



## **Achieving Routine in Organizational Change**

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*We preconceived that uncertainty and the need to discover new framing concepts would frequently face school decision-makers trying to significantly alter their domain. In contrast, however, we found that familiar administrative mechanisms were used to channel consideration of a major decision—that of the computerization of the curriculum. These familiar administrative mechanisms were used in combination with inspired use of language to reinforce the routine frame. Thus, for organizational participants, the very routineness symbolized the unexceptional nature of a change that might otherwise have aroused considerably more attention.*

Most organizations at one time or another make important, even dramatic, changes in their domain of operation (Thompson, 1967). They modify their clientele; they alter their mix of products or services; they adopt radically new technologies of production or distribution; they merge with other organizations; they divest themselves of long-held property or programs; they reject an existing ideology and develop a new self-concept; or they move to new geographical locations.

The explanation of how shifts of this sort take place most often focuses on surprise and uncertainty. This explanation asserts that major organizational decisions are produced by charismatic, ideological, and frequently disorderly processes. It asserts a discontinuity between the processes of day-to-day maintenance of the existing organization and processes that produce long-run modifications of the organization. Thompson (1967), for example, argued that under conditions of ambiguity, decisions are made by "inspiration," that is, by the unarticulated insights of a charismatic leader. March and Olsen (1976) described such decision processes as the random intermixing of problems, solutions, is-

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sues, and decision makers, in decision situations described as "garbage cans." Weick (1979) proposed a model of learning under uncertainty as a process of evolutionary drift, driven by random enactment and selective attention, under the loose control of only partially consistent retentions from previous experience.

A second explanation of organizational processes can be juxtaposed with this perspective. Fundamental shifts in organizational domain, in this view, result from the ordinary workings of day-to-day processes. Significant shifts, in fact, are frequently not discovered to be fundamental until after they have taken place. Continuity with the past and adherence to routine are the expected state of affairs. In contraposition to dramatic explanations, there is rarely a significant difference between the mechanisms of day-to-day activities and major adaptation.

This second account of organizational life is well illustrated in recent writing of March (1980) which significantly departs from the mood of the garbage can model with which he is more often associated:

Most change in organizations is the result neither of extraordinary organizational processes or forces, nor of uncommon imagination, persistence or skill. It is the result of relatively stable processes that relate organizations to their environments. It occurs because most of the time most people in an organization do approximately what they are supposed to do, and what they are supposed to do is to be intelligently attentive to their environments. Bureaucratic organizations are not always efficient. They can be exceptionally obtuse. But most of the organizations we study exhibit an impressively decentralized capability for changing as a matter of routine. ... Within such a concept of change in organizations, drama in organizational events is produced not by dramatic efforts but by elementary processes. The same processes that sustain the dull day-to-day activities of an organization produce the unusual events. Organizations change easily and continually; and the effectiveness of an organization in responding to its environment is linked tightly to the effectiveness of its routine processes.

March's emphasis on the routine side of change has become increasingly relevant in our longitudinal study of three school districts. The districts were chosen on the basis of their reputation, among peers and other informants, for being well managed. With one or two notable exceptions, March's earlier garbage can model and our own initial concept of the drama which must necessarily accompany major new activities have been much less useful for describing these districts than March's later emphasis on dull, elementary, routine processes.

This article therefore explores the routine as an *achievement* of management. We have observed several shifts in organizational domain (including change in clientele, altered mix of products and services, adoption of new technologies, and divestment of property and programs) that were achieved without "dramatic efforts," as March now describes it. These shifts in domain did not have the ambiguous, disputed objectives or the unknown and poorly understood consequences that we originally expected. Rather than accept the absence of these problematic conditions as a priori characteristics of the situation, however, it is interesting to ask *how* significant domain change can be presented so that

these problematic conditions do not emerge. In the case analysis which follows, the existence of a well known set of administrative mechanisms is highlighted as a particularly important means of achieving routine.

### Background

The broader study of which this article is a part focuses on the process of issue management in three Chicago-area school districts. An issue is defined as a set of concerns which top-level administrators identify as both important to the long-run nature of the district and as occupying considerable organizational effort. Several such issues have been followed in each district, including two potential school closings, extension of a foreign-language training program in the elementary grades, merger with a regional vocational training center, reduction in the educational budget, abandonment of student self-scheduling in a high school, reorganization of the administrative structure of a junior high school, and the purchase of microcomputers for use in elementary classroom instruction. The study began in 1979. The most intensive period of data gathering, during which we visited each site at least every other week, took place during the 1980-1981 school year.

The overall objective of this work has been to broaden the focus of most research on decision-making by simultaneously considering: (a) the contribution of multiple actors to decision-making; (b) the simultaneous existence and potential interaction of many different issues requiring decision-makers' attention; and (c) the changing nature of what is at issue as the decision context itself evolves over time. The unit of analysis has been the issue itself and a descriptive case history for each issue studied has been constructed. Data have been collected by a variety of methods: interviews with key participants; observation at meetings of administrative staffs, boards of education, parents and the public; and examination of minutes, reports, speeches, news releases, and other written documents. All interviews have been tape-recorded and transcribed verbatim. Relevant stories in the local newspapers have been summarized. All data have been coded and entered into computer storage for key word retrieval. Almost all of this data-gathering has been done by both of us so that there are two sets of observer notes to compare. Our impressions of interviews and meetings were generally compared and tape-recorded immediately following contact with one of the sites.

Our analytical strategy assumes that each issue may have important idiosyncratic features. Therefore, theory is being developed for *each* issue without forcing premature uniformity across issues. It is quite likely that different issues are managed differently, even in the same district. It is also presumed that something of general, abstract, and theoretical significance can be learned from the analysis of even a single issue, although we will next attempt to relate the management of issues across districts.

The analytical strategy is illustrated in this report by selecting a single issue, describing its life course, analyzing the processes used to manage its development, and charting the changes in substantive emphasis which occur over time. The theoretical frame within which this analysis takes place focuses on the way

in which a change in organizational domain was effectively routinized. This analysis is being followed by a second study which focuses on formal content analysis of the complete set of speeches given by the superintendent over a 15-year period. These documents are being analyzed, using a procedure developed by Axelrod (1976), to study the extent to which the superintendent's causal thinking about the issue became routinized over time. A third study may focus on the interpretations of the issue by other actors in the district. We then will look more closely at the routine in other districts in the study.

Given the large amount of data we have collected, such sequential studies will be necessary. This report, then, should be seen as laying out a framework which will be further explored, first with respect to other data from this district and then with respect to data gathered from other districts. Other frameworks are emerging from the study of other issues.

Our approach is not incompatible with Glasser and Strauss' (1967) prescriptions for developing grounded theory, but our design is considerably larger in scope. Glasser and Strauss suggest that research questions can be profitably explored by beginning empirical investigations with as little theory as possible, so that theoretical concepts can be derived from the data themselves. We, on the other hand, began this study dissatisfied with the very questions being asked in organization studies. We therefore began by framing the study in broader terms than often used (multiple actors, multiple issues, over time). Our intent was to derive the appropriate questions of study from the data itself, not in the absence of theory, but in the face of the multiple theories that have been advanced over time. For the issue discussed in this article the interesting question seemed to be: "Why the absence of fanfare in a major change of domain?" This is a question made relevant by recent writing on the messy character of decision processes. In effect we followed Sherlock Holmes' method in the case in which he suggests to Watson that the key clue is that the dog did *not* bark.

### **The Site and its Repertoire of Administrative Mechanisms**

Shady Grove,\* Illinois, is an upper-middle-class suburb of Chicago, populated by families whose breadwinners tend to be employed in management and the professions. It is politically conservative, and strongly supported Reagan in the 1980 and 1984 Presidential elections. Community members place a high value on education, and take as their educational reference group other elite metropolitan suburbs from across the country, such as Scarsdale and Palo Alto. School administrators pride themselves on being educational leaders rather than followers, with an emphasis on excellence, innovation, individualized instruction, and strength in basic education. Candidates for public office, including school board members, are selected by a caucus of community leaders, and typically run unopposed. The school system is organized into an elementary district (K-8) and a high-school district. Each district has its own seven-member Board

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\*Pseudonyms are used throughout, and facts are altered slightly to preserve the anonymity of the district.

of Education elected to rotating four-year terms We are studying the elementary district.

Robert Sampson received his EdD in the early 1960s and has been Superintendent of the Shady Grove Elementary School District for about ten years. His central administrative staff consists of an assistant superintendent, a business manager, a public relations officer, a school psychologist, a building and grounds supervisor, and various clerical personnel, all housed in the same administrative office building.

The district consists of six elementary schools and the junior high. Enrollment dropped 24% from 1973-1974 to its 1980-1981 level of about 2,100 students. The pupil-to-teacher ratio is about 21 to 1. Staff reductions paralleled the enrollment decline and certain programs were phased out during the 1970s, so the district is currently in good financial condition. Vacant classroom space has been rented out to a local junior college and other non-profit community organizations. To date, no neighborhood schools have been closed.

A variety of regularly scheduled group meetings comprises the administrative apparatus of the district:

1. The superintendent meets weekly with the assistant superintendent, the business manager, and the public relations officer in an administrative staff meeting. Usually one of the building principals attends this meeting.

2. The entire central administrative staff meets once a month with all the building principals in the principals' meeting.

3. At one additional meeting per month, this same administrative group is joined by the teacher-administrators (one person per building, each devoting 25% time to administration) in an all administrative staff meeting.

4. The Board of Education meets once a month in its regular meeting, at which official business is transacted.

5. The board also meets the week before the regular meeting in its curriculum meeting to review the district's various programs and to discuss proposals for programmatic change. No official votes are taken at this meeting. The curriculum meeting of the board is a long-standing tradition in Shady Grove, having functioned continually for 30 years. It is perhaps the district's most distinctive administrative characteristic and can play a key role in strategic decision-making, as shall be seen. The agenda of the curriculum meeting is planned several months in advance by the assistant superintendent.

6. The board sometimes meets immediately after its regular meeting in executive session to discuss sensitive matters relating to personnel and property management.

7. Once a year, typically in the fall, the board takes a tour of the physical facilities to inspect repair work and the general condition of buildings, classrooms, and other facilities.

8. The budget committee, and, when necessary, the negotiating committee of the board, meets between regular meetings of the board to conduct committee business.

9. In most years, the board and the central administrative staff conduct open forums with the PTA organization in each school in the district. The superinten-

dent may also meet two or three additional times per year with the district-wide PTA group on special topics.

10. In special cases the board will appoint a blue-ribbon committee from the community to study and make recommendations regarding some problem or program in the district.

Together, these regular meetings provide more than 100 occasions per year when the superintendent can discuss district affairs with his immediate staff, building administrators, the board, parents, and the public. The kind of items allocated to each kind of meeting are well-specified and anticipated by participants. This administrative apparatus constitutes a complex information-processing and decision-making network that operates according to a more or less predictable routine, supplemented by innumerable less-formal contacts and group meetings. A crucial question for research is how this set of formal administrative mechanisms is used when domain changes are considered in the district.

### *The Issue: Microcomputers in the Classroom*

In February 1980, at its monthly regular meeting, the School Board of Shady Grove unanimously voted to spend \$25,000 to buy 10 Apple II Plus microcomputers for use in classroom instruction. The decision was made on the recommendation of a blue-ribbon committee of computer experts drawn from the community, which had begun work on the problem seven months earlier. In the charge to the committee, the superintendent provided a prioritized list of objectives that he hoped the committee would attempt to achieve in making a recommendation on computer usage. Included were the suggestions that students would become literate enough to use computer technology in everyday living and would master basic course material through the use of the computer. Teachers would be able to track student progress and provide student options via the computer. In addition, the computer would be available for drill and tutorials to meet individual student needs.

These first-level priorities were followed by suggestions that the computer should also be available for testing, research, data storage, and simulations, and that students should have the opportunity to learn the BASIC computer programming language.

The list of objectives proposed a fundamental change in the school district curriculum in the eyes of the superintendent. Computer technology was to be introduced into the curriculum as a topic in its own right. But the computer was also seen as a more general teaching device for all students in all areas of the curriculum, as an administrative device for management of instruction, as a device for research, as a mechanism for storing instructional programs, and as a way of developing basic skills. Computers thus described would impact the activities of both students and teachers. In short, this was an innovation with the potential for pervasive impact on the school system's pedagogy and curriculum. In making its decision in early 1980, the district was among the first elementary school districts to make a major commitment of resources in the computer area.

It is difficult to pinpoint exactly when the district began to consider the possibility of buying microcomputers for instructional use. The first time the topic ap-



peared on any formal agenda of the Board of Education was at the May 1979 curriculum meeting, under a discussion topic headed "Technology in Education." The topic had been announced to the board at its prior regular meeting in April. At the May curriculum meeting, six reprinted articles were distributed on various aspects of personal computing and computer-assisted instruction. A seven-page handout was also prepared and presented by the staff, (the superintendent, the business manager, one of the elementary school principals, and the director of audio-visual instruction). This handout began by asserting that "[the] computer is the ultimate audio-visual machine," an early sign that the computer issue would be linked closely with a familiar technology while its novelty was deemphasized. The handout went on to stress the need to develop "computer awareness" in grades K-3, and "computer literacy" in grades 4-8. Possible uses, available texts, films, and reference works were listed.

At the regular meeting of the board in June, a unanimous vote was taken to create a committee to review computer technology. Prior to the meeting, the superintendent had already secured an agreement to serve on such a committee from three community members with computer expertise. They were asked to select two additional members, and given the charge "to review computer technology and investigate possibilities for its future in the district."

No further mention was made of the project at the July curriculum meeting, despite the presence on the agenda of an extensive discussion of the mathematics program, including the desirability of using hand-held calculators in mathematics courses, an issue that was at least peripherally related to computers. However, at the regular meeting of the board in July, the full composition of the committee to review computer technology was announced, as were its plans to hold its first meeting two days later.

From that date until the January 1980 curriculum meeting, six months later, when the committee presented its findings and recommendations to the Board, occasional mentions of the committee's continuing progress were made at regular board meetings. For example, in the September 1979 minutes, the superintendent reported that the committee on computer futures continued to meet twice a month. (Note the subtle change in committee designation from "committee to review computer technology.")

The committee submitted its report at the January 1980 curriculum meeting. The report was formally accepted at the February 1980 curriculum meeting, and at the February regular meeting, the decision to appropriate \$25,000 to buy 10 microcomputers was officially taken.

Despite the statement of far-reaching objectives, the potential impact of the decision to invest in the microcomputers was only mildly noted by the board. In the minutes of the February board meeting, it was reported that "President Alexander said he had no quarrel with the expenditure [of \$25,000]; however, this is a substantive change in the curriculum and he wondered if the Board had spent enough time talking about it, adding that it was not only dollars and cents but an important commitment." After further extensive discussion, the board voted approval of the expenditure, and went on to the next agenda item, approval of the recommendations of the textbook selection committee.

Broader publication of the microcomputer decision was similarly low-keyed. The district publishes a short newsletter four to six times per year for distribution to all community leaders. In the March/April 1980 issue, a three-quarter page story announcing the microcomputer decision was printed on an inside page. The story related the thoroughness and breadth of consultation of the decision process and the goals of the program. However, it concluded on a conservative note, with Superintendent Sampson stressing the program's continuity with long-standing values and policies:

[Shady Grove] is committed to instruction in the basic skills ... making our students literate through heavy emphasis on reading, writing, listening, speaking, mathematics, social studies, science, foreign language and the arts. In this context, it is incumbent upon our district to make students literate in the 1980s version of our basic skills—computer language.

Thus was a potential major change in curriculum pictured merely as a natural extension of the district's commitment to "basic skills" and "literacy."

Further, this innovation quickly took hold in the district. By April of the first year, 400 of 600 junior-high students had taken a basic course familiarizing them with computer operation. Many students in other grades had also been involved. In-service teacher training had been carefully orchestrated to involve key teachers, including the head of the teachers union. Fifteen teachers and learning center directors, chaired by the junior high school principal, were appointed to a committee to implement and monitor the program. A primary aim of the committee was to develop a three-year extension of the program. This group made presentations to the board at its May and June 1981 curriculum meetings, recommending, among other things, the purchase of 40 additional micro-computer systems. The board approved these plans in its regular July meeting, authorizing an expenditure of over \$140,000.

### *Analysis of Issue Management*

How can this program, in our opinion the most significant change in Shady Grove's domain in over half a dozen years, be interpreted? The following features seem most noteworthy in the flow of events:

1. For this particular issue in this particular district, issue management is better described by the routine perspective identified at the beginning of this paper than by the dramatic perspective. There is heavy reliance on the use of existing and familiar administrative mechanisms activated in familiar ways. The introduction of computers is framed as an extension rather than as a sharp break with current values and policies. March's (1980) recent views on routine-driven change, rather than our own initial focus on his garbage can model, better describe the data. Routine definitely triumphed over drama.

2. Proper choice of language helped frame the decision as ordinary and routine, downplaying potential discontinuity with past practice. Prime examples include describing the computer as an "audio-visual device," computer knowledge



as a "basic skill," the educational objective as computer "literacy," and the opportunity to learn a programming language as "teaching the computer."

3. At least five distinct administrative mechanisms were used during the decision process: (a) the monthly regular meeting of the board of education; (b) the monthly "curriculum meeting" of the board; (c) the blue-ribbon committee of computer experts drawn from the community; (d) the weekly administrative staff meeting; and (e) the in-house committee of teachers and learning center directors. These mechanisms might be thought of as the empty containers into which issues such as the computer issue are poured. They are stable parts of the administrative structure ready to be called into being or "attached" (Sproull, 1980) to some specific issue. Each mechanism appears to have a routine way of operating, and each is a general routine (or operator) in that it can be applied to the processing of a wide variety of problems.

Such administrative mechanisms are well-suited to carrying out some tasks and poorly suited to carrying out others. For example, the curriculum meeting of the board seems ideally suited to a general overview and assessment of a situation, but (at least in this case) was poorly suited to create and evaluate solutions to the problem at hand, or even to define the problem in the most fruitful way. The regular meeting of the board, and later, the newsletter, served the function of publicly taking and displaying decisions to create committees, approve findings, and commit funds. Strung together, these mechanisms comprise a long sequence of information-processing routines that constitute the observable artifacts and vehicles of an issue-management strategy.

4. Each of the administrative mechanisms served not only to advance the decision process but also to link key sets of participants: computer experts to the board, the administrators to the teaching staff, the district to the public. The sequence of mechanisms can be seen as creating a network among organizational actors. Further, the superintendent, the director of audio-visual instruction, and a teacher with a long-standing interest in computers, played important linking roles. Despite the involvement of different groups of participants at different points in the decision process, these three actors (especially the superintendent) were involved in all aspects, including attendance at every one of the meetings of the blue-ribbon committee. Thus, while participation of other players shifted over time, as March's "garbage can model" asserts, there was significant continuity in the involvement of key actors, and the administrative mechanisms themselves further carried information from actor to actor.

5. The superintendent consciously used well-defined criteria to select and structure the sequence of administrative mechanisms for managing this issue. For example, he expressed the following rationale for using a blue-ribbon committee to generate the initial recommendation on microcomputers:

Typically, if we had this kind of problem we would go with a professional staff who should know more about these instructional matters than anyone else. In this particular case we didn't have anybody on our staff that had any expertise in this area. So we had to go somewhere else to get the expertise .... You see, if we take our teachers, and they talk about reading to the board, they have tremendous credibility. If we

take that same staff and talk about computers, we don't have the credibility, so we had to find somebody with credibility. The nature of the thing dictated that we get this blue-ribbon committee.

Our working hypothesis is that a stable set of such "rules" exists in the superintendent's mind and guides his actions. They have been, in part, more broadly institutionalized within the administrative structure of the district as a whole. So the district is able to consider and implement changes in its domain, such as the introduction of microcomputers, without fanfare. Its governing structures and set of administrative mechanisms appear to embody the routines by which this is accomplished.

More generally, we are beginning to speculate, on the basis of observing other issues as well as the computer issue analyzed here, that the effectiveness of leaders such as Sampson may rest on their ability not to be overly dramatic in the work they do. Instead, they fold changing circumstances into an ongoing fabric of sense-making which absorbs the events which might seem startling to newcomers or outsiders (Pondy, 1978).

In order to conclude that major domain change is brought about by dramatic means, we would have to have seen little use of previously constituted procedures. We would also have expected to see the superintendent or other bureaucratic leader playing a high-profile, charismatic role in selling the curriculum change to the board, community, teaching staff, and others. Neither factor was observed. Although the superintendent participated actively in nearly all discussions of the computer proposal, he functioned in an *ex officio* capacity, preferring to stay in the background of various official committees. Even when public speeches were made to the staff endorsing the computer idea, it was always in the context of regularly scheduled addresses. The superintendent functioned, in Whetten's (1984) terms, as a "catalytic" leader, bringing together relevant parties and guiding debate, but never forcing issues in a charismatic way, or relying bureaucratically and rigidly on standard operating procedures. The superintendent made flexible use of routine administrative procedures, but it is crucial to point out that the procedures were routine and familiar, not *ad hoc* and novel. The use of familiar procedures helped to make the novel subject matter unexceptional.

Two competing hypotheses about the driving force of this unexceptional change might be juxtaposed with the conclusion we have drawn. First, it might be that the formal mechanisms merely displayed decisions achieved through more informal means. Second, it might be that administrative mechanisms merely displayed the superintendent's decisions with respect to the computer curriculum. While it is foolish to suggest that informal processes and leadership do not play a role in any organizational decision, we do not feel that these two alternative theoretical frameworks can take center stage in explaining this decision. Indeed, we now argue that routine is likely to be found more useful for understanding the bulk of organizational decisions.

We have little evidence, in the extensive data we gathered on the computer issue, of behind-the-scenes activity. It appears that the smoothly orchestrated flow of administrative mechanisms, which worked to make this major decision unexceptional, made such activity unnecessary. The structure of meeting agendas,

which repeatedly drop small, manageable updates on the progress of activities such as those carried out by the blue-ribbon committee on computers, appears to be a major way in which this is accomplished. Reminders and updates divide the impact of things like the introduction of computers into manageable pieces. They gradually make a new concept familiar. Repeated references help actors less centrally involved in the day-to-day life of the district, such as board members, parents, and the public, see new activities in the district as non-startling.

In effect, administrative mechanisms appear to both resolve and forestall the development of "ambiguous or disputed objectives" and "unknown or poorly understood consequences of action," the conditions which recent theory leads one to expect in a major change of organization domain. Because these twin conditions do not flower, a more obtrusive mode of presentation is not necessary.

We also find little support for the hypothesis that the computer decision was driven primarily by the superintendent. We do give his strong commitment to the computer curriculum credit for this issue's appearing on the district's agenda. But our evidence suggests that the specific shape of the hardware and curriculum decisions did not flow from him directly. The inclusion of computer experts on the committee alone is strong evidence that the superintendent invited substantive contribution.

Even in cases where the leader of an organization has specific objectives in mind, administrative mechanisms may be seen as primary devices for getting other actors in the district to make the decision to support the leader's plan. In our study, school board members and many teachers became a part of the computer decisions in this way. As Quinn (1980) notes, this commitment is critical for implementation of a decision, and thus administrative mechanisms of the type we have described are of great importance. However, the commitment is likely to be stronger, as Quinn also notes, if actors are able to help shape the decision. We therefore believe that a network of strong administrative mechanisms is not just a mechanism for concurrence, it tends to *make* decisions.

In sum, we argue that a counterweight should be added to the argument that has held center-stage in much recent writing about organizations. Dramatic descriptions of attempted domain change, such as those offered by Thompson (1967), March and Olsen (1976), and Weick (1979), may be viewed as problematic situations that existing administrative mechanisms could not successfully manage. Successful management may consist of applying the well-understood and well-developed procedures of managing the current domain to the management of domain change. If so, the structuring of these mechanisms becomes one of the most important tasks of the practicing manager.

### **The Structure of Organization Activity**

Ranson, Hinings, and Greenwood (1980) argue that the re-structuring of organizational activities results from five potential sources: (a) changes in the interpretive schemes underlying organizational activities, such as theological perspectives in a church, a customer service orientation in a corporation, etc.; (b) inconsistencies or contradictions in the values and interests implicit in an orga-

nization, such as competing commitments to basic skills versus "relevant" subjects in a school or university; (c) significant changes in resources availability which trigger shifts in power and dominance among competing interest groups; (d) changes in the situational context, such as size, technology, environmental threats, etc.; and (e) inconsistencies or contradictions in the existing situational context.

The Ranson et al. (1980) view has two different implications for our study. First, those who wish to minimize changes in an organization's structure must seek to de-emphasize or counteract changes in interpretations, power, or context, and to resolve or smooth over apparent contradictions in values/interests or situational context. The treatment of changes or contradictions as "routine" and unexceptional is thus a conservative action which reinforces existing structures. Second, for those who wish instead to maximize structural change, Ranson and associates' theory suggests that the proper strategy is to induce changes in context, power, or interpretive schemas, or to highlight or introduce contradictions in values or situational contexts. The important point here is that structural change is not brought about directly, but is induced at arms' length. In other words, changes (even major changes) in structure are the result of the patient workings of elementary causal forces in the organization.

Language is an important aspect of this process. Use of appropriate language serves to evoke schemas which can serve either to dampen or amplify structural change. In our case, reference to computer programming as a basic skill evokes a traditional approach to education which appears to be favored in the district being studied; reference to computer literacy ties the computer into fundamental values of language competence.

The structuring of organizational activities is seen by Ranson and associates as fundamentally a process of reinforcing routine and repetitive aspects of organization. An important way in which structures are stored in the organization is in the presence and nature of what we have called "administrative mechanisms," such as regular board meetings, staff meetings, blue-ribbon committees, and so forth. The administrative devices, in Ranson and associates' terms, have been previously constituted by the organization's past history, a history which we were unable to observe during the period of the study. But they also constitute, or channel, or structure, the day-to-day or week-to-week activities of managing particular issues. It is precisely because of the presence of such stable and familiar devices that change is able to be managed smoothly and routinely. The very presence of routines enables the routinization of change.

It can now be seen that the task of administration is two-fold: first, to construct a repertory or library of routines; and second, to make use of those routines for routinizing the new and unfamiliar. Our case study of the introduction of microcomputers into Shady Grove has demonstrated that such administrative routines are available within the structure of the organization, and that nearly all of the available repertory of routines were used at one time or another in implementing the fundamental change in the curriculum we observed.

## Conclusion

We have used the information from a detailed four-year case study to shed light on a fundamental question of organizational change: Must domain change (i.e., change that involves fundamental restructuring of an organization's mission, product, markets) be brought about by dramatic/chaotic means, as suggested by either the garbage can model or contingency theory, or can fundamental change be brought about by the routine workings of ordinary organizational processes?

Our suggestion is that routine change is more frequent than often acknowledged, and of particular importance when only *some* of the factors identified by Ranson et al. (1980) as promoting change are at work in an organization. The position that more dramatic changes may represent an inadequate set of administrative mechanisms bears a strong resemblance to Weber's (1968) discussion of the place of charismatic leadership in bureaucratic settings. Our focus, however, is not on the threats to existing authority posed by changes which the organization perceives as abrupt. Rather, we want to call attention to the possibility that less visible change processes can also significantly reposition the organization.

The process of domain change we describe under these conditions bears strong similarities to Quinn's (1980) model of logical incrementalism. Logical incrementalism is characterized by low profile, partial solutions to problems, a gradual unfolding of a strategic vision, and a use of language that de-emphasizes the novelty of what is being proposed. A coalition of political support is gradually built up, parallel to the analytical development of the proposed change. Our view of the process is somewhat different from Quinn's in that we stress the construction and use of a repertory of routine administrative mechanisms for implementing many changes. Quinn, by contrast, suggests that implementation processes are more ad hoc, invented as the process goes along. Quinn does not take explicit account of the fact that the very process of implementing change reinforces or reconstitutes the routine processes used in the implementation process.

Quinn also seems to suggest that at each step of the incremental process, the forces of logic come into play, that there is a conscious calculation of what to do next. Our model of the process might be better described as "routine-driven incrementalism," or "routine-channeled incrementalism." Routine emerges out of the use of administrative mechanisms, and requires less guidance than Quinn's description of logical incrementalism.

This view has importance for the practice of administration. Routines are tools, tools that are shaped by the uses to which they are put. Good administration, like any skilled craft, requires good tools. The point of this article is that administrators are both tool-makers and tool-users. Chief among the administrator's tools are administrative routines, and they are made useful through use.

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