes have changed too, and that in electricity it is Britain that has led the way in the creation of regime of "ordered competition", is instructive. It demonstrates that the change is not simply a convergence on the American model and/or an outcome of the excessive power of American business community but also an open-ended process, which significantly involves policy learning.

While both states have changed their regimes their starting points were different. Britain started with restrictive regulatory regimes at the municipal level, and then moved towards etatism and direct provision of services by the state. America started with laissez-faire policies and then moved to the consolidation of regulatory regimes with private monopolies, first at the state level and then on the federal level. The terms that may best capture the variations in the trajectories of the American and British states in their dealing with telecom and electricity at the starting point of the first half of the 20th century is the regulatory state in America and the service-provision state in Britain. Other terms, like the interventionist state, the positive state, or even the administrative state, do not capture the different trajectories of the two countries and/or obstruct our understudying of the new architecture of the nation-state that has developed since the 1980s.¹⁷ The new regimes of ordered competition in both the US and Britain are characterized best as the rise of the Competition State. To describe the changes in Britain as the rise of the regulatory state would be instructive

to the extent that new regulatory structures are established, but it would be misleading as British regulatory expansion begun some centuries earlier, well before the 1980s. Hence, while the British trajectory may be described as movement from the Service-provision State to the Competition State, the American trajectory may be described as a movement from the Regulatory State to the Competition State.

The term Competition State does not connote metamorphosis of the state. It is best to talk in this sense about a change that adds a new institutional layer to a very thick structure that has taken shape over centuries. Like coral reefs, state structures are built and rebuilt down generations and are subject to forces of erosion and renewal at the same time. New layers are not simply overlaid but are accommodated. This is one reason why new divergencies are expected to occur and why structures do not simply follow strategies. Facing different state structures, the same strategies may result in different outcomes. Variances in structures and regime design against the background of different economic, social, and political environments will most probably affect the outcomes of the reforms. Thus, while the nation-state is forcing globalization back through the institutionalization of the Competition State, it does so, as before, in a way that ensures the perpetual generation of convergence and divergencies.

Interventionism and positivism have differed between the countries, and somewhat less between the sectors, but they were important across the countries and across the sectors. This is why Seidman and Gilmour (1986) on the one hand and Majone (1997) on the other characterized the postwar order in the US and Britain as positive and interventionist. But for political economists, probably in contrast to public administration specialists, direct or indirect provision of services could not represent the major feature of change. More significant are on the one hand the changes in the politics of ownership, centralization of power, and legitimization of monopolies, and on the other continuity of interventionism and positivism. The form of interventionism has changed, not its extent or even scope. Compared with the past, positivism is still an important characteristic of the current regimes of telecom and electricity. This is reflected in the potential for the promotion of life-line policies, the emphasis on universal service, and the continuity in rate-regulation. While the employees of British and American telecom and electricity paid a heavy price

(layoffs, and decrease in job security for those who stayed) the consumers seem to be winning in telecom or may win in electricity.

Notes

¹ An international organization of electricity generation, World Power Conference, was established only in 1924. The organizational development of this organization was very slow (its primary action was to hold international conference every three years). It is now called the World Energy Council.

² The first public telephone exchange in America was opened in New Haven in 1878. The first in Britain was opened in London a year later.

³ Municipal ownership of the telephone was much more successful in the Netherlands and Canada. In the United States there were only a few scattered systems, the largest and the most successful begin that of Brookings, South Dakota (Glaeser, 1957, 446).

⁴ Comprising the Secretary of War as chairman, the Secretary of the Interior and the Secretary of Agriculture.

⁵ The new statist order of the post war period became even more monolithic with the nationalization of the Imperial telecommunications provider Cable & Wireless [1947].

⁶ The extent of transformation in comparison to the old regime was not radical and smaller then the Carter's administration was hoping for.

⁷ Avoided costs were calculated as the price that the utility would save by not having to build new plants to provide what they could get from the independent generator.

⁸ The consent decree was a court modified agreement between the antitrust authorities in the Department of Justice and AT&T.

⁹ The Scottish system and North Irish electrical system were privatized according to different models. However, the English and Welsh electricity included about 88% of the total so it is justified to characterize the British trajectory according to the governance regime of England and Wales (Thomas, 1996, 47).

¹⁰ This situation in US was some what better but still telephone was a luxury. In 1896 telephone service in NY City cost \$20 a month while average monthly income of a worker was \$38.50 (Pool, I. Forecasting the Telephone: A Retrospective Technology Assessment, Alberx, 1983, p. 22. Schiller, 1998, 400-1).

¹¹ Or race to the bottom, that is, erosion on regulatory standards, see in relations to trade policies (Vogel, 1995). The same issue was examined in relation to British electricity environmental regulations by Collier. She found out that the electricity privatization was a mixed blessing in environmental terms. The lessons are that privatization and liberalization *per se* are not necessarily a problem but there is a definite need for a strong commitment to sound environmental regulations (Collier, 1995). In the US, under title XII of the 1992

Energy Act, the government will pay producers of electricity from certain renewable resources a “production incentive payment” or provide tax credits. This subsidy, coupled with technological improvement, is apt to rekindle the market for renewable electricity (Gilbert and Kahn, 1994, 205).

¹² For example, high speed internet for video, graphic and special applications.

¹³ See Schmidt (1997) as to the European Union and OECD (1997) for a sectoral updates.

¹⁴ This does not mean that in telecom reform was pre-determined by technological change. Technological changes did not dictate or even create pressures for change in telecom. New technologies supplied no more than positive incentives for telecom liberalization that made regime change an attractive option.

¹⁵ In the first days of telephony the technology was effective for a distance of only a few kilometers. In time, this sensitivity to distance became far less important. While new technologies reduce the sensitivity of electricity to distance across time, it is still far more sensitive than telecom (one critical problem is the rise in energy losses with distance).

¹⁶ George J. Stigler “First Lecture”, in Manuel F. Cohen and G. J. Stigler, *Can Regulatory Agencies Protect Consumers?* Washington, DC: American Enterprise Institute, 1971. Cited in MacAvoy W. Paul, *The Failure of Antitrust and Regulation to Establish Competition in Long-Distance Services*, The MIT Press and the AEI Press, 1996, p. xv

¹⁷ Cerny’s conceptualization of the transformation from Welfare State to Competition State (Cerny, 1990, 220) is not satisfying for our purpose either, because telecom and electricity etatism is not a major feature of the welfare state.

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