Chapter 8

The ecology of games in telecommunications policy

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In the 1980s, communications scholars began to pay more attention to the politics of communications policy, not surprising in light of the profound changes affecting broadcasting, cable, and telecommunications.[1] Why, for example, after over a decade of restrictive policy, did the British launch efforts to develop cable television systems? Britain, like France, Germany, and many other European nations, had previously restricted the development of cable to serve as relay systems, designed only to retransmit broadcast stations received over the air. Why the change? And how can we account for equally dramatic shifts in the telecommunications arena with the French P&T's development of cable television systems, the moves to privatize British Telecom and Nippon Telegraph and Telephone, and the divestiture of AT&T?

One approach to understanding the factors shaping these developments has been through research on the policymaking process in communications. Policy researchers have offered several explanations for policy change in communications. None, however, seems to incorporate the almost routine interactions between developments in communications and events outside the common purview of communications policy studies. In the United States, for example, efforts in the late 1970s and early 1980s to rewrite the Communications Act of 1934 were overwhelmed by antitrust policy – that is, the settlement of the Department of Justice's antitrust case against AT&T. In Britain the government's restrictive cable policy took a back seat once cable system development became identified with an information technology industrial policy (Dutton, 1987; Dutton and Blumler, 1988). Later, its effort to promote the development of private cable TV systems was nearly stillborn after the surprise announcement of a change in tax policy that disallowed capital allowances for investment in cable plants. In the European Community, the Commission's 1992 policy initiative in

developing a common market for telecommunications was forced to respond to a wave of nationalism and democratic reforms throughout Eastern Europe, epitomized by the collapse of the Berlin Wall in 1989.

A central argument of this chapter is that prevailing explanations of policy change in communications fail to incorporate the role of such interactions across different domains of corporate and public affairs. Such interactions are treated as aberrations, or unique historical circumstances outside the reach of prevailing theories. It may be, however, that prevailing interpretations have fallen short of the mark because they are not anchored in an adequate model of the broader system of action governing the development of communications. I shall present the outlines of one candidate model of this broader system of action that is based on what Norton Long (1958) termed 'an ecology of games.'

I begin by describing the concept of an ecology of games. In doing so, I hope it becomes clear that this terminology is not being used to belittle the serious social, economic, and personal stakes at issue in the development of communications. Personal careers, corporate profits, national cultures, and the public's welfare are among the stakes in the games shaping communications. Once I have defined this idea more fully, I provide a more concrete, empirical grounding for it by describing the ecology of games shaping telecommunications policy in the United States. I then compare aspects of this ecology with the ecology of games surrounding communications policy in other nations, and I go on to show how the ecology of games can be linked to several factors, such as legal–institutional arrangements, in ways that explain the dynamics of a nation's communications policy. In the final section, I review strengths and weaknesses of this approach, not to validate an interpretation, but to suggest a line of inquiry that could be pursued in a variety of communication policy areas. The idea of an ecology of games, old as it is, provides a new way to think about the social and political shaping of world communications.

Most studies of the politics of communications policy stress the strength and interplay of organized groups and interests. So-called stakeholder analyses are common within industry as well as academe. At times, though, these analyses take on many aspects of traditional models of group politics – the billiard ball notions of the influence of pressure groups.[2] In the United States, depictions of interest group regimes in support of regulation and the role of large telecommunication users in promoting deregulation come close to these early models of

group politics (Cowhey, 1988; Schiller, 1982). Ithiel Pool and his colleagues were among the first to challenge such billiard ball notions through empirical research on the role of interest groups in shaping Congressional behavior (Bauer *et al.*, 1963). Following the work of Pool and others, scholars of communications have offered a variety of more sophisticated, pluralist interpretations of the communications policy-making process; these scholars view policies as a compromise among complex and evolving coalitions of elites, including lay politicians, interest groups, and political parties (Dyson and Humphreys, 1986; Hills, 1987; McQuail and Siune, 1986).

In contrast to the pluralists, elite theorists have argued that the convergence of policy across several nations supports the notion that these changes are the consequence of the self-interested politics of transnational economic elites (e.g., Garnham, 1983). Elite theorists argue that information and communication technologies are driven more by military and industrial applications than by public communication needs, that public preferences are controlled through marketing techniques, and that while politicians and technocrats may participate in decisionmaking with respect to communications media, they are primarily responsive and accountable to the economic elite of a society (e.g., Garnham, 1983; Mosco, 1982; Schiller, 1981). These scholars build upon many ideas developed by such elite theorists as Floyd Hunter and C. Wright Mills, and they led to some of the same controversies with pluralists that emerged in the study of urban politics from the 1950s through the 1970s.

In the 1950s, Norton Long used the idea of an ecology of games to critique pluralist and elitist interpretations of local politics (Long, 1958).[3] According to Long, local events are seldom governed in the sense that either pluralists or elitists assume. Rather, the development of communities tends to unfold as a consequence of often unplanned and unanticipated interactions among relatively independent games. Individuals seldom make decisions about the larger community. Most often they make decisions as the occupant of a role, such as a real estate agent, council member, developer, or planning commissioner, in a certain game, such as a real estate game, a tax game, a construction game, or a zoning game, respectively. So the evolution of local communities might be viewed as the outcome of a history of separate but interdependent games.[4] The overall system of action within which groups and interests operate could be described as an ecology of games.

This idea is quite generalizable. The ecology of games notion implies that different actors and organizations within a territory are involved in games in which they play a certain role. For Long, territories were defined by local communities. But the territory of an ecology of games could be national or even global, which the arena for communications policy has indeed become. Games involve competition among players under a set of rules.[5] They 'provide a sense of purpose and a role,' 'a set of strategies and tactics' for the players (Long, 1958). Rules define how the players compete for the prizes of their game. Every game has its own prizes, but they might vary widely. In some games it may be profit; in others it may be virtue or recognition. Different games can also be interrelated by some players simultaneously participating in different games and some players transferring from one game to another. The outcome of one game might well affect the rules of play of another. Once we know someone is playing a game, we might be able to say something about their goals, the rules they play by, and the range of strategies and tactics they might exploit. In this sense, games structure the activity of their players.

The assumption that games provide a clear set of goals and objectives to players distinguishes this theoretical perspective from similar theories that stress the 'sequential, unfolding nature of activity' (Pfeffer, 1982). For example, Michael Cohen and others (1972) developed a 'garbage can model' of the behavior of 'organized anarchies,' like universities. This notion is similar to an ecology of games in that it emphasizes the fluidity of participation and the unfolding nature of activity. But it is also based on an assumption that the preferences of participants are problematic, which is quite at odds with an ecology of games because games provide their participants with goals and a sense of purpose.

Long was not the only political scientist to employ the concept of games. The most prevalent use has been in game theory, a well developed area of formal, positive theory, although it has found limited application to empirical studies of policymaking. (For a classic over-view of game theory by contemporaries of Long, see Luce and Raiffa (1957).) But the notion of games has been used outside of formal theory as well.

One way is as an analogy to certain features of political behavior. In this vein, one of the most parsimonious ones was drawn by the political scientist, E.E. Schattschneider (1960), who compared politics to a fight:

> Every fight consists of two parts: (1) the few individuals who are actively engaged at the center and (2) the audience that is irresistibly

attracted to the scene. . . . The outcome of every conflict is deter-
mined by the extent to which the audience becomes involved in it
(Schattschneider, 1960: 2).

Many political conflicts can be likened to a game in which there are no
limits on the number of players on each team and spectators can at any
time choose to join in the game. Contestants with a decided lead might
well try to maintain the status quo by keeping their side intact and the
spectators in the stands. In contrast, contestants about to lose a contest
might change the odds by dividing their opponents or drawing
spectators into the game. In politics, these strategies can be pursued by
defining the issues at stake. By determining what the conflict is about,
the key players can shape how individual players choose sides and the
number of spectators drawn into the conflict (Schattschneider, 1960).

The ecology of games is compatible with Schattschneider's analogy.
We might be able to describe the history of political conflicts sur-
rounding communications; for example, we might identify the central
players or contestants and their attempts to shape the outcome of each
contest by defining the issues (i.e., using the politics of ideas) in order
to change the scope of the conflict (i.e., by incorporating or excluding
spectators) or to alter the nature of cleavages that determine how the
players choose sides.

A shortcoming with Schattschneider's analogy is that most conflicts
(even fights) are governed by rules that constrain the actions of players
and spectators. Nor is politics so simple as to be encompassed by a
single conflict. Likewise, the rules governing political conflict differ
across political systems, and also over time and within different insti-
tutional settings. Sometimes the rules and their application are unclear
or themselves a matter of controversy, requiring a mechanism, such as
an umpire, for interpreting the rules and their application. And the
outcome of games is not always zero-sum, like in a fight. For such
reasons, the more general concept of an ecology of games is attractive.
It suggests that different games can be played simultaneously, with each
player involved in more than one game. Each game can have a different
mix of players and spectators as well as its own rules and umpires.
Moreover, although different games, they might be interrelated.

Another use of the concept of games is found in the work of Michel
Crozier and Erhard Friedberg (1980: 56), which conceptualizes the
behavior of individuals as organized around games, and organizations as
collections of games. Policy outcomes, or other behavior of collectiv-
ities, is viewed by Crozier and Friedberg (1980: 57) as 'the result of a

series of games participated in by the various organizational actors,' which I view as compatible with what Long (1958) would refer to as the outcome of an ecology of games.

For over three decades Norton Long's concept of an ecology of games has rarely found direct application, despite the fact that his ideas are widely known. His 1958 article is widely reprinted and at one time was a staple of many undergraduate and graduate courses in urban politics and administration. Long himself did not develop the idea much beyond his original article. It might be that behavioral research paradigms of the 1960s did not prepare American social scientists to work with this qualitative approach. Although even Crozier and Friedberg (1980), European social scientists, do not use the concept of an 'ecology of games,' their work is conceptually and methodologically close to Long's. The idea of an ecology of games emerged from qualitative and historical case studies. Quantitative, behavioral research, either experimental or survey based, did not form the foundation for an ecology of games, since quantitative researchers could not readily define the idea of an ecology of games in a way that was easily amenable to measurement. (Similar problems have confronted efforts to apply formal theories of games.) It is a sensitizing concept within a case study mode of inquiry, which differs from a concept intended to be operationalized within a quantitative survey. In the 1990s, the social sciences are more open to, and sophisticated in the use of, qualitative research. Moreover, several theoretical streams of work, such as the new institutionalism (March and Olsen, 1984, 1989) and concrete theory (Lane, 1990), buttress the argument for a theoretical perspective that more realistically captures the complexity of the policymaking process. Maybe the 1990s are ripe to revisit the ecology of games and build upon Long's notion (Dutton and Vedel, 1991).

It is possible to sketch the ecology of games surrounding communications policy in the United States and some of the principal ways it differs from the ecology of games in other nations. This approach helps make sense of the development of communications, provides a grammar for discussing the development of telecommunications, and overcomes some limitations of more conventional frameworks.

It is difficult to define the boundaries of any game as well as any ecology of games. To build on the metaphor of an ecology, it should take place within a territory. Analytically, a territory might be defined geographically and functionally as the development of world communications. However, I will focus on a more limited territory, the development of telecommunications in the United States. The environment of

this ecology of games entails other functional areas of communications, such as publishing, broadcasting, and cable television, but it is not limited to communications-related activities. For example, developments in regulatory policy within other industries influenced the communications field. And all these ecologies can be viewed to exist within an international environment.

The history of telecommunications in the United States provides a rich source from which to extract a few examples of how developments reflect many features of an ecology of games. This history is, of course, too complex and controversial to characterize in a brief essay. But simply by looking at some of the most well documented developments within this history through a different lens, I can illustrate it as the outcome of interactions among separate but interdependent games. It also suggests certain features that might be characteristically American about this ecology of games.

Since the Second World War, numerous games shaped United States telecommunications. Among the most prominent, prior to divestiture, were public utility, boundary drawing, and antitrust games. The public utility game was organized around the provision of efficient telephone services to residential, business, and government customers in a universal and equitable fashion in return for monopoly revenues to the private telephone companies. The telephone companies, groups representing business and residential users, the Federal Communications Commission (FCC), and state public utility commissions, were some of the key players negotiating over regulatory policies, such as rate-of-return pricing. The rules of this game were established by the Communications Act and state legislation as interpreted by their respective regulatory agencies.

The play of this public utility game was importantly influenced by a boundary drawing game, which pitted the telephone companies against new telecommunications equipment and service providers, with the FCC serving as umpire. This game involved conflicts over the definition of basic telecommunications services and facilities. The Carterfone decision in 1968 and the computer inquiries were moves within this game. *Computer Inquiry I* (1965–9), *Computer Inquiry II* (1976–80), and *Computer Inquiry III* (1985–) have focused on defining the boundary between unregulated computing and regulated telecommunications services.

Outside of the communications arena *per se*, an antitrust game became significant to telecommunications beginning in 1949, when the Department of Justice brought an action against AT&T. Its rules were

established by antitrust (not communications) law, but its outcome dramatically shaped communications policy. In 1956, a consent decree restricted AT&T to providing regulated telecommunications services. And the *Modified Final Judgment* of 1982 – which resulted from an action brought by the Justice Department in 1974 to modify a 1954 Final Judgment to the Department of Justice action begun in 1949 – stipulated the divestiture of the operating companies from AT&T, which re-structured the American telecommunications industry. The Justice Department's role in this game was to block illegal efforts by AT&T to eliminate competition through cross-subsidies, discriminatory pricing, or other strategies. Given different players, objectives, and rules, it is not surprising that the antitrust and public utility games were at odds. They were by no means independent since AT&T was a key player in both games and the outcome of each affected the play of the other. But the actions of the key players within Justice and the court appear to have been governed almost exclusively by the goals and rules of the anti-trust game.

The ecology of games shaping telecommunications is clearly not this simple. Many other games were also quite significant prior to and following divestiture. Table 8.1 identifies some of the most salient ones, grouping them by type and indicating some of the key players, goals, and strategies associated with each. Taken together, they indeed compose a complex ecology.

At least three kinds of games seem to have animated the development of telecommunications in the United States (Table 8.1). At the center appear to be several that essentially entail competition among business-es for markets, like the competition between long-distance telephone companies. Marvin Sirbu's chapter (16) identifies a struggle for owner-ship and control over telecommunications networks that is different from the competition between MCI, Sprint, and AT&T for telephone customers, but the struggle fits well in this general category. Compe-tition among electronic equipment manufacturers for sales to telephone companies is clearly in this set. Competition between telephone companies and cable operators also falls into this category and links this ecology of games to that surrounding cable communications. These business competition games take place under a set of rules largely determined by telecommunications policies established by state and federal government officials. The FCC and the courts largely perform a role as umpire, and the umpires can exercise discretion, but that is all part of how these games are played.

Another kind of game – policy games – involves competition among players attempting to influence public policies, from struggles over the rewrite of the Communications Act to conflicts over pricing policy to debates over antitrust law. These games are distinct from business competition games in several respects. First, they are largely fought over the rules that are to govern competition among businesses, including rules that might permit a business to establish a monopoly and avoid competition. Second, the government becomes a player, not just an umpire, with various governmental agencies competing to influence policy in that agency's view of the public interest. (Of course, governments can compete with businesses in telecommunications and other areas, such as when a state owns a telecommunications network, or when a municipality owns a cable TV system; however, a clear feature of the United States ecology of games is that this is the exception rather than the rule.) Third, this kind of game has a greater potential for conflicts to engage various spectators as players because it involves public agencies. Also, the prizes in policy games are more diverse, ranging across any number of motives leading actors to become involved with policy.

A third kind of game concerns metapolicy, that is, struggles over the political and administrative principles that govern policy games. In telecommunications, one metapolicy game involves the ongoing struggle over the first amendment and its application to communications. As Ithiel Pool (1983) pointed out in *Technologies of Freedom*, change in the Court's interpretation of the first amendment could directly affect the outcome of nearly every aspect of telecommunications. If cable companies, or for that matter telephone companies, become first amendment publishers, many of the rules now governing business competition in telecommunications would be problematic. A less salient game involves principles surrounding privacy and its application, as derived from interpretations of the first and fourth amendments.

These games differ from policy games in that they involve many who are not directly involved as players in policy or business competition games. The rules governing metapolicy games are key features of the larger political system, such as the separation of powers and role of the courts in the United States. As an aside, it is worth noting that critical scholars have long held that national economic and political systems have a systematic affect on policymaking. It may be that many structural considerations, so central to critical scholars, can be linked to the idea of an ecology of games, given the importance of national and international

Table 8.1 Games shaping the development of telecommunications in the United States

Types & examples of games	Key players	Selected goals and purposes	Selected strategies
Metapolicy games			
1st Amendment	A faction within cable industry, cities	Restrict franchising authority of cities	Define cable operator as 1st Amendment publisher
Regulatory theory	Economists, regulators, policy scientists	Define prevailing theory of regulation	Academic and business recognition
Partisan politics	Democrats vs Republicans Neo-conservatives vs Liberals	Pass partisan agenda	Legislation, campaigns & elections
Policy games			
Public utility	RBOCs, Common Carrier Bureau of FCC, State PUCs, business & residential users	Universal & equitable services	Regulation of monopoly suppliers
Boundary drawing	Telephone companies & industry associations, large users, providers of computing & information services	Gain new markets	Broaden (narrow) definition of basic services
Antitrust	Department of Justice, AT&T	Win settlement; prevent illegal business practices	Bring to trial/settle
Interagency politics	FCC, NTIA, State Department, House & Senate Committees	Maintain and enhance status of agency	Insure that agencies' policies appear to work
Federalism	Federal, State & local regulators	Legitimize jurisdiction over communication industries and services	Lobbying, oversight of other regulatory agencies

Business competition games

Long-distance service	Long-distance companies (AT&T, MCI, Sprint...)	Profit, market share	Qualitative improvements through modernization, cream-skimming on limited routes with used equipment, and nonunion labor
Local service	RBOCs, State PUCs, Residential & business users	Minimize cost of services; equitable and universal access	Rate-of-return pricing Cost averaging
Network control	International Communication Association, Large users, Local exchange carriers, Interexchange carriers	Control provision and operation of network services	Support network architectures biased toward individual interests
Terminal equipment sales	Westinghouse, Siemens, and other equipment manufacturers & retailers	Capture market for customer's networks (e.g. RBOCs & larger users)	Develop technology in support of networking strategy
Cable/Telco	Cable and telephone industry associations	Capture market for video services to households	Encourage policies in support of your technology. Maintain or erode policy and technological barriers to telephone entry
R & D	Bell Labs, Bellcore, other centers of R&D	Technological innovation, i.e. patents, royalties, licenses, recognition	Promote trials & experiments, pricing policies that encourage long-term investment (e.g. price caps vs rate-of-rotum)

economic systems in establishing the rules governing games, if not the games themselves, as well as their relative status.

Other metapolicy games have influenced telecommunications. One was a regulatory theory game that witnessed academic, industry, and government economists and policy analysts in a struggle to define prevailing regulatory philosophies. A central cleavage of this game developed between the proponents of marketplace competition versus the defenders of regulation, of which the former gained an upper hand in academic and policy circles (Derthick and Quirk, 1985). This game was being played alongside industry-specific conflicts over regulation of trucking, airlines, and other industries. Their outcomes, despite the differences in players, have been relevant to telecommunications.

It is possible to move beyond these three general types of games. For example, there are what might be called bureaucratic games. These are singled out as a separate class because they also are governed by different rules, sometimes unique to the corporate and governmental organizations in which they are played out. Also, they are played within organizations, which are assumed to act as single entities in the other games. For example, AT&T might be viewed as a single actor within the antitrust game that pitted it against the Department of Justice. But the moves of each player can also be viewed as the outcome of games played within each organization.

Within the former Bell system, there was a struggle over strategic planning that shaped AT&T's actions in the case. Given a declining rate of growth in ordinary telephone services, AT&T faced some of the same concerns over developing new markets that the European PTTs were facing. AT&T's problems were compounded by the inflation of the 1970s because the company was a major lender, financing telecommunications equipment that was repaid through rentals; indeed, Peter Drucker (1984) has argued that inflation placed major strains on AT&T prior to divestiture. The outcome of this conflict placed executives at the top of AT&T who were prepared to move the corporation into new markets, particularly into new information technologies and into the international arena. Within Justice, the decision to bring its suit to trial after holding off for six years might be viewed as the outcome of bureaucratic games that placed 'true believers' in positions of authority within the agency (Drucker, 1984: 11).

More generally, there have been a variety of bureaucratic games within the agencies participating in communications policy. This conflict has primarily concerned members of the FCC, the National Telecommunications and Information Administration (NTIA), and

House and Senate committees, as each has sought to establish, defend, and implement its own stamp on public policy. And interagency jurisdictional and administrative turf battles have generated some of the more enduring struggles in communications, including a continuing federalism game creating conflicts between federal and state agencies over the nature of overlapping authority in regulating telecommunications. The federalism game has been more salient for cable TV than for telecommunications, but it is relevant to both arenas.

I have not exhausted the games that might be identified, such as those including international players or the ones involving AT&T and the aerospace industry over the development of satellite communications facilities – which proved significant to the evolution of competing communications networks. Nevertheless, the point should be clear that the interaction of several different kinds of games shaped the development of telecommunications. They have unique sets of players, goals, strategies, and rules. Once this is recognized it is also clear that most considerations of telecommunications policy focus only on one or a few games that compose a much larger ecology.

Having such a framework to describe the larger system of action in which these games are played can help to anticipate as well as understand the actions of individual players, which are often rational from the perspective of a particular game, even though the interaction of decisions made within the context of different games may lead to dysfunctional consequences. Within the context of an antitrust game, judicial decisions might have been quite rational, while in the context of international trade in electronic equipment, it appears irrational, especially from an American perspective. In a similar sense, the actions of individual players may be more or less complex and more or less contradictory, depending on the set of games that they are simultaneously playing. Consider the differences in complexity surrounding the goals and strategies of a player in few games within this ecology (e.g., Judge Harold Greene) in contrast to a player in many games (e.g., AT&T).

I have argued that the development of communications is often affected by the outcome of games outside the communications arena *per se*. But the opposite is also true: The ecology of communications has impacts outside of its immediate territory. In the United States, telecommunications developments influenced at least three major areas, including national defense, international trade, and industrial and economic development (Drucker, 1984; Torerro, 1985). With regard to national defense, the Department of Defense had to adapt its communication systems to the post-divestiture environment. In the trade area,

there has been a growing recognition that divestiture changed the rules of the game in international trade in telecommunications; for example, it created incentives for the Regional Bell Operating Companies to shop abroad for equipment. And divestiture has had implications for vital aspects of industrial and economic development, including the resources devoted to R&D in information and communications technology (Noll, 1987).

The ecology of games surrounding telecommunications in the United States differs markedly from that in Japan and most western European nations. First, in the United States, the most significant games tend to be those that define the rules of the game – what I have labeled as metapolicy. Conflicts over the First Amendment and its application to communication exemplify this type of game, which has implications for the play of most other games in communications. Antitrust policy is another – a game about the rules of the games that govern business competition. In Japan and western Europe, the most central games seemed to have revolved around more programmatic policy goals. For example, in France, Japan, and Britain, a well defined industrial policy, focused on information and communications technology, took precedence over the rules of business competition, which were compromised and adapted to address industrial policy objectives.

The second way in which the United States ecology of games in telecommunications differs from other nations is that business competition seems to be more central to the American ecology of games. This might be less so in Japan, and it is clearly less in most western European nations. Consider how much cleavages over communication policy are often deepest between business rivals (e.g., telephone versus cable companies) in the United States. Debate between the telephone and cable industries often seems to cut deeper than any bureaucratic, ideological, or partisan divisions. In France, for example, partisan cleavages are more clearly reflected in divisions over communications policy. Even in Japan, where competition between business adversaries is fierce, the major cleavages tend to be between the Ministry of International Trade and Industry and its allies and the Ministry of Posts and Telecommunications and its allies. Business competition has closer ties to political-administrative divisions.

Some games appear almost inconsequential to telecommunications policy in the United States but quite central in other nations. For example, a governmental budgeting game has been of much consequence to the public PTTs of most Western European nations. Competition

among government agencies for funds has often resulted in governments drawing from PTT revenues to support the general fund, much like American local governments have used cable franchise fees to support the general fund, but at a much larger scale and in a far more flexible manner. In France, for instance, the play of this game was partly responsible for the French P&T's willingness to pull back on some of its more ambitious cabling plans; the Socialist government increased the amount it drew from the P&T to support the general revenue, thereby squeezing the resources it had thought were available to finance cable system development (Vedel and Dutton, 1990). Likewise, an international broadcasting game has been central to telecommunications policy in Canada as well as in France and other European countries for decades, but almost irrelevant to the American ecology of games until foreign firms purchased the lion's share of major Hollywood film studios in the late 1980s. The French P&T gained support for its cabling plan in part because cable offered a mechanism for gaining more control over the proportion of French programming that would be aired, compared to the alternative of relying on satellite distribution of programming.

Partisan political games have also been surprisingly less important in the United States than in Europe. As is often said, deregulation began under Jimmy Carter. Although the Reagan Administration made deregulation a priority of its conservative agenda, the rise of neoconservative politicians within the Republican and Democratic parties may have muted partisan debate between a Republican FCC and a Democratic Congress. Outside the United States partisan politics has been more closely tied to communications policy. In Britain the Conservative party's support for privatization of British Telecom and private cable systems was opposed by Labour. In France partisan politics has long been tied to communications policy, particularly in broadcasting but also in telecommunications.

Of most importance, an industrial policy game has been pivotal to shaping the development of telecommunications in Western Europe and Japan, but not in the United States. Communications and information technology were defined as strategic industries for revitalizing the economies of Japan, Britain, France, and West Germany, among others. During the late 1970s and early 1980s, each of these nations invested public funds in efforts to develop new telecommunication infrastructures and services as one aspect of an information technology-led industrial policy (Dutton et al., 1987).

During the same period, the United States developed no comparable industrial policy; to the contrary, it focused on the rules of the game, rather than vice versa. Only in the late 1980s, with increasing awareness of the industrial and trade implications of a successful introduction of high definition television, did discussions of industrial policy emerge as a legitimate focus for debate, if only for a brief period of time. Even then public support for the electronics industry was only contemplated as programmatic support for national defense, rather than as an aspect of an industrial policy. This is not new for the United States. Fred Weingarten (1987) has noted that 'approximately 80 per cent of federally funded R&D in computers and communications is paid for by the Department of Defense,' which he takes to mean that 'national security is the dominant motive for Federal support' (Weingarten, 1987; Office of Technology Assessment, 1985).

The perspective of an ecology of games provides a framework for examining various factors that might affect the strength and interplay of the groups and interests shaping policy change in communications. One is a set of market factors, anchored in demand for services and the ability of industries to meet marketplace expectations. Given the centrality of business competition to the American ecology of telecommunications, its unfolding has been importantly shaped by consumer demands and the ability of competing businesses to meet them. For example, the absence of a mass market for newer information services and AT&T's inability to quickly succeed in the information technology area affected the strength and interplay of actors in ways not anticipated prior to divestiture.

Another set of factors shaping the American ecology of telecommunications is an array of legal-institutional arrangements, such as the governmental structures surrounding the regulation of communications industries. Legal-institutional arrangements define many of the players as well as the most critical rules in national ecologies. Business competition is central to a large portion of games in the United States largely because of the political-administrative traditions surrounding the private ownership of communications infrastructures. Likewise, the role and scope of the FCC gives the American ecology a unique makeup. The status of NTIA within the Department of Commerce distinguishes the US from other nations, such as France and Japan, that have major ministries responsible for communications. And the federalist structure of the United States has made state and local officials more significant actors in the national politics of cable and telecommunications matters than they are in many other nations, such as Britain, where local authorities have virtually no involvement.

Finally, a set of symbolic factors affects the strength and interplay of groups. Studies of the politics of regulation in the United States have argued that the deregulation of telecommunications has been driven by the persuasiveness of pro-competitive economic arguments, which have overcome the interest group regimes supporting government protected monopolies (Wilson, 1980; Derthick and Quirk, 1985; Altshuler, 1988). Derthick and Quirk (1985) refer to the important role of pro-competitive arguments in what they called the 'politics of ideas,' a theme closely related to what Murray Edelman (1971) discussed as 'symbolic politics,' which I would define as 'systematic efforts aimed at giving a symbolic character to objects or acts as a means for achieving political aims and objectives' (Dutton and Blumler, 1988). For example, images and symbols can be linked to objects or events such as technologies or policies that evoke positive or negative responses. They do so by referencing symbols that have specific meanings in a culture.

The politics of ideas clearly affected the ecology of games surrounding telecommunications. One of the most fundamental symbolic shifts was the idea that communications and information technologies were ushering in new businesses and industries – the so-called information economy. In Japan, Western Europe, and the United States this recognition had important consequences. It broadened the scope of the telecommunications games. Economic and industrial elites, at one time spectators, began to enter as key players in conflicts over telecommunications policy. They now saw telecommunications less as a public utility and more as a new area for business investment and a strategic resource for the efficient development and operation of other industries on a global scale, including travel, banking, finance, and insurance, increasingly dependent on telecommunications. 'Ma Bell', a benign public utility, began to be perceived as another large corporation subject to the same distrust shown others in corporate America – a 'dinosaur' that would slow innovation and crush its competitors.

A second symbolic shift was a growing awareness of the convergence of communication technologies. As the technological distinctions between print, common carrier, cable, broadcasting, and computing industries became blurred, players in any one of these areas began to see personal stakes in the outcome of games being played within the other industries. A related idea was that technological change in communications undermined the rationale for AT&T's monopoly over various telecommunications services, particularly terminal equipment and long-distance services. This belief introduced changes in the rulings of the FCC and launched efforts by Congress to rewrite the Communications

Act. More importantly, perhaps, it broadened the scope of conflicts over the regulation of AT&T by making antitrust claims against the corporation more salient within the FCC. In the end, however, the rules governing telecommunications policy and business competition were most dramatically reshaped by divestiture and the *Modified Final Judgment*, the outcome of a game played outside of the communications policy arena.

Another aspect of the politics of ideas has been a growing consensus on the economic rationality of competition in the marketplace over regulation in the public interest. Several analyses of regulatory policy have focused on the emergence of this consensus in favor of competition (e.g., Wilson, 1980; Derthick and Quirk, 1985). Others have labeled this as an antitrust ideology (e.g., Pool, 1983: 1132; Drucker, 1984). Regardless, this shift in regulatory ideology could be applied to telecommunications largely because of these earlier changes in how telecommunications was perceived.

I have argued that an ecology of games provides a theoretical perspective for discussing the strength and interplay of groups and interests shaping communications. Also the exact nature of this ecology of games is likely to evolve over time and differ across social, political, and economic systems in response to differences in three sets of factors discussed above, which I have labeled as market, legal–institutional, and symbolic factors.

From this perspective, the politics of communications is complex but neither random or chaotic. The notion of an ecology of games offers a framework for thinking about this extremely complex system of inter-actions shaping the development of communications. It highlights the role played by those who shape the rules of the game, such as the courts in the United States. And it emphasizes the potential for unanticipated, unplanned developments, while raising doubts about perspectives on the politics of communications policy that post a more governed, isolated, and predictable system of action. In fact, it helps explain why prediction is likely to elude those in the policy sciences who seek to attain it.

The ecology of games has other advantages as an approach to research. It helps identify the cross-pressures facing key players, who are often involved in more than one game. It provides an interpretation of the broader system of action in which the development of communi-cations takes place. Most conventional interpretations underplay the role of unplanned, unanticipated interactions between various organized interests, which have decidedly influenced the development of communications. For example, in Britain, France, and the United States,

cable and telecommunications policies have been affected by decisions in other policy areas. The most obvious area was industrial policy, which is a major driving force in each country, although at different times and in different ways.

Nevertheless, conventional interpretations view communications policymaking as a self-contained system of action. Instead, it may be more useful to recognize that it is being formulated and implemented in parallel with other policies. Many players in one policy area are simultaneously in others. The outcome of the political process in one arena often shapes play within another. Nothing is new about these interactions; however, our theories tend to ignore them. Personality, historical circumstance, and the proverbial 'environment' are used to cover gaping holes in our theoretical frameworks. From an ecology of games perspective, such interactions are an explicit and central feature of the policy process and a key force behind policy change. This may be the central advantage of this perspective compared to other theoretical frameworks, such as interest group, pluralist, or systems theory – it focuses attention on different phenomena.

I have found the ecology of games to be a useful approach to the study of a variety of developments in communications (e.g., Dutton and Makinen, 1987; Dutton and Guthrie, 1989; Vedel and Dutton, 1990). However, my use of this approach has generated several charges from other social scientists.

One criticism is that the ecology of games is only a metaphor. Like many other theoretical perspectives, such as systems theory or pluralist theory, it is a rich metaphor, but it is more than that. It has all the elements of a theoretical concept in qualitative research. In many respects, it is a sensitizing concept – one that helps make sense of a wide array of concrete observations at the empirical level. Severyn Bruyn's discussion of participant-observer research defines what he calls a 'sensitizing concept,' by which he refers to a 'term coined by Herbert Blumer some years ago to indicate those kinds of terms which give a sense of reference, a general orientation, rather than a precise definition, to a phenomenon under study' (Bruyn, 1966: 32). The ecology of games is more of a sensitizing concept within a participant–observer, case-study mode of inquiry than an ideal type or a theoretical construct relevant to quantitative research. I have not focused on developing more precise operational definitions, because I believe this would over-simplify the concept. It is nevertheless a useful theoretical construct within a case-study mode of inquiry that summarizes empirical obser-vations within one case that can be validated to the degree that other

social scientists discover similar patterns of behavior in other case studies.

In this regard, the ecology of games shares much in common with a class of contemporary approaches to the empirical study of politics, which Ruth Lane has labeled 'concrete theory' (Lane, 1990). The ecology of games, like other approaches to concrete theory, moves away from behaviorally deterministic models as well as overly simplistic models of economic rationality to develop more realistic perspectives on the actual behavior of elites pursuing multiple objectives in complex organizational settings. Although concrete theories look closely at the environment of decisionmakers, the ecology of games provides an approach for directly incorporating events outside a particular policy sector, like communications (Dutton and Vedel, 1991).

Also the notion of games evokes the criticism that the phenomena are not taken seriously; that is, games are played for amusement. Norton Long (1958), when addressing the same criticism, argued that games are a serious business. E.E. Schattschneider's analogy to a fight as one type of game illustrates that the stakes can be great. The concept is not used to trivialize the process or outcome of the politics shaping communications or brand them as entertaining. More often than not, the games of political life are not amusing.

A related criticism takes off from the use of an ecological metaphor – an implicit suggestion that somehow, as an ecology, the outcome is likely to be functional within a broader social ecology (Long, 1958). This assumption not only takes the biological analogy too literally, but also overstates the sustainability of natural ecologies. The long-range functional utility of this process is uncertain. Given that no political system as a whole is in any sense governing the policy process – at least from an ecology of games perspective – it is as likely to be dysfunctional as it is to be functional to some players, if not the broader society affected by the development of telecommunications. Of course, after the fact, it is always possible to develop an argument that any outcome was functional in some way. But the value of an ecology of games perspective does not hinge on any claims about its functionality.

In fact, it is well within the scope of this approach to ask: How functional is the US ecology of games in telecommunications policy? In the area of telecommunications policy, for example, have the industrial, economic, cultural, and social implications of the American ecology of games been as functional, in many respects, as that shaping communications in several other nations, particularly Japan? In the US, as argued

above, communications policy is generally subordinated to anti-trust and other rules of the game governing business competition. In Japan, national policy objectives are more likely to be balanced with policies surrounding anti trust and business competition. A Japanese concern over 'excessive competition,' which seldom worries the American policy community, reflects this orientation. Two general factors might cause telecommunications policy to be subordinated within the American ecology of games. One is symbolic – the dominance of a limited vision of telecommunications as primarily a means for other industries, particularly the large users of communications, to gain a competitive advantage over their rivals (Dutton and Vedel, 1991). Another is legal–institutional – the absence of a Cabinet or department level executive agency responsible for communications. It is not surprising that telecommunications policy in the US is driven by anti-trust concerns and the needs of large business users given that NTIA is simply an agency within the Department of Commerce.

In Japan, friction between the Ministry of International Trade and Industry, which represents large users and equipment manufacturers, and the Ministry of Posts and Telecommunications, which is more responsive to the interests of broadcasters and NTT, reflects conflicts of interest between these groups. These conflicts must be continually negotiated and compromised. In the US, telecommunications policy has been subordinated to the rules of the game in business competition. Even if the telecommunications industry in Japan has not surpassed the US, the tremendous gains made by Japanese relative to US companies over the last decade should cause the US policy community also to question the functionality of this American ecology of games in telecommunications policy.

An ecology of games is a heuristically valuable sensitizing concept, which offers a new approach to the study of communications policy. It directs attention to the objectives, strategies, and rules shaping the behavior of individual decisionmakers as a means to explain collective outcomes. It incorporates factors outside of the communications policy sector *per se* into explanations of policy change. It is suggestive of cross-national variations in the politics of communications and the role that market, legal–institutional, and symbolic factors play in shaping the ecology of games within nations. Finally, it incorporates the notion that to some degree the outcomes of politics on the development of tech-nology and, therefore, its role in society are less determinate, less governed, and more unpredictable than suggested by many other contemporary perspectives, whether elite, critical, or pluralist. As a

consequence, the players and spectators have some liberty to shape their fate as they influence the games in world telecommunications policy.

NOTES

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2 The major scholars of group theory published key works in the early 1950s (e.g., Truman, 1951; Latham, 1952).

3 While I have borrowed the concept of an ecology of games from Norton Long (1958), he would not necessarily agree with my interpretation and elaboration of his ideas, nor the way I have generalized them to describe the development of communications. Long (1987) believes that an ecology needs to be confined to a well defined geographical territory – his examples are all local (Long 1958). I argue that his idea is adaptable to national, even global arenas. Despite differences in such assumptions, I have found his ideas useful to the interpretation of cable and telecommunications developments in local as well as global arenas (e.g., Dutton and Makinen, 1985, 1987; Dutton, 1987; Dutton and Guthrie, 1989; Dutton and Vedel, 1991; Vedel and Dutton, 1990).

4 Other theoretical perspectives on urban and neighborhood development are based on similar models in which development patterns are the product of the interaction of more localized or segmented decisions (Fumitoshi Kato (1988)).

5 I am not using game as synonymous with 'strategy' as is often done in the implementation literature; for example, see Bardach (1977) and Mintzberg (1983). Some, for instance, speak of the games people play in organizations to block or delay the implementation of an information system (Grover *et al.*, 1988). These are valid uses of the term, but quite different from the way I use it here.

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