By synthesizing theoretical and empirical research on issue networks, this paper describes and classifies four examples of networks involving educational issues. A literature review shows that, unlike other social and economic influences, networks are marked by flexibility in membership, leadership (individual, group, or organizational), structure, operation, and lifespan. The literature also reveals that the initiators of issues may generate a policy movement by creating a network of advocates. Applying the literature's conclusions to four issues of state policy-making—school finance reform, creationism, collective bargaining for teachers, and minimum competency graduation—shows the influence of various types of networks. None of the issues was actively advocated by federal government policy. Interview data and socioeconomic information were considered in analyzing the effects of the four issues on the policy agendas of California, Florida, Indiana, Massachusetts, Texas, and Washington State. Networks were typed by their degree of uniform adherence to a concept and by their style of organization. The cases ranged from absolute control over the concept and strict centralization of dispersal, in the case of "creation science," to the diffusion of a general concept without centralized guidance, in the case of minimum competency testing. Besides degrees of agreement, the paper notes, networks could possibly be typed according to variations in policy solutions and content. (JW)
THE ROLE OF ISSUE NETWORKS IN STATE AGENDA-SETTING

Michael W. Kirst
and
Gail Meister

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Michael W. Kirst is Professor of Education at Stanford University.

Gail Meister is a graduate student in the School of Education, Stanford University.

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Abstract

Several diverse strands of theoretical and empirical research on state policymaking offer alternative perspectives in how and why issues appear on a given state's policy agenda. This paper reviews this literature with special attention to the operation, role, and impact of policy issue networks. Networks that spread issues rapidly among states are located within the burgeoning literature from numerous disciplines on network concepts. The authors' conclusions are then tested using four issues: minimum competency graduation, collective bargaining, school finance reform, and "creation science."

Classifications and characteristics of different networks are analyzed. There is evidence that in some circumstances interstate policy issue networks can override iron-triangles and intra-state socio-economic variables by placing specific issues in a state policy agenda.
Introduction

How do interests organize themselves in a pluralistic society to make policy among the states? Several diverse strands of theoretical and empirical research into state policymaking offer alternative perspectives on how and why issues appear on a given state's policy agenda. (Agenda-setting for this paper implies active and serious consideration of an issue by policymakers.)

One set of interpretations stresses the importance of political demands expressed in public opinion, electoral processes, and interest group activities. Such demands may originate within a given state or across state boundaries—the latter phenomenon being a partial function of the "nationalization" of politics generally and of interest group activity and the media specifically. A second perspective focuses attention on various external environmental factors, including a state's relative administrative, economic, political, and social development. As a result of variation along each of these dimensions, certain states stand out as regional leaders in the (horizontal) diffusion of policy innovations across states. More recently, analysts have begun to argue that the impetus of many policies arises within government itself—this constitutes a third perspective on the process of agenda-building. Thus, the expansion
of issues on the state's agenda is a function of the increased bureaucratization and professionalization of state governments, a process often spurred by federal (vertical) policy innovations and mandates. These federal policies create technocrats and interest groups oriented around an issue domain.

Finally, scholars have begun to look at the role of issue entrepreneurs who spread policy issues across states through the use of vertical and horizontal linkages. This notion is distinct from the traditional view of interest group politics and of the bureaucrat as a policy initiator. Policy networks fostered by these entrepreneurs are viewed as another cause of the growth of state government activity.

To locate these interpretations within political science's relevant literature, the next section briefly illustrates each interpretation. The following section treats network concepts and definitions in greater detail. The final section presents the findings of the Network Study Team's examination of four educational policy issue networks. Our project identifies four distinct network types, based on our investigation of the four issues in six target states. The patterns we detect suggest an issue network typology for state agenda-setting.

**Literature Search**

The interpretation which credits political demands as instrumental in state agenda-setting contends that public opinion is an important ingredient. Schon describes the process of social change beginning with:

...a disruptive event or sequence of events, which sets up a demand for new ideas in good currency. At that point, ideas already present in free or marginal areas of the society begin to surface in the mainstream, mediated by certain crucial roles. The broad diffusion of these new ideas depends on interpersonal networks and upon media of communication...
ideas become powerful as centers of policy debate and political conflict.

According to this view, ideas which win the struggle for acceptance and implementation bring with them both leadership positions and leaders to fill them. A somewhat dissenting view, however, theorizes: "At most, government may be said to operate within a loose, permissive 'context' of opinion which allows decision-makers substantial discretion in the creation and design of new programs." In his review of American theories of power, McFarland focuses on the role of traditional special interests or "factions" in agenda-setting. He maintains that standard notions of pluralism (that interests compete democratically) and even plural elitism, a later formulation (that special interests and related coalitions dominate the public interest in specific policy areas), do not adequately explain the rise of recent social movements such as environmentalism and women's rights. As a substitute, he outlines some propositions for a "new group theory." For example, he asserts that "political movements usually form coalitions with some established interest group, elements of political parties, and individual political candidates," and further, that elected officials may hop on the bandwagon of a movement during its initial success, thereby bolstering its success. He observes that "generations of lobbies" grow in response to these social movements, and that television news critically hastens their development or demise.

Conlon and Abrams name the mass media as agents painting over "older portraits of the Congress"—portraits which accentuated party discipline, apprenticeship and deference. They point to growing numbers of "legislative activists and policy entrepreneurs" within the Congress whose portraits accent instead the media's perceived power. "Symbolic politics" result, such as section 504 of the Rehabilitation Act of 1973: ambiguous legislation to facilitate symbolic coalition-building and to enhance the legislator's image. The authors report this phenomenon only as it pertains to regulatory legislation, such as for handicapped
persons, but claim that even retrenchment policies may fall subject to it, too.9

Mitchell fills in another aspect of this first agenda-setting interpretation. He cites a study by Caplan which documents the use policymakers make of print and electronic sources "to gain insight into relevant social science findings."10 Newspapers and government reports tied at 81% use, books registered at 76%, professional journals at 70%, closely followed by magazines at 69%, and trailed by television and radio at 50%.11

A second interpretation—that socioeconomic variables determine a state's policy agenda—is also amply represented in the literature. Gray traces this line of explanation back to Pemberton, who stated that the time for adoption of an innovation is determined in part by the "interplay of an infinitely large number of elements in the social milieu."12 Gray's own work, studying the adoption of twelve laws in education, civil rights and welfare, found support for Walker's thesis that "innovative states are both wealthier and more competitive than their sister states at the time of adoption of a particular law."13 Noting that this trend is less clear-cut for education laws, she concludes that "innovativeness...is issue- and time-specific at best."14 Feller, Menzel and Engel, cited by Milward, go behind this observed phenomenon to hypothesize that commercial entrepreneurs selling to public agencies may induce early innovation in wealthy, urbanized states simply because these are the "more lucrative markets."15

Summarizing the body of "constraint" literature, Mitchell indicates:

Variables which have been tested by these constraint studies and found to significantly affect legislative decisions include...socio-economic variables within a state or a legislator's constituency such as federal expenditures, personal income levels, urbanization, education and industrialization.16

But he goes on to report Crumm's finding that the "effects of internal variables, however important they may ultimately prove to be, clearly differ in their significance depending on the policy issues being decided."17 Milward also concludes that no single variable is responsible for adoption of an innovation. For him,
"The cumulative and interactive effect of (policy) entrepreneurship along with both organizational and socioeconomic variables is a more plausible argument." 13

In a study of the rate of school site innovation—diffusion in Canada, Lytton isolates a trio of environmental variables. He concludes that for school day scheduling innovations, the "role of regulations and legislation appeared substantial" for the adoption of education of handicapped children offerings, the "values of provincial societies seemed to account for the variation in diffusion patterns;" and for energy conservation measures, "economic factors clearly accounted for regional differences in rates of adoption." 19

The third interpretation of state agenda-setting analyzes the power of government itself to generate political agendas. Beer identifies the interplay between the "professional-bureaucratic complex and the "intergovernmental lobby" as a source of "centers of influence." 20 Equivalent to the "iron triangle," "triple alliance," "subgovernment," and "subsystem politics," beer's professional-bureaucratic complex is a "core of officials with scientific and professional training" working "in close cooperation with legislators and interested groups." 22 The centralizing tendency of these similarly-trained and technically-minded members of the professional-bureaucratic complex, who communicate easily with each other across formal organizational lines, is offset by the decentralizing or "fragmenting" tendency of the intergovernmental lobby. The intergovernmental lobby is composed of "governors, mayors, county supervisors, city managers, and other office holders." 23 Governmental activity—creation of programs like those of the Great Society—actually stimulates growth of the intergovernmental lobby, instead of the reverse. 24

Hilward groups suppliers or potential suppliers of public goods, including civil servants with private sector producers, as a governmental entity capable of creating its own demand. Before coalescing into a policy community, these
suppliers of public goods must first behave like a social network. Milward proposes that under certain conditions, these policy communities can create their own demand and, following Downs, that they may "institute policies for which there is virtually no demand where there are few resource constraints." Like Beer, Milward sees governmental programs as the catalyzing agents in the formation of policy networks. "The program the legislation establishes creates the constituency rather than the reverse." 

Heleo also critiques the iron triangle concept as incomplete. With Beer and Milward, Heleo notes that government's "activist policies" actually encourage formation of interest groups "around the differential effects of these policies." The growth of government and the proliferation of its client groups has thus encouraged the development of specialized subcultures composed of highly knowledgeable policy-watchers. The heroes of these subcultures or networks are "policy politicians--experts in using experts, virtuallers of knowledge in a world hungry for the right decisions." The system tends to produce government appointees who "move among the various networks, recognized as knowledgeable about the substance of issues...but not irretrievably identified with highly controversial positions...Their muddiness on the most sensitive issues makes them acceptable." Heleo goes on to develop the idea of issue networks more fully, underlining their distinction from a public, from a coalition, and from a conventional interest group. Milward also distinguished policy networks from interests. He claims that broadly organized interests become properly specified as networks only when they adhere to a particular governmental program.

This kind of analysis has led some observers to the fourth interpretation of state agenda-setting: the role of policy issue networks. One strain in this literature incorporates elements of sociology and psychology to examine personal networks. For example, Eulau and Siegel surveyed individuals to discover their "primary zone" (defined as neighbors with whom the respondent
interacts face-to-face) and to probe the political congruence of these interpersonal networks. The micro world of personal networks carries over into the macro realm of political representation. Boli and Kohli, clarifying that a network of direct and indirect contacts links constituent and representative, conclude that it is "a configuration of linkages that, at the macro level of analysis, can be thought of as constituting the representational system." These authors also posit that networks may explain certain electoral behavior, such as uniformity among candidates, and either overwhelming victories by incumbents on the one hand, or dramatic shifts in support around election time on the other.

The strain of this literature concerning us directly, however, involves policy issue networks in state agenda-setting. Heclo provides an overview. Labeling these "proto-bureaucracies," he defines issue networks:

Issue networks...comprise a large number of participants with quite variable degrees of mutual commitment or of dependence on others in their environment; in fact it is almost impossible to say where a network leaves off and its environment begins. Iron triangles and subgovernments suggest a stable set of participants engaged to control fairly narrow public programs which are in the direct economic interest of each party to the alliance. Issue networks are almost the reverse image in each respect. Participants move in and out of the networks constantly. Rather than groups united in dominance over a program, no one, as far as one can tell, is in control of the policies and issues. Any direct material interest is often secondary to intellectual or emotional commitment. Network members reinforce each other's sense of issues as their interests, rather than (as standard political or economic models would have it) interests defining positions on issues.

Heclo asserts that issue networks will not "replace the more familiar politics of subgovernments in Washington" but they will "overlay the once stable political reference points with new forces that complicate calculations, decrease predictability, and impose considerable strains on those charged with government leadership." On the other hand, Hillard more boldly states that policy networks and their context, policy systems, are "(taking the central place as the core unit of the new political economy.)" Such a view must alter concepts of political power because it touches all phases of policy-
making, from agenda-setting to assessment. According to him, "the national and subnational elements of a policy subsystem form a policy sector within which often lies control over policy initiation, implementation and evaluation." Milward's thesis rests in part on his careful and particular definitions of these "national and subnational elements." For him, a policy system comprehends the policy community and governmental programs with which it associates, playing out its mandate to act in the government's name in an interorganizational environment he defines as "an interorganizational field which is dynamic and which is embedded in it an incentive structure." As we noted above: Milward distinguishes between a policy community and a network, in that a policy community may exist before a network comes into being. He further distinguishes between the non-governmental members of the policy community and persons in the decision network holding formal positions in government. The program or policy network makes up one piece of the policy system, along with network tools (of government grants, loans, subsidies, etc.), and normative structures. Policy networks have vertical (piercing governmental layers) and horizontal (centralized or iron triangle) components, neither of which can be fully understood except in relation to the other. For our purposes, the most useful distinction is that networks attack to specific programs or issues rather than to general policy areas or to broad interests.

Network Theory

Policy issue networks are increasingly seen as powerful agents for political change. Not only do they carry, but they may also develop and shape the ideas that eventually become part of a state's policy agenda. How to recognize and describe them are the questions to which this section is addressed. Political science, sociology, education and organizational behavior studies, while all placing networks in their own contexts, nonetheless offer some common understandings toward a network theory on which we will draw.
Networks are synonymous with systems, a term which emphasizes an on-going communication process. According to Rogers, convergence network analysis is a holistic approach, an improvement on the linear model consisting simply of source, message, channel, receiver components. He formulates networks as "cycles of information-exchange over time," adding that communication implies a willed commonality, such as "mutual understanding and/or collective action."

Bolland offers a slightly different approach to network theory, stressing influence rather than mutuality. What he terms the relational approach "assumes that power is strictly an interpersonal relationship in which community leaders influence one another through the direct (and the indirect) exchange of messages. As such, influence is not necessarily an overt act but rather occurs during the everyday interaction among people."

Somewhat similarly, Walker associates membership in the kind of community a policy network is with the constant exchange of information about activities and ideas. Among the ideas exchanged, those which conform to "current professional consensus are the most rewarded." Milward calls attention to this principle as the "institutionalized thought structure" of shared judgments or "appreciations" operating in policy systems.

In Beyond the Stable State, Schon considers networks to be the contemporary normative form of functional systems, replacing the center-periphery model and its variant, the proliferation of centers model. The center-periphery model denotes attraction of people to a center, like the nineteenth century German university, then dispersion, once their bags are full of innovations. Examples of the proliferation of centers model are the Roman army or early Christian missionaries who established secondary centers as a family of overlapping or analogous situations, instead of exact replications of the center. The "propose-dispose model" of a federal center writing broad guidelines for local ingenuity to supply in detail is a refinement of the variant. For Schon, the network model is a singular type, which alone is flexible enough to survive
With new strategies of institutional design, new roles come into prominence. In an era of instability, roles of intervention become more prominent than roles of stability; the entrepreneur, invader, organizer, advocate consultant, muckraker and the change-oriented leader become more visible and important. With the primacy of functional systems, roles related to responsiveness to new information and the network roles essential to the design, development and management of the shifting networks on which functional systems depend (become prominent).

A synthesis of various commentators' definitions can be stated. An issue network links members informally across formal decision making lines by channeling information, resources, psychological support and learning from one part of the network to another. Schon, in fact, calls these networks learning systems if they have the flexible qualities to transform themselves.

Theorists also propose a variety of ways to describe network dimensions. In the language of communication networks, Rogers posits three measures for network analysis: communication proximity, which is the degree of overlap of two persons' communication networks; linkage distance, the number of links or steps in the shortest path joining two individuals; and correlational similarity, the conformity of non-links as well as links in two people's networks. Mizruchi, on the other hand, states that the concept of centrality, as a measure of the organization and of individuals, is a "crucial variable in group activities." This is so because of the "considerable correspondence between network centrality and influence."

Although Mizruchi focuses on interlocking corporate directorships, a facet of community power studies, the measures he develops for centrality may be valuable to other fields, too. Matrix algebra is the tool used to compute three measures of centrality: 1) the number of links from one point to other points; 2) the "intensity" of the links, which may also include some indication of direction, or a factor accounting for the potential number of links (dependent on network size); and 3) the centrality of those to whom one point is linked.
Another theorist sees different dimension to the notion of centrality. These are "interaction potentials," or the number of others with whom one link may directly share messages; "disruption potential," or the ability of one link to disrupt the flow of information or to change the content; and "proximity," a measure of the degree to which the shortest path between people is short by network standards. The author suggests that the latter two measures capture the leadership and power quotient of network participants better than interaction potential.

A related measure of centrality assesses principal connections among the subset of points which constitute a clique. Using "peak analysis," a network analyst may determine which of any two directly interlocking points is the more central and then discern a clique in the pattern of highest points. Proponents aver that this technique is particularly appropriate to uncover financial corporate structure, in which area it has been developed and applied.

In less technical and broader terms, Schon suggests networks be defined: through the nature of their elements (for example, persons, departments, organizations), the nature of the channels connecting them (formal lines of authority, information or decision; interpersonal bonds) and the nature of the transactions that can occur through these channels (...may be 'referral', 'early warning', distribution, or 'money-lending' networks). On a secondary level, networks may be characterized by their scope, complexity, stability, homogeneity, and flexibility.

Because they are dynamic systems existing outside of formal organizations, theorists caution that networks may have fuzzy, shifting boundaries, fluid memberships (where even members may not be aware they belong to a network), varying influence relationships, changing purposes, unstable structures and limited lives. These dynamic and ephemeral attributes supplied our framework as we traced four unrelated policy issues on their way to state agendas. A brief explication of generic network dimensions follows.
Membership

That only parts of networks may be active at any one time and that relationships in the network may change over time make precise statements about membership size and identity difficult. At most, we can enumerate typical participants. Membership in a policy issue network may be based on related "role definitions or on empirical "linked" contacts. In an inclusive sense, networks are composed of those who decide on change, those who must change, those who enforce change, those who benefit from it, and those who support it with belief or resources.

Diversity among members is characteristic. Rogers cites "the strength of weak ties" as a network principle, meaning that "heterophilous relations--the difference in attributes between two network members--facilitates the spread of ideas from group to group." Scholars usually identify network members by job title, job category, or by role. Among the job titles and categories, "reformers, providers, practitioners, intervenors and researchers" are typical. In addition, journal editors, representatives of business firms, elected officials, staffs and lobbyists may also belong to "communities of policy experts."

Categorized by specialized role, network members may include liaisons, bridges (the latter link cliques of which they are members to those of which they are not; the former link cliques without being members of either one), isolates or cosmopolites. Or networks may include those whose roles are systems negotiator, "underground" manager, maneuverer, broker, network manager and facilitator, with distinctions drawn along dimensions of scope and nature of members' activity.

Defined in this way, issue networks alter the traditional view of social movements--of which they may be a special case. Rather than building exclusively on shared grievances and discontent, issue entrepreneurs and organizations may manufacture and market a social movement.

Leadership

Network leadership may be provided by an individual, group or organization. An individual or cadre of critical figures in a "decentralized core" can...
concentrate and direct the flow of information, referrals and support. A "linking pin" organization, in contrast, may by providing needed infrastructure, lead the network merely by its de facto dominance. Leadership is sometimes conceived of as an evident attribute of a network's structure. In this case, leadership may be termed a "positional resource," giving the central entity "some degree of control over the agenda-setting and policy-development processes" and hence, "systemic power." Equally likely, however, is the possibility that a network lacks a clear, fixed center or locus of leadership, and that society at large provides network infrastructure. As noted above, the concept of degree of leadership in a network is sometimes called centrality.

Structure

Matrices or plots, such as sociograms, are often used to represent network structure. (One writer proposes expressing network complexity by "a three-tiered, multi-dimensional molecular model with complex lateral relations at each level simultaneously affected by equally important and complex vertical relations." Characteristics of both flows and relationships are typically reported. For example, one team of authors names the number of links between individuals "mesh," the direction of flow between individuals, "connectivity," and the shortest path to effective action within the network, "distance." The strength of ties, the cohesion and stability of links, and the capability of the network to diffuse information may also be described. A model derived from the study of corporate board interlocks identifies "density" and "reach" dimensions. Density here means the ratio of actual to possible relations, and reach means the percentage of units which may be reached in some fixed number of steps from the network center. Correlating density and reach predicts the degree of cohesion and hierarchy in a network. Other researchers note the degree of formalization and standardization, and the amount of members' dependence on each other or on the linking pin actor. Structural openness is another dimension, as is whether a network has a single or multiple purpose.
The question of single or multiple purpose leads to the problematic consideration of content. One author claims networks may be either process- or content-oriented (but he has never seen the latter). One proponent of structural network analysis (of the corporate interlock type) even acknowledges that, although structure does reveal something about network content, it may not communicate much about the consequences of actual network behavior. Another writer asserts that the content of information-exchanges is one of two aspects of communication network analysis not yet investigated. However, Schon claims that the center-periphery model and its variant, described above, are structurally suited for a "uniform, simple message," but for him these models are pre-network classifications. An important strategy, well-known in agenda-building, is to associate one's issue with emotionally laden symbols which have legitimacy, contemporary meaning, and wide public appeal.

Operation

The flow among linked members activates the system, transmitting what ultimately issues as influence or power through the network. Various known as resources or payoffs, the elements of flow include labor, money, legitimacy and facilities, as well as skill development and information, psychological support, positive feelings and the opportunity to help others learn. Still others may be respect, mutual interest and propinquity. The mix of some or all of these elements with a network's membership, leadership and structure (and, we might add, content) determines the network's ability to facilitate or to constrain change in the policy arena.

Life Cycle

The quasi-organic nature of networks suggests that they have what may be termed a life cycle. As such, they may grow, decay and die. But the literature offers neither certainty nor agreement on this point. One view holds that over time an iron triangle may turn into an issue network and revert back at some
later time. A network's response to its own growth, replication or the achievement of its aims is unpredictable, as is its vulnerability in the face of particular factor combinations. For example, school finance reform is losing steam as fiscal problems constrain state budgets. It is a great deal easier to equalize school funding during a rising economic tide.

Comparative Cases

To investigate the role of issue networks in agenda-setting, we studied four educational policies in six states. Interviews with key actors revealed a pattern determined by the issue area rather than by state, even when the states differed in socioeconomic and political variables such as fiscal capacity, legislative capacity and state policy centralization. The four separate policy issues also seemed to cluster consistently when network dimensions such as leadership, structure, membership and operation were considered. From this material, we have constructed an issue network typology for state agenda-setting (see Appendix A). It is based on the study of the advent of scientific creationism, school finance reform, collective bargaining for teachers, and minimum competency testing for high school students to the policy agendas of California, Florida, Indiana, Massachusetts, Texas and Washington. None of the issues was advocated by federal government action in any major fashion. The federal role was at most technical assistance after the issue had reached state agendas.

We will describe the first case, school finance reform, in greater detail than the others to illustrate the findings on which our issue network typology is based. For the remaining cases, an outline of main points will be presented. These issues are all discretionary or "chosen problems" and are elevated to the formal agenda after priority items (i.e., habitual, recurrent (e.g. budget) and crisis-induced policies) have been dealt with.
School Finance Reform

The school finance reform movement can claim impact in 20 to 25 states that contain about 60 percent of the nation's pupils. Its predominant approach has been to "level up" the low spending districts without decreasing spending in the wealthy districts. Landmark progress toward this goal came in 1969, in large part because of successful court suits as Serrano in California and Robinson vs. Cahill in New Jersey. These suits declared that the property tax based system of financing education was unconstitutional because school districts with little assessed value of property per pupil could not raise as much money with the same tax rate as their wealthy neighbors. For example, Oregon's Brothers School District has an assessed value of $537,761 per pupil while Know Buttle is restricted to $16,119. While the U.S. Supreme Court in the Rodriguez case ruled this problem was not a federal issue, a nationwide network has been operating behind the scenes orchestrating and spreading finance reform among the states.

The entrepreneur with many resources to launch the network was the Ford Foundation, working in close collaboration with HEW's National Institute of Education (NIE). One grant officer at Ford was at the network center, transmitting and intercepting information flows. The Ford Foundation provided publicity, grants, travel, and recognition as a way to motivate and glue together the network participants. Indeed, it funded, directly or indirectly, all of the network's major elements, which may be enumerated as:

(1) lawyers to sue the state. Ford grants were made to the Western Center on Law and Poverty (California) and the Lawyers Committee for Civil Rights Under Law (Washington, D.C.) to coordinate interstate legal activities. These Ford-funded lawyers devised and litigated Serrano and Robinson; and the Lawyers Committee has assisted in more than twenty subsequent state suits.

(2) private agencies to spread the concepts of finance reform around the state—state branches of the League of Women Voters and the National Urban Coalition. These agencies publicized general principles which the network supported.
(3) scholars to testify as expert court witnesses in favor of reform and then to advise the state on how to meet the court order. These scholars from prestigious universities adapted the network's principles to specific state contexts.

(4) interstate technical assistance groups such as the Education Commission of the States (ECS) and the National Conference of State Legislatures. These groups worked with the scholars and provided computer simulations of various solutions. They were hired by state politicians whom the network discovered or after court suits made "reform" seem likely.

(5) state politicians and political institutions—the Governor's Citizens Committee on Education (Florida) and the Oregon Legislature's Committee on Equal Educational Opportunity. These temporary government units employed network scholars and groups like ECS as their chief advisors.

(6) research and action centers oriented to minority groups, including the International Development Research Association (Hispanic, located in San Antonio) and the New Jersey Urban Coalition (Black, headquartered in Newark). These Ford-funded organizations insured that minority concerns were brought to the attention of the groups mentioned above.

(7) graduate students—from Columbia to Stanford—who received full scholarships to prepare themselves as the next generation of school finance advocates or technicians.

Ford and NIE provided operating expenses, travel, consultants, research papers, and any other appropriate incentive to make the network effective. Periodic meetings of key network participants were used to select target states for intervention. States that were "ripe" found all seven elements descending on them. In all states, the symbolism emphasized the legal concepts of equity, fundamental rights, and discrimination against the poor and ethnic minorities.

The school finance reform network is characterized by fairly high central
guidance and the promotion of similar policy solutions across states. The Ford Foundation, which furnished the central guidance, however, is a multiple purpose and multiple issue organization, a diluting force in network participation. The policy solution was framed as a general concept, equity in finance, and backed by arguments on legal and constitutional grounds. Thus, policy solutions in various states differed according to a state's specific legal precedents and requirements. The membership which gathered around this general concept agreement was consistent neither from state to state nor within a state over time. Coalitions in the school finance reform network were forged by conventional political bargaining and side payments, with teachers sometimes included and sometimes excluded. Meeting annually in one place, this network is easily visible and identifiable, and, taken with its other properties, is a distinct network type. It may be summarized as a core concept agreement network.

Scientific Creationism

Single purpose and single issue, the network promoting scientific creationism represents a distinct, and in some respects, an ideal type. So high is central control and so focused is the message that not only are the policies advocated the same across different states, but identical statutes are proposed in different states. Legislative drafting and testimony is performed by the Institute of Creation Science in San Diego. These statutes require local schools to give equal coverage to biblical creation and to evolution as scientific theories. The network's arguments are value-based. Consequently, no compromise on the proposed statute is deemed possible. Moreover, the membership, which evidences the fervor of a body of true believers, is consistent and static, from state to state. Those who disagree with the network's arguments and policy solution are charged with heresy. The San Diego-quartered Institute provides a model law, legal support, and substantive arguments to legislative leaders in many states.
Legislators interested in the creation issue are referred to the San Diego Institute by the Moral Majority and the Religious Roundtable. The Institute is at the center of the network and connects the key points. From San Diego, the main flow is information and technical assistance. Overall, the dense, hierarchical profile of this issue network can be summarized as an absolute consent agreement type.

**Collective Bargaining for Teachers**

The issue of collective bargaining produced a network with considerably more variability on several dimensions than either scientific creationism or school finance reform. As late as early 1979, many teachers believed that collective bargaining was "unprofessional." The National Education Association (NEA) provided a leadership center, but the proliferation of state and local NEA-affiliated centers—a federal configuration—perhaps better describes the way this network developed. On the one hand, a group of collective bargaining-oriented national NEA leaders pushed hard for a national unified dues structure and designed national conventions promoting the virtues of collective bargaining. These actions encouraged uniformity among state chapters. The "Young Turks" at NEA headquarters were a key central coordination team and played a role similar to that of the Ford Foundation for school finance. On the other hand, NEA funded the Uniserv program which strengthened local capacity and collective bargaining acceptance. National NEA paid a large part of the executive secretaries' salaries at the local level. These local Uniserv people were handpicked by NEA national precisely to advocate and convert local teachers to collective bargaining. A large majority of teachers needed to support collective bargaining in most states before state leaders would consider the issue seriously.

Membership in the collective bargaining network was predictably consistent across states, in that participants (Uniserv) saw themselves as labor pitted against management. National NEA headquarters, however, kept a tight rein on Uniserv and coordinated state collective bargaining efforts. The network based
its arguments on friendship and on agreements within an occupational group, so
that the membership embraced in social solidarity those who might conceivably
crack on certain questions of values. Also, the network produced and tolerated
great variation as to whether or not state and local chapters endorsed the
model statute promulgated by NEA. Therefore, despite some similarity to the
absolute concept agreement type, the collective bargaining network is, once
again, a distinct type. It can be summarized as a simple concept agreement network.

Min-term Competency Testing for High School Students (MCT)

In the 1970s public dissatisfaction with school achievement resulted in
type statutes requiring a minimum competency test before high school graduation.
The minimum competency testing network (MCT) is a fourth network type, differing
but strikingly from the other three networks in the matter of central guidance.
As one observer put it:

It is probably fair to say that the minimum competency testing
movement, supported for the most part by non-educators, has moved
through thirty-eight states without any centralized support, and
no single agency or group of people playing an advocate role.

Excerpt advisors from agencies like the Institute for Educational Leadership,
The Education Commission of the States, and the Ford Foundation did participate
in information-sharing throughout the network, but in a second wave—after the
idea had already reached the state legislative agenda. Along with the technical
and legislative assistant who helped write versions of MCT legislation and
guidelines, the agency consultants provided technical assistance only in response
to requests from state leadership. The concept of network "centrality" simply
does not apply to MCT.

In contrast, the mass media played an important part in carrying MCT as
a new idea to many states, with the issue/attention cycle predicting the early
flame of publicity and later fading of "newsworthiness." Legislative sponsors
heard about MCT from the newspapers, national news magazines or education journals
written for non-specialized audiences. Those who in retrospect may be called
members of the NCT network agreed simply that the realm of improving school performance resided in technological assessment. Network members did not necessarily agree on specific goals, a specific test, or a uniform policy design. Often a lone figure (such as California's Assemblyman Hart or Massachusetts' former Commissioner of Education Ariele) sculpted the public's awareness and concern into an item for the state agenda. Its spontaneous, idiosyncratic development and its loose, non-hierarchical form are unique to the NCT network among the networks studied. It can be summarized as a vague concept agreement network type in that members believed any type of graduation exam would improve high school standards. The NCT network had the lowest cohesion, least formalized information flow, and most indirect connecting points.

Our study of four policy issue networks in six states points to these tentative conclusions:

1. Policy issue networks may be characterized as distinct types. From least to most agreement within the network, they can be identified as absolute concept agreement, core concept agreement, simple concept agreement and vague concept agreement network types.

2. Network dimensions of leadership, membership, structure, and operation account for the variation among the network types. The degree of variability in centrality of guidance, consistency of membership, configuration of relationships, and utilization of resources tends to predict a network's relative ranking as one of the four types (see Appendix B).

3. Networks may also be classified by the kind of policy solution they advocate. Along this dimension, networks vary from one extreme of a complete, invariable statute to the other extreme of similarly motivated but highly variable programs.
(4) The content or subject matter of a policy issue network—and the
grounds on which the arguments are advanced—may contribute to the
ways the networks develop, the kinds of policy solutions they advocate,
and their designation into distinct types. Ranging from value-based
arguments to legal and constitutional-based arguments to conventional
political bargaining arguments, the network message may determine
variation along other network dimensions. Moreover, centrally-driven
networks create a more similar state policy outcome.

(5) Interstate policy issue networks frequently can override political
and socioeconomic variables in state agenda-setting. On the whole,
network effectiveness—rather than fiscal capacity, legislative
capacity, or state policy centralization—accounts for some issues
on a state policy agenda. But in some states (such as Texas), the
political, social, and economic climate is so hostile to network
issues that they never reach the state legislative agenda in terms
of committee deliberation or floor action. In the Texas case, this
failure occurred despite persistent network efforts in school finance
and collective bargaining (see Appendix C). On the other hand,
NEA succeeded with its collective bargaining statute in the difficult
Indiana political context. In Texas, there was no agreement on the
specifics of the policy to be adopted and implemented with respect
to collective bargaining and NCT.

(6) Policy issue networks can override state-level iron triangles and
force them to react to externally driven issues. Issue networks
are not the sole means of agenda-setting, but are often overlooked
and not well understood.

Further research on issue networks will test the dimensions, classifications
and hypotheses which have emerged from the four cases we have studied, and will
add to the growing understanding of how issue networks affect state policy.
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31. Ibid., p.103.

32. Ibid., p.106.

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Dalin, op. cit., p.62.


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Ibid., pp.8 and 26.
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REFERENCES


### Role of Issue Networks

**ISSUE NETWORK TYPOLOGY for STATE AGENDA SETTING**

<table>
<thead>
<tr>
<th>Scientific Creationism</th>
<th>School Finance Reform</th>
<th>Collective Bargaining for Teachers</th>
<th>Minimum Competency Testing for High School Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute concept agreement</td>
<td>Core concept agreement</td>
<td>Simple concept agreement</td>
<td>Vague concept agreement</td>
</tr>
<tr>
<td>High central guidance and promotion</td>
<td>Fairly high central guidance</td>
<td>Central stimulation by national group but considerable local initiative</td>
<td>Decentralized network with no policy issue promoter</td>
</tr>
<tr>
<td>Consistency in types of participants across states; cohesive network of true believers</td>
<td>Coalitions of interest groups through bargaining and side payments</td>
<td>Stereotypical participants: Labor vs. Management</td>
<td>Cadre of expert advisers (not the original advocates)</td>
</tr>
<tr>
<td>Dissenters charged with heresy</td>
<td>Rolling coalitions within states; complexion of coalitions different across states</td>
<td>Social solidarity among potentially diverse members</td>
<td>Media crucial through issue attention cycle</td>
</tr>
<tr>
<td>Value-based arguments</td>
<td>Legal and constitutional arguments</td>
<td>Arguments based on friendship and occupational interests</td>
<td>Agreement on means of improving school performance</td>
</tr>
<tr>
<td>Identical statute with no compromise considered</td>
<td>Specific legal argument tailored to individual state</td>
<td>Model statute available for imitation but high variability among states as to endorsement specific goals</td>
<td>Absence of uniform policy design; no agreement on specific goals</td>
</tr>
<tr>
<td>Single issue organization</td>
<td>Network meets annually</td>
<td>Network meets in national conventions</td>
<td>Continuous flow of information sharing</td>
</tr>
</tbody>
</table>
### Appendix B

#### RANK ON DIMENSIONS

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Competency Testing</th>
<th>Collective Bargaining</th>
<th>School Finance</th>
<th>Creationism</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Central control and guidance</td>
<td>5</td>
<td>2</td>
<td>2.5</td>
<td>1.5</td>
</tr>
<tr>
<td>2. Desire/hope for symbolic rewards (vs. that for tangible resources)</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3. Importance of the condensation symbol as perceived by legislators for placing issue on agenda</td>
<td>1</td>
<td>4</td>
<td>2.5</td>
<td>2</td>
</tr>
<tr>
<td>4. Sophistication and organization of network mechanism used to spread issue</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. Willingness to compromise or modify proposal during state political process</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6. Importance of media for awareness and diffusion</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Influence of specific statute as a starting point for policy deliberation</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>8. Stability of intra-state interest group participation -- do the same groups support or oppose the network proposal</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>9. Regularity and structure of meetings by network participants</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Ranking Scale

1. Extremely strong effect
2. Strong effect
3. Moderate effect
4. Weak/little effect
5. Extremely weak/ negligible effect
### Typology of States

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>Florida</th>
<th>Indiana</th>
<th>Texas</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Historical receptivity to new policy ideas that circulate among the states</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>2. Impact of state political culture in changing national concept</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3. Sophistication of state administration and legislative staff</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>4. Cohesiveness of interest group which leads to coalition or conflict</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Linkage of state or local officials to interstate policy issue networks</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>6. Linkage of relevant intra-state interest groups to interstate networks</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Ranking Scale

1. Extremely strong
2. Strong
3. Moderate
4. Weak
5. Negligible