Regulatory Agencies as Interpretation Systems:

Reconceiving Organizational Capacity

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Abstract

How do US regulatory agencies organize themselves to gather and utilize the knowledge required to solve policy problems? Traditionally, political scientists have answered this question by referencing the concept of organizational capacity — the relative ability of regulatory agencies to plan, implement, and analyze public policy decisions. The organizational capacity thesis, however, provides an overly reductionist view of knowledge utilization by regulatory agencies because it places too much emphasis on formal policy analysis. Instead, this paper seeks to provide a broader answer to the aforementioned question by positing a conception of regulatory agencies as "interpretation systems" that utilize various forms of policy-relevant knowledge depending on whether 1) they view policy problems as analyzable, and 2) whether they wish to pursue an active or a passive knowledge acquisition strategy. The model is presented an illustrated using a case study of the US Federal Communications Commission and the regulation of cable television.

Keywords: regulatory agencies; interpretation systems; organizational capacity; cable television

How do US regulatory agencies organize themselves to gather and utilize the knowledge required to solve policy problems? Though seldom explicitly stated, this question has concerned scholars of regulatory policy for decades. In particular, more than seventy years worth of scholarship has highlighted the need for regulatory agencies to develop their organizational capacities — that is, the organizational resources needed to successfully plan, implement, and analyze public policies.[1] As early as 1941, Robert Cushman complained that "for its own sake and for the sake of those affected by its regulatory policies, the government ought to know where it is going an how to get there."[2] For Cushman, many regulatory agencies could not reach their full potential because they lacked the skilled professional research staff necessary to engage in formal policy analysis and planning. Echoing these sentiments in the 1950s, Marver Bernstein cited a lack of professional expertise and policy planning capabilities as a major reason why some regulatory agencies began capitulating to the firms they regulated.[3] More recently, scholars writing across multiple theoretical traditions have demonstrated through extensive case study evidence that highly developed organizational capacities, when present, contribute to effective policy formulation[4] and the attainment of bureaucratic autonomy.[5]

Given the strength of this sentiment, the central importance of organizational capacities to regulatory agency policymaking would seem to be unassailable. Nevertheless, in the pages that follow the organizational capacity orthodoxy is indicted as an overly reductionist answer to the question posed at the beginning of this paper. The organizational capacity thesis is based on two questionable assumptions: 1) that formal policy analysis is the sine qua non of regulatory decision-making, and 2) that a set of

organizational capacities can be assembled that allows the agency to easily address all policy problems within its purview. In reality, the world of regulatory policymaking is significantly more complex. Regulatory agencies regularly confront the unknowable, either because the problems they must address are novel, data is unavailable, or because cause and effect relationships are ambiguous. Under these circumstances, formal policy analysis proves inadequate in regulatory decision-making. As a result, regulatory agencies must frequently seek out other forms of knowledge to assist in the resolution of policy problems.

The purpose of this paper is to broaden the scholarly understanding of knowledge utilization in regulatory policymaking by advancing a conception of regulatory agencies as "interpretation systems."[6] In brief, the interpretation systems approach recognizes that formal policy analysis is just one facet of how regulatory agencies go about gathering and processing policy-relevant knowledge. Furthermore, the interpretation systems approach anticipates that agencies will develop knowledge acquisition and utilization strategies that fit the needs of specific policy problems contingent on two dichotomous variables: 1) whether or not the policy problem in question is analyzable, and 2) whether the agency prefers a passive or active knowledge acquisition strategy. Depending on how these two variables align, the agency will choose from one of four "interpretation modes," or strategies for gathering and utilizing policy-relevant knowledge.

Organization theorists Richard Daft and Karl Weick pioneered the interpretation systems model nearly thirty years ago as a way to explain how knowledge acquisition and utilization vary across a range of organizational types. However, in an effort to make Daft and Weick's model applicable to the unique realities of regulatory agencies, insights

gleaned from the scholarly literature on regulatory policymaking are employed to develop the adapted version of the model that is presented in this paper. The paper proceeds as follows: The outlines of this theoretical argument are presented in section two; then, in section three, the theoretical model is illustrated with a case study of the US Federal Communications Commission's (FCC) efforts to fashion a regulatory scheme for the cable television industry between the 1950s and the 1980s. The concluding section highlights the need for scholars to re-conceptualize the role played by knowledge within the regulatory process.

Regulatory Agencies as Interpretation Systems

A view of regulatory agencies as interpretation systems begins with the presumption that an organization is not simply an arena of decision-making, but "a set of procedures for argumentation and interpretation" as well.[7] Simply put, organizational participants collectively use various forms of knowledge to understand policy problems and argue in favor of particular solutions. While formal policy analysis is one such category of knowledge, it coexists alongside a range of others that includes intuition, ideology, practical experience, and professional judgment. Changes in organizational capacities thus grow out of the conviction that formal policy analysis can be more effectively used to understand and resolve particular policy problems than other forms of knowledge.

The ultimate decision to alter organizational capacities rests with agency leaders, though it is heavily influenced by policy ideas, the requirements of statutory mandates, resource limitations, the attitudes of agency staff, and external political pressures. In

synthesizing these influences, agency leaders are guided by two overarching considerations: 1) whether or not they believe the policy problems under study are analyzable, and 2) whether they believe it is appropriate to employ a passive or an active knowledge acquisition strategy.[8]

With respect to the first consideration — analyzability — agency leaders are more likely to create and utilize organizational capacities when they believe that a policy problem can be understood and resolved through expert knowledge. Leaders are most likely to believe in the analyzability of problems when policy goals are perceived to be clear and data for measuring their achievement are available. Organizational leaders are also likely to believe that a problem is analyzable when researchers are in agreement on the nature and causes of the policy problem in question, or when the organization as a whole adheres to a particular set of theories or policy ideas that guides their analysis.[9]

By contrast, agency leaders will be less inclined to construct and utilize organizational capacities when they believe that a policy problem is not analyzable. The belief that policy problems are not analyzable could be an outgrowth of internal bureaucratic values, but could also occur simply because the problems in question are highly ambiguous. Ambiguous problems are problems that can be interpreted in several different ways, either because they encompass competing goals or because available data are unreliable or difficult to interpret.[10] Under these circumstances, cause and effect relationships are difficult to isolate and experts disagree as to the nature and extent of the problem. Organizations confronting policy ambiguity resort to what Thomas McGarity calls "technobureaucratic rationality," which he characterizes as an approach to regulatory policymaking rooted in "frustrating hands-on experience with unanswerable

questions of extraordinary complexity."[11] In essence, regulators eschew rational policy analysis in favor of intuition informed by their professional training and years of experience as regulators.[12]

With respect to the second consideration — knowledge acquisition strategies — regulatory agencies differ in terms of how actively they endeavor to acquire knowledge from their policy environments. Agencies that take a more passive approach to knowledge acquisition are content to rely on professional judgment, established bureaucratic values, and knowledge supplied to the organization through external parties. By contrast, organizations that seek a more active approach to knowledge acquisition will set up research divisions and "experiment" with their policy environment by implementing policies designed to yield practical experience through trial and error.[13]

In some instances, the agency's knowledge acquisition strategy may be predetermined by institutional arrangements. Specifically, statutory mandates may or may not require agencies to actively solicit and analyze new information on a continuous basis. For instance, under the Clean Air Act, the EPA is required to periodically evaluate and revise National Ambient Air Quality Standards for "criteria" pollutants, essentially ensuring that the agency will take an active approach to knowledge acquisition over time. By contrast, the Toxic Substances Control Act puts the EPA in a more reactive position that forces the agency to rely principally on evidence submitted by external parties when evaluating whether or not chemicals should be approved for industrial use.[14]

More frequently, however, agency leaders will choose to employ an active knowledge acquisition strategy, either because it corresponds with their worldview or because they confront highly novel and/or technically complex policy problems that

require the use of expert knowledge to reduce uncertainty.[15] As William Gormely notes, organizational leaders are particularly prone to use expert knowledge when a technically complex issue is also publicly salient. Such issues place organizational leaders under pressure to take actions that are both politically and technically correct. Under these circumstances, technical experts can provide justifications for policies that will be perceived as apolitical by politicians and the masses.[16]

Employing the two aforementioned variables — analyzability and type of knowledge acquisition strategy — Daft and Weick developed a four-fold typology of the "interpretation modes" employed by organizations.[17] Although Daft and Weick principally had business organizations in mind when constructing the typology, I demonstrate in the following subsection how this typology can be used to explain how regulatory agencies utilize various forms of policy-relevant knowledge.

Four Modes of Interpretation

The first interpretation mode identified by Daft and Weick — *conditioned viewing* — occurs when a regulatory agency believes policy problems are analyzable, but chooses a passive knowledge acquisition strategy. Such a circumstance is likely to occur when a regulatory agency confronts policy problems that are easily understood and subject to routine resolution over time. Possible examples might include the granting of a license or permit, certification of a new product, or adjustment of rates for a public service industry. Problems of this nature can generally be resolved through the use of information contained in standardized reports or applications submitted by external parties. Agencies will find it necessary to maintain a basic research staff to review

standardized information, but will see little need to maintain or utilize an elaborate policy planning apparatus that is actively engaged in gathering data and formulating policy decisions.

The second interpretation mode — *undirected viewing* — occurs when a regulatory agency confronts policy problems that are not considered analyzable and chooses a passive knowledge acquisition strategy. Under these circumstances, the choice of a passive knowledge acquisition strategy may be driven by a lack of organizational resources, bureaucratic values that disfavor a particular form of expert knowledge, or the simple conviction that the policy problem in question is not pressing enough to actively study. Political pressure may cause an organization to more actively seek out knowledge about a policy problem, but because the policy problem is not considered analyzable, few organizational resources will be willingly devoted to the task. Instead, agencies will be content to utilize non-routine data that filter into its decision-making processes in the form of special studies conducted by external parties (e.g., regulated corporations, think tanks, and study groups). Regulatory agencies engaged in undirected viewing will generally utilize research staff for purposes of reviewing external data, and will rely heavily on practical experience, ideology, or professional judgment in the making of decisions.

When an organization believes a policy problem is not analyzable and chooses an active knowledge acquisition strategy, it is said to be employing what Daft and Weick refer to as the *enacting* mode of interpretation. In this situation, the agency considers a problem important enough to seek its resolution, but because the problem is believed to be highly novel or ambiguous, resolution through formal policy analysis and planning is

not likely to occur. Because enacting organizations actively seek to gather information about policy problems, they may be motivated to invest in the development of internal policy analysis and planning capabilities, but may not always find them useful. More often, the agency will seek to gain knowledge by "enacting" its external environment through trial and error experimentation. In other words, the agency will impose policy solutions in the hope that the implementation process will yield practical knowledge. However, because expert knowledge does not point the way to effective solutions at the outset, policies are more likely to be formulated through a process of democratic pragmatism, in which bargaining and compromise with regulatory stakeholders occurs.[18]

Finally, an agency will gravitate to a *discovering* mode of interpretation when it believes a policy problem is analyzable and chooses to employ an active knowledge acquisition strategy. It is under these circumstances that an agency is most driven to create and actively employ elaborate organizational capacities. Agencies may gravitate toward a discovering mode of interpretation after first reducing policy uncertainty through the use of an "enacting" interpretation strategy. It is equally if not more likely, however, that an agency will gravitate toward the discovering mode when it becomes captivated with a set of policy ideas that explains cause and effect relationships or prescribes the use of a particular analytical technique. Substantial barriers to becoming a discovering organization may include the need to maintain political support and overcome the existing bureaucratic culture within the agency. Nevertheless, an agency that becomes a discovering organization is positioned to conduct independent policy analysis, plan innovative policy solutions, and act with increased autonomy from its external political environment.

Viewing regulatory agencies as interpretation systems has at least three advantages. First, it provides a conceptual framework for understanding how agencies use knowledge, broadly defined, to resolve policy problems. Under such a framework, formal policy analysis and planning capabilities become just one of several forms of knowledge that regulatory agencies may legitimately choose to employ.[19] Second, viewing regulatory agencies as interpretation systems provides a basic mechanism for understanding the dynamics of agency knowledge utilization. Interpretation modes are by no means static, and an agency will conceivably move between multiple modes as its perceptions of policy problems and political and institutional conditions change over time. Third, it allows for the possibility that an agency may simultaneously apply different interpretation modes to the resolution of different policy problems within its purview. Regulatory agencies frequently have complex missions that require them to administer multiple statutes, grapple with a diverse array of problems and, in the process, develop complex organizational structures that segment their work among semi-autonomous policy-specific staff offices.[20] For these agencies, organizational capacities will develop in a policy-specific fashion, with different types of knowledge brought to bear in the resolution of different problems at different moments in time. When viewed this way, organizational capacities need not be an "either/or" proposition, as the literature sometimes erroneously implies.

The FCC and Cable TV: An Illustration

In light of the considerations discussed in the preceding section, it seems evident that the best way to understand a regulatory agency's utilization of knowledge is to

carefully examine how the agency grapples with specific policy problems over time. To this end, the remainder of this paper uses the conceptual framework to examine a case study of FCC's efforts to fashion a regulatory scheme for the cable television industry between the 1950s and the 1980s. The case of the FCC and cable television regulation was chosen because it provides a particularly vivid illustration of how a regulatory agency can progress through multiple modes of interpretation as it confronts a highly novel and ambiguous policy problem. As will be demonstrated below, the advent of cable television motivated the FCC to figure out how to use economic analysis in regulatory decision-making.[21] Moreover, cable television was a major factor in moving the FCC away from more passive knowledge acquisition strategies in the 1950s toward an "enacting" interpretation mode in the 1960s and eventually a "discovering" mode by the late 1970s and 80s.

The Cable TV Problem

Cable television developed during the 1950s in response to the demand for television service in communities that could not yet support their own local broadcast stations. Known as Community Antenna Television or "CATV" until the late 1960s, cable television originated in communities like Astoria, OR and Lansford, PA as modified master antenna systems that intercepted and delivered distant broadcast signals to customers' homes via coaxial cable.[22] In 1952, there were only fourteen known CATV systems serving just a few thousand homes. By the end of the 1950s, however, there were hundreds of systems serving nearly three quarters of a million homes.[23]

From quite early on, television broadcasters viewed cable television as an economic threat, arguing that the importation of signals from distant broadcast markets would undermine the ability of local communities to support their own television stations. Broadcasters further argued that cable systems possessed an illegal competitive advantage because they intercepted and carried copyright-protected programming without seeking permission.[24] Motivated by these concerns, broadcasters began pressing the FCC to take regulatory action against the fledgling cable industry.[25]

Cable television, however, presented the FCC with a novel problem because its technological uniqueness made it difficult to place within the framework of existing policy ideas and institutions. The Communications Act of 1934 - the FCC's principal source of statutory authority – authorized the regulation of two broad categories of commercial communications technologies. The first category was common carriers, which generally included communications technologies that served as a "for hire" delivery mechanism for the transmission of messages between customers. Under the Communications Act, common carriers such as the telephone industry were subject to public-utility style price and entry regulation. The second category was broadcasters, which consisted of content providers who delivered their messages to customers via electromagnetic frequencies. Radio and television broadcasters were licensed to use frequencies so long as they met the broad statutory requirement that they serve the "public convenience, interest, and necessity."

Cable television did not fit neatly within either one of these two categories. Like the telephone, cable television served as a wire-based delivery system for messages on a "for-hire" basis. Like broadcasting, however, the messages delivered by cable took the

form of commercially developed content obtained from a third party rather than messages originating with the customers of the system. Thus, cable was at best a tenuous fit with either category, making it initially unclear whether existing policy tools could be brought to bear in resolving any economic impact cable was having on broadcasters. Furthermore, the FCC did not possess the capacity to assess the economic impacts of cable television or make effective use of that information within the policy process. In the 1950s, the FCC maintained a small Economics Division, the responsibilities of which were largely divorced from regulatory decision-making, and mainly consisted of compiling general reports on economic trends within the communications industry.[26]

It is within this institutional and organizational context that the FCC began grappling with the challenges presented by cable television.

Undirected Viewing, 1956-1960

Between 1956 and 1960, the FCC's interpretation mode with respect to cable television was best characterized as undirected viewing: a passive knowledge acquisition strategy and a belief that the cable problem was generally not analyzable. The FCC resorted to undirected viewing for three overarching reasons. First, the FCC continued to have relatively limited economic analysis capabilities and little firsthand knowledge of the fledgling cable industry. Second, cable television was generally not viewed as a major threat to broadcasters; cable remained a small industry that was generally confined to smaller communities. Third, FCC leaders generally believed that the economic struggles of the broadcasting industry could not be resolved through regulatory intervention. Indeed, while speaking before Congress in 1958, FCC Chairman John

Doerfer made clear his position that the agency "could no more protect a television station from [cable television] than … protect it from a local drive-in movie house or whatever other form of attraction might develop within the service area."[27]

The FCC's limited analytical capacities and anti-interventionist philosophy eliminated any hope that the economic impacts of cable television on broadcasters would be thoroughly analyzed. Responding to pressure from Congress and the broadcast industry, the FCC undertook an inquiry into the economic impacts of cable and other "ancillary services" on local television stations.[28] The inquiry, however, consisted mainly of a review of data submitted by local broadcasters and cable providers, with the FCC doing virtually no data gathering or aggregate-level analysis of its own. Because much of the data submitted by interested parties relied on case examples and was, thus, relatively impressionistic, the FCC found it difficult to draw a cause-effect connection between the existence of cable television service within a broadcasting area and the decline of local station revenue.[29] Because the conclusion of the inquiry brought little new analytical clarity and no changes in the FCC's previous positions, the agency chose to take no regulatory action for the next several years.

Enacting Mode, 1961-1972

Between 1961 and 1972, the FCC gravitated toward an enacting mode of interpretation; that is, it sought to take a more active posture on cable television issues, but continued to believe the problem was not analyzable. As such, the FCC pursued knowledge through trial and error, imposing regulations in an attempt to learn from the outcomes. The decision to pursue an enacting strategy was driven by two main factors.

First, cable television came to be viewed as a more serious problem; the industry began expanding into urban areas, where it was believed to pose a more significant economic threat to broadcasters.[30] Second, in the early 1960s the FCC was dominated by a group of Kennedy-appointed liberal Democrats who were fiercely dedicated to the promotion of television broadcasting as local public service enterprise.[31] Unlike their predecessors, these "New Frontier" commissioners were willing to employ regulatory intervention to ensure that cable television did not undermine the economic well being of local broadcasters. Like their predecessors, however, the new group of commissioners saw little need to incorporate rigorous economic analysis into the making of regulatory decisions.

By the end of 1962, the FCC had concluded that even the potential for cable television to cause economic harm to broadcasters was an adequate reason to begin the process of formulating regulations.[32] The National Association of Broadcasters responded to the FCC's call for public comments by commissioning an elaborate economic study aimed at demonstrating the need for regulation. Conducted by Dr. Franklin Fisher of MIT, the study indicated substantial economic impacts from cable in many television markets.[33] Fisher's data and methods, however, were controversial and quickly refuted in a study conducted on behalf of the National Community Television Association — the major cable television trade association.[34] The FCC attempted to resolve the dispute by commissioning a study of its own from an independent economist,[35] but found the analysis to be no more conclusive than the industry studies.

By 1966 — the year the FCC issued its first major set of cable regulations — the agency had seemingly given up on economic analysis, noting in one of its rulemaking

documents that "studies of this nature … are of limited value since they cannot measure some of the most important factors we are bound to consider."[36] The FCC believed that the full economic effects of cable television could not be adequately predicted because the industry was growing too rapidly. In particular, cable providers would soon be expanding into urban areas, where their economic impact on local broadcasters might be devastating and irreversible. Fearing the worst, the FCC enacted a set of regulatory measures designed to protect broadcasters.

Almost immediately, the new regulations were criticized as a short-term solution that imposed unnecessary restrictions on cable providers in an attempt to protect broadcasters.[37] Indeed, by the end of the 1960s the FCC was contemplating revision of the rules for those very reasons. By that time, Dean Burch had been confirmed as President Nixon's appointee to serve as FCC Chairman. A longtime Republican Party insider, Burch came to the FCC with no experience in the area of communications policy and, therefore, no preconceived ideas concerning the appropriate direction for television policy. Indeed, from quite early on Burch signaled that he would take a pragmatic approach to the formulation of communications policy.[38] This sense of pragmatism drove Burch to make cable television policy a top priority, committing the FCC to designing a regulatory regime around "the public interest … rather than the economic difficulties — real for fancied — of those with competing interests."[39]

To aid in this process, Burch took steps to improve the FCC's organizational capacities. First, Burch convinced his fellow commissioners to create a permanent Cable Television Bureau within the FCC, placing it on even footing with the other operating bureaus[40] and giving it the "resources and functions equal to the magnitude of …

[cable's] challenges and to the commission's role in its development."[41] Burch also recognized that the FCC could not arrive at the best policy options for cable or any other sector of the communications industry without competent, neutral policy analysis and planning advice. Although Burch was aware that operating bureaus like the new Cable Bureau possessed substantial practical knowledge, he believed the commissioners should not rely solely on these offices for policy advice. As he informed Congress later in 1970, "[operating] bureaus ... tend to have a certain bias, because they have to operate under any decision they make."[42] Burch further noted that the operating bureau staffs were mired in the day-to-day minutiae of policy implementation, which made it difficult to think in terms of long-range planning. To counteract these deficiencies, Burch pushed for the creation of a separate Policy Planning Office that would provide the commissioners with what he characterized as "non-partisan" policy advice.[43]

Although these organizational changes seemed to provide the FCC with important new policy planning tools, the agency did not immediately put them to use in the creation of a new cable television policy. Rather than using expert analysis as his guide, Burch chose a political strategy aimed at reconciling the competing preferences of interest groups. First, the FCC circulated a draft policy proposal referred to as the Public Dividend Plan, which attempted to resolve the policy differences that existed among broadcasters, cable providers, and program suppliers by making concessions to each side.[44] To better facilitate dialogue among competing interests, the Burch Commission then organized a series of panel sessions in the spring of 1971.[45] Following the sessions, the Cable Bureau prepared a unified proposal, which was intended to serve as a basis for soliciting further public comment. Heated disagreements among broadcasters, cable

providers, and program suppliers, however, led Burch to take the extraordinary measure of asking the White House Office of Telecommunications Policy (OTC) to facilitate negotiations between the parties.[46] The negotiation sessions produced a "consensus agreement" that served as the framework for a final set of regulations ratified in 1972.[47]

The new regulations, which continued to impose substantial restrictions on cable television providers, were the product of political negotiations rather than policy planning and sound economic analysis. Why was this the case? At least a partial answer can be found in a statement Dean Burch made before a committee of the US House in 1972. In describing why it was necessary to impose regulatory burdens on cable, Burch noted that a failure to do so "would impose an economic burden on the over-the-air television system which no one can really analyze."[48] In essence, policy-planning capabilities were of little use because the availability of reliable data concerning the economic relationship between broadcasting and cable television remained limited. The most significant non-partisan analysis available at the time was a RAND study that mainly relied a computer simulation to predict future trends in broadcaster advertising revenue.[49] Most "hard data" on broadcast revenues came from the broadcasters themselves, who produced studies suggesting that cable might be responsible for a substantial decrease in the advertising revenues of some broadcast stations.[50] Given the lack of good data and non-partisan analysis, the FCC could not rely on policy analysis to overcome the substantial policy disagreements that divided interested parties. For Burch, the most pragmatic course was to negotiate a settlement that would provide economic protection for broadcasters and program suppliers as the cable industry developed.[51] As the FCC stated upon issuing the regulations, if some rules proved unnecessary, this information would have to be revealed

through "experience and insight," which would allow the agency to "act accordingly — to make revisions, major or minor — and to keep pace with the future of this dynamic area of communications technology."[52]

Toward a Discovering Mode, 1973-1989

After 1973, the FCC gradually evolved toward a discovering mode of interpretation, initially with respect to cable television, and later with respect to other policy problems within its purview. The first steps in this direction were organizational reforms undertaken by the Burch Commission to further strengthen the FCC's policy analysis and planning capabilities. In 1973, the Cable Television Bureau was reorganized to include staff offices devoted specifically to analysis and policy development. Furthermore, between 1972 and 1974 the Cable Bureau's staff was enlarged nearly three-fold, making the bureau a sizable division, possessing resources on par with the other operating bureaus. Also in 1973, the Planning Office was renamed the Office of Plans and Policy (OPP) and given a broad mandate to conduct independent policy analysis, comment on policy proposals, and evaluate the findings of outside researchers.[53]

These organizational reforms, however, only provided the FCC with the necessary infrastructure to carry out advanced policy analysis and planning. The motivation to actively engage these organizational capacities required political change as well. In the 1970s, the bureaucratic culture within the FCC became more supportive of formal policy analysis, as a new generation of staff gradually infiltrated the agency.[54] In addition, cable television regulation rapidly became a salient issue with Congress in the 1970s. A 1976 congressional staff study criticized the FCC for choosing to formulate policy through

political compromise rather than the application of expert analysis.[55] During a lengthy series of follow-up hearings, FCC Commissioners were put in the hot seat by committee leaders in the US House, who accused the agency of imposing unnecessary regulations on the cable industry.[56] Taken together, the changes in bureaucratic culture and increased political pressure created an environment in which formal policy analysis became an important tool for justifying regulatory decisions.

Perhaps the most important source of change was the appointment of Charles Ferris to head the FCC in 1977. Ferris sought to increase the use of economic analysis in regulatory decision-making, which he quickly accomplished by staffing the OPP with more economists and giving them a position of influence in regulatory policymaking.[57] Under the leadership of Ferris and Mark Fowler, his immediate successor, the OPP became, in the words of one former staff member, "an important voice in policy deliberations" and "a counterweight to the dominant influence that the bureau chiefs gained through their control of the staff and information in their respective subject areas."[58]

The influence of economists first became noticeable in the field of cable regulation when the FCC undertook a broad-based economic study of the relationship between cable television and broadcasting. The study, completed in 1979, employed a level of analytical sophistication previously absent from FCC cable television proceedings. First, the FCC employed economic theory to reframe the goals of television policy around consumer welfare rather than concerns about economic harm to certain industry sectors.[59] Second, the FCC developed policy recommendations through an extensive analysis of data that included a review of economic studies conducted by both

agency staff and external parties.[60] As a result of analysis undertaken in the proceedings, the FCC concluded some of the most restrictive cable regulations should be repealed. In a statement issued at the conclusion of the proceeding, Chairman Ferris expressed confidence in the staff's conclusions, noting that they demonstrated "the value of economic reasoning" in regulatory proceedings. Ferris further expressed the belief that "decisions on other major issues in ... other [FCC] bureaus [could] benefit no less from the application of economic analysis."[61]

Indeed, over the next decade, economic analysis became a mainstay in FCC proceedings across a variety of issue areas. For instance, in the field of telephone policy, FCC economists were a driving force behind two major decisions that transformed rate regulation following the breakup of AT&T in 1982. The first was the FCC's access charge plan, which set up a cost recovery scheme that directed revenue to local telephone companies in exchange for delivery of long distance calls.[62] The final access charge plan was heavily influence by agency economists, who drew on economic theory to develop a scheme that moved consumer rates closer to the marginal cost of service.[63] Second, agency economists successfully argued for the adoption of a system of incentive-based rate regulation that capped AT&T's long distance service charges below the rate of inflation, forcing the firm to become more efficient over time.[64]

Economists also proved influential in shaping US spectrum policy. Historically, spectrum was viewed as a scarce public resource that was licensed for commercial use only after the prospective licensee could make a showing that it was in the public interest to do so. Beginning in the early 1980s, however, FCC economists authored a series of working papers in which it was argued that spectrum should be allocated according to

market demand rather than abstract regulatory judgments regarding the public interest.[65] The suggested mechanism for implementing such a scheme was competitive bid auctions — an idea that had been advocated by Nobel Laureate Ronald Coase more than two decades earlier.[66] The spectrum auctions idea ultimately found a receptive audience among several successive FCC Chairmen and was finally adopted by Congress in the 1990s.[67]

By the end of the 1980s, FCC leaders and staff believed that numerous policy problems could be studied and resolved through the formal application of economic analysis. Moreover, these officials were willing to pursue a highly active knowledge acquisition strategy through which they took the initiative to collect data and study issues within their policy domain. Indeed, agency officials initiated some of these inquiries, such as price caps and spectrum auctions, with little prodding from their external environments. Taken together, these are the characteristics of a true discovering organization.

Conclusion

The foregoing case study provides some confirmation for the thesis that regulatory agencies may be viewed as interpretation systems that employ varying modes of interpretation depending on their perceptions of 1) the analyzability of particular policy problems, and 2) their estimation of whether a passive or active knowledge acquisition strategy is warranted. Such a perspective provides insight into how regulatory agencies use a diverse array of knowledge sources to resolve policy problems. More importantly, however, it suggests that scholars who tout formal policy analysis as

the key to superior regulatory decision-making may be doomed to disappointment. With respect to this latter point, the case of the FCC once again provides a relevant example.

In spite of the FCC's efforts to enhance its organizational capacities since the 1970s, multiple commentators have continued to criticize the agency for insufficient use of formal policy analysis. Analyzing a broad range of FCC decisions from the 1970s and 1980s, Warren Lavey criticized the agency for what he characterized as "sharp differences ... in the FCC's use of economic theories and analytical tools to address similar economic issues in the regulation of diverse industries."[68] According to Lavey, changing how lawyers and economists work together in the formulation of regulations could alleviate the problem.[69] More recently, Thomas Hazlett has argued that all areas of FCC decision-making could be improved through increased use of economic analysis. Hazlett encourages the FCC to pursue this strategy through the creation of a new Office of Economic Analysis that employs a large number of Ph.D. economists who actively participate in all areas of agency decision-making.[70]

Philip Napoli, by contrast, notes the difficulty of relying heavily on economic analysis in the communications policy process. In his words, "communications policy analysts face an analytical burden more complex than analysts in other policy areas. The range of variables and methods that must be considered extends into areas seldom encountered within other regulatory contexts."[71] For Napoli, this complexity derives from the fact that FCC regulators must take both social and economic variables into consideration when formulating communications regulations. In spite of this complexity, however, Napoli holds out hope that the FCC can "account for the social and political consequences of its policies with the same empirical rigor as the economic consequences,

and ... give this information full consideration in the decision-making process."[72] Napoli suggests that employing multi-disciplinary approaches to policy analysis that incorporate other types of social science knowledge might alleviate these analytical difficulties.[73]

Although Napoli correctly asserts that communications policy problems are too multi-faceted to be resolved through the application of isolated disciplinary knowledge, he errs on two accounts. First, he incorrectly asserts that communications policy is unique in this respect. In many areas of social regulation — environmental, occupational safety, and consumer product regulation, for example — decision-makers must balance economic and social considerations in ways that require the application of a multi-disciplinary approach. Second, Napoli, like the other authors discussed in this section, overestimates the extent to which formal policy analysis can be brought to bear in the resolution of regulatory problems. In some instances, the findings of policy analysts are contested, making it impossible to arrive at a consensus solution.[74] In other instances, expert knowledge fails to take into consideration the full range of values at stake in the policymaking process.[75] As such, policymaking situations of this nature will more likely be resolved through the application of alternative forms of knowledge and processes that allow the negotiation of consensus.

For these reasons, scholars of regulatory politics need to take a broader view of the role played by knowledge in regulatory agency deliberations. The interpretive systems model provides one rudimentary conception of when and how various forms of knowledge are used by regulatory agencies. Whether or not it provides a robust, generalizable framework for analyzing regulatory agency knowledge utilization will need to be the subject of future research.

Notes

[1] Phrases like "governmental capacity," "administrative capacity," "state capacity," "bureaucratic capacity," and "organizational capacity" have become commonplace in political science and political sociology since the 1980s, and are often used loosely to describe the tools and techniques used by governments to carry forward their directives. Beth Walther Honadle offers a general definition of capacity in her article "A Capacity-Building Framework: A Search for Concept and Purpose," *Public Administration Review* 41 (1981): 575-580. The definition of organizational capacity used in this study, accepted among many state theorists in the US, builds on Hugh Heclo's assertion that bureaucratic power is heavily condition on the "capacity to draw upon administrative resources of information, analysis, and expertise for new policy lessons and appropriate conclusions on increasingly complex issues." Hugh Heclo, *Modern Social Politics in Britain and Sweden: From Relief to Income Maintenance* (New Haven: Yale University Press, 1974), 305-306.

[2] Robert E. Cushman, *The Independent Regulatory Commissions* (New York: Oxford University Press, 1941), 728.

[3] Marver H. Bernstein, *Regulating Business by Independent Commission* (Princeton: Princeton University Press, 1955), 176-179.

[4] Martha Derthick and Paul J. Quirk, *The Politics of Deregulation* (Washington, DC: Brookings Institution, 1985); Marc Allen Eisner *Antitrust and the Triumph of Economics: Institutions, Expertise, and Policy Change* (Chapel Hill: University of North Carolina Press, 1991); Thomas O. McGarity, *Reinventing Rationality: The Role of Regulatory Analysis in the Federal Bureaucracy* (New York: Cambridge University Press, 1991); Theda Skocpol and Kenneth Finegold, "State Capacity and Economic Intervention in the Early New Deal," *Political Science Quarterly* 97 (1982): 255-278.

[5] See especially Daniel P. Carpenter, *The Forging of Bureaucratic Autonomy: Reputations, Networks, and Policy Innovation in Executive Agencies, 1862-1928* (Princeton: Princeton University Press, 2001); Gregory Hooks, "From an Autonomous to a Captured State Agency: The Decline of the New Deal in Agriculture," *American Sociological Review* 55 (1990): 29-43; Christopher McGrory Klyza, "A Window Of Autonomy: State Autonomy & the Forest Service in the Early 1900s," *Polity* 25 (1992): 173-196; Terry Moe, "Interests, Institutions, and Positive Theory: The Politics of the NLRB, *Studies in American Political Development* 2 (1987): 236-299.

[6] I derive the concept of an interpretation system from the work of Richard L. Daft and Karl E. Weick. See their article "Toward a Model of Organizations as Interpretive Systems," *Academy of Management Review* 9 (1984): 284-295.

[7] Michael D. Cohen, James G. March, and Johan P. Olsen, "A Garbage Can Model of Organizational Choice," *Administrative Science Quarterly* 17 (1972): 25.

[8] Here, I borrow from Daft and Weick, who assert that differences in the "interpretation styles" of business organizations can be explained along two dimensions: 1) management's beliefs about the analyzability of the external environment, and 2) the extent to which the organization intrudes into the external environment to understand it. See Daft and Weick, "Interpretation Systems," 287.

[9] Derthick and Quirk, *Politics of Deregulation,* 238-244.

[10] Karl E. Weick, *Sensemaking in Organizations* (Thousand Oaks, CA: Sage Publications, 1995), 91-95.
[11] McGarity, *Reinventing Rationality,* 5.
[12] Ibid., 7.
[13] Daft and Weick, "Interpretation Systems," 288.
[14] For an overview of EPA's statutory authority, see Walter A. Rosenbaum, *Environmental Politics and Policy* 8th edition (Washington, DC: Congressional Quarterly Press, 2010).
[15] Michael J. Zarkin, "Organizational Learning in Novel Policy Situations: Two Cases of United States Communications Regulation," *Policy Studies* 29 (2008): 89-90.
[16] William T. Gormley, "Regulatory Issue Networks in a Federal System," *Polity* 18 (1986): 606.
[17] Daft and Weick, "Interpretation Systems," 288-289.
[18] On the importance of democratic pragmatism to environmental policymaking, see John S. Dryzek, *The Politics of the Earth* 2nd ed. (Oxford: Oxford University Press, 2005), 99-120.
[19] The notion that traditional policy analysis is the only legitimate form of policy-relevant knowledge has come under criticism in recent years among adherents to the post-empiricist school. See Frank Fischer, *Reframing Public Policy: Discursive Politics and Deliberative Practice* (New York: Oxford University Press, 2003).
[20] Both the FCC and EPA fit this description. The FCC possesses a broad statutory mission to regulate the entire electronic communications industry and has historically found it beneficial to segment its staff work into policy bureaus organized around specific industries — telephone, broadcasting, and cable, for instance. EPA administers multiple statutes aimed at regulating specific environmental "media" such as air and water. Thus, EPA has divided itself into separate policy offices for air, water, etc.
[21] Other authors have noted the importance of cable television to the development of the FCC's economic analysis capabilities. See Robert Corn-Revere, "Economics and Media Regulation," in *Media Economics: Theory and Practice*, ed. Alison Alexander, James Owers, and Rod Carveth, 71-90 (Hillsdale, NJ: Lawrence Erlbaum Associates, 1993).
[22] Patrick R. Parsons, *Blue Skies: A History of Cable Television* (Philadelphia: Temple University Press, 2008), 61-69.
[23] Don R. LeDuc, *Cable Television and the FCC: A Crisis in Media Control* (Philadelphia: Temple University Press, 1973), 86.
[24] The FCC first formally confronted these issues in *Frontier Broadcasting*, 24 FCC 251 (1958).
[25] *Frontier Broadcasting* 24 FCC 251 (1958).
[26] US Federal Communications Commission, *Seventeenth Annual Report to Congress* (Washington, DC: GPO, 1952), 20-21.
[27] Senate Committee on Interstate and Foreign Commerce, *Television Inquiry—Part VI: Hearings before the Committee on Interstate and Foreign Commerce,* 85th Cong., 2nd Sess., 1958, 3507.
[28] Ancillary services generally included technologies that extended the reach of broadcast signals, other examples being boosters and translators. See *Report in Docket 12443*, 26 FCC 403 (1959).

[29] Ibid., 415-421.
[30] Michael Zarkin, *The FCC and the Politics of Cable Television Regulation: Organizational Learning and Policy Development* (Amherst, NY: Cambria Press, 2010), 94-95.
[31] For an excellent account of FCC broadcast policy during these years, see James L. Baugham, *Television's Guardians: The FCC and the Politics of Programming, 1958-1967* (Knoxville: University of Tennessee Press, 1985), 57-112; See also Parsons, *Blue Skies*, 202-206.
[32] FCC, *Notice of Proposed Rulemaking*, 14 December 1962, Docket 14895 (FCC Docketed Case Files, RG 173; Washington, DC: National Archives).
[33] Franklin M. Fischer, *The Impact of CATV Competition on Local Television Service,* 26 October 1964, Dockets 14895 and 15233 (FCC Docketed Case Files, RG 173; Washington, DC: National Archives).
[34] National Community Television Association, *Additional Reply Comments in Opposition to Proposed Rulemaking,* 14 December 1964, Dockets 14895 and 15233 (FCC Docketed Case Files, RG 173; Washington, DC: National Archives), 6.
[35] Martin H. Seiden, *An Economic Analysis of Community Antenna Television Systems and the Television Broadcasting Industry* (Washington, DC: GPO, 1965).
[36] *Second Report and Order*, 2 FCC 2d 725, 744 (1966).
[37] Zarkin, *Politics of Cable Television*, 97.
[38] Burch's pragmatism was noticeable as early as his confirmation hearings. See Senate Committee on Commerce, *Nominations — 1969*, 91st Cong., 1st Sess., 1969, 5-27.
[39] Quote taken from New York Times, "Outlook for CATV is Given by Burch," 10 January 1970, 55.
[40] Much of the FCC's professional staff is organized into bureaus that take responsibility for formulating regulatory policy for specific sectors of the communications industry. At that time, there was also a Common Carrier Bureau to regulate the telephone industry, and a Broadcast Bureau to formulate policy for the broadcasting industry.
[41] New York Times, "Outlook," 55.
[42] House Committee on Government Operations, *Reorganization Plan No. 1 of 1970: Hearings before a Subcommittee of the Committee on Government Operations*, 91st Cong., 2d Sess., 1970, 55.
[43] Ibid.
[44] On the Public Dividend Plan, see *Second Further Notice of Proposed Rulemaking in Docket 18397-A,* 24 FCC 2d 580, 582-587 (1970).
[45] *Broadcasting,* "Where All the Talk about Cable May Lead," 80, no. 13 (1971): 81-82, 84-86.
[46] LeDuc, *Cable Television*, 198-199.
[47] See generally *Cable Television Report and Order,* 36 FCC 2d 141 (1972).
[48] House Subcommittee on Communications and Power, *Cable Antenna Television*, 92nd Cong., 1st Sess., 1971, 30.
[49] Rolla Edward Park, *Potential Impact of Cable Growth on Television Broadcasting* (Santa Monica, CA: RAND, 1970).
[50] See for instance Leonard L. Fischman and Associates, *Evaluation of FCC August 5, 1971 Distant-Signal Proposals for Cable Television in Terms of their Impact on Over-*

The-Air Broadcasting, 14 October 1971, Docket 18397-A (FCC Docketed Case Files, RG 173; Washington, DC: National Archives).

[51] This conclusion seemed to have been reached following the aforementioned panel sessions in 1971. In an interview, one high-ranking FCC staff member noted that resolution of the cable issue would necessarily be "political, not logical," and characterized by "compromises to accommodate the contending factions." See *Broadcasting,* "Where all the Talk," 82.

[52] *Cable Television Report and Order*, 36 FCC 2d 141, 167 (1972).

[53] Gerald W. Brock, *Telecommunications Policy for the Information Age: From Monopoly to Competition* (Cambridge, MA: Harvard University Press, 1994), 55.

[54] See generally Dean M. Krugman, "FCC Commissioner, Legal Assistant, and Staff Perceptions of Cable Television," *Journalism Quarterly* 56 (1979): 3-8; Zarkin, *Politics of Cable Television,* 133.

[55] House Committee on Interstate and Foreign Commerce, Subcommittee on Communications, *Cable Television: Promise versus Regulatory Performance*, 94th Cong., 2nd Sess., 1976, Committee Print.

[56] House Subcommittee on Communications, *Cable Television Regulation Oversight — Part II,* 94th Cong., 2nd Sess., 1976, 1229-1264.

[57] Derthick and Quirk, *Politics of Deregulation*, 79; Douglas Webbink, "The Recent Deregulatory Movement at the FCC," in *Telecommunications in the US: Trends and Policies*, ed. Leonard Lewin (Dedham, MA: Artech, 1981), 62.

[58] Ibid., 56.

[59] *Report in Docket 21284*, 71 FCC 2d 632, 636-640 (1979).

[60] Ibid., 668-674.

[61] *Report in Docket 20988,* 71 FCC 2d 951, 1000 (1979).

[62] *MTS and WATS Market Structure*, 93 FCC 2d 241 (1982).

[63] Brock, *Telecommunications Policy*, 184-187; When AT&T was the monopoly telephone provider, regulation made it possible for higher long distance rates to subsidize local service rates. Under competitive conditions, however, economists assume marginal cost pricing, meaning that consumers pay the incremental costs associated with each unit of a good they purchase. Thus, by fashioning a scheme based in principles of marginal cost pricing, the FCC was essentially requiring local customers to pay a more natural share of the cost of service.

[64] The "price caps" system of rate regulation was first suggested by FCC economists in a 1987 working paper. See John Haring and Evan Kwerel, "Competition Policy in the Post-Equal Access Market," 2 FCC Rcd. 1488 (1987). For a more thorough discussion of the development of the FCC's price caps plan, see Brock, *Telecommunications Policy,* 257-287.

[65] Douglas Webbink, *Frequency Spectrum Deregulation Alternatives*, US Federal Communications Commission, OPP Working Paper #2 (Washington DC: GPO, 1980); Evan Kwerel and Alex Felker, *Using Auctions to Select FCC Licensees*, US Federal Communications Commission, OPP Working Paper #16 (Washington, DC: GPO, 1985).

[66] Ronald H. Coase, "The Federal Communications Commission," *Journal of Law and Economics* 2 (1959): 1-40.

[67] Michael J. Zarkin, "Microeconomic Ideas, Policy Epistemologies, and the Politics of Spectrum Licensing, 1922-1997, *Polity* 38 (2006): 187-192.
[68] Warren G. Lavey, "Inconsistencies in Applications of Economics at the Federal Communications Commission," *Federal Communications Law Journal* 45 (1993): 442.
[69] Ibid., 489.
[70] Thomas W. Hazlett, *Economic Analysis at the Federal Communications Commission: A Simple Proposal to Atone for Past Sins.* Resources for the Future, Discussion Paper #11-23, May 2011.
[71] Philip M. Napoli, "The Unique Nature of Communications Regulation: Evidence and Implications for Communications Policy Analysis," *Journal of Broadcasting and Electronic Media* 43 (1999): 568.
[72] Ibid., 574.
[73] Ibid., 575.
[74] David Collingridge and Colin Reeve, *Science Speaks to Power: The Role of Experts in Policymaking* (New York: St. Martin's, 1986), 9.
[75] Bruce A. Williams and Albert R. Matheny, *Democracy, Dialogue, and Environmental Disputes: The Contested Languages of Social Regulation* (New Haven: Yale University Press, 1995).