competing with a growing population and a finite amount of land area available to us to use in the United States. As the Nature Conservancy stated in 1975 in a report for us, "America is losing ground," and it still is. Not just in terms of habitat in general, but also in terms of habitat next to existing reserves.

However, we must never fail to recognize all we have accomplished in creating the reserves we now have in the United States. There are no countries who could compare with us in terms of the number, size, diversity, or quality of the national parks and various types of nature reserves we have, owned or administered by the federal government, the states, counties, cities, universities, private conservation organizations, and individual citizens. We do have some regional cooperative activities. However, this is not enough. We need holistic land use planning in this country as it relates to national parks and nature reserves.

To achieve this, however, there must be a widespread appreciation of the fact that we now have a problem. This demands a viewpoint by much of the American public of "looking beyond national park or nature reserve boundaries," not just to set aside more of the small remnant examples of the vast diversity of our country's natural landscape, but to preserve in perpetuity all the biota in the national parks and nature reserves we have already worked so hard to establish.

Thank you.

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The National Park Service in the Temporary Society: Creating a Learning Agency

Richard Greenough and J. Douglas Wellman

Public agencies in democracies must adapt to changes in their social and political environments if they are to survive (Selznick, 1949). In America, the demands for agency adaptation have increased rapidly as our society has become more "temporary" (Mosher, 1971). The National Park Service, particularly in the years since the mid-1960s, has ex-
experienced such rapid change in the demands made on it that concern about agency direction has been raised (Forest, 1984; Chase, 1987).

"Our desires for permanence and our demands for change are....at war in the national parks."

In this chapter we examine several theoretical viewpoints on public agency response to environmental change. Taken together, these responses are described as creating a "learning agency." Based on this body of theory, we sketch out some ways the National Park Service might enhance its ability to learn and grow with changing social demands.

**Changing Demands on the National Park Service**

Throughout its organizational history, the National Park Service has had to adjust its policies in response to demands and opportunities from the larger American social and political system. These changes have been especially dramatic in the years since 1960. In that time, growing environmentalist power has challenged the Service's original policy of encouraging visitor use through facility development and agency leadership has shifted from professionals to political appointees, while congressional restructuring has increased legislative interest in parks as distributional goods (Forest, 1984).

One of the most challenging developments to emerge from these changes has been the "living landscape" or "greenline" parks. In these areas the Park Service is charged with preserving landscapes with a mixture of public and private ownership. Aversion to federal governmental intervention and unwillingness to pay full land acquisition costs have spawned efforts to force or entice local governments to regulate land uses in ways that would meet federal preservation objectives. At Cape Cod, for example, Congress specified that the Secretary of Interior's land condemnation powers would be suspended as long as local units of government carried out zoning acceptable to the National Park Service. In more recent
legislation, Congress has relied more on the carrot than the stick. In creating the Santa Monica National Recreation Area, for example, Congress provided for federal funding and technical assistance to state and local planning efforts which, if acceptable to the Park Service, would lead to federal funding for implementation.

The initiatives at Cape Cod, Santa Monica and elsewhere might point the way to the future. In the Conservation Foundation's 1985 assessment of the National Park System, greenline parks are advanced as the most reasonable approach to system expansion (Conservation Foundation, 1985). More recently, the President's Commission on Americans Outdoors, in suggesting greenways through and between urban areas, has reinforced the non-traditional park management concepts that have evolved since Cape Cod.

The greenline parks represent a radical departure from National Park Service tradition. The Park Service was a bureaucratic child of the Progressive era, and its formative years appear in retrospect to have been a golden age in which agency experts managed federally owned lands for widely agreed on purposes. In the new parks, in contrast, the Service does not own all the land, management must proceed in partnership with state and local units of government, public involvement in all phases of park operations is heavy, and occasionally there is strong disagreement over park purposes (Forresta, 1984).

The extent of change from traditional park approaches is extreme in the case of the greenline parks, but similar dislocations exist throughout the system. In the traditional nature parks like Yosemite (Wellman, 1987), in the historical parks like Manassas (Harris, 1987) and in the urban national parks like Gateway (Forresta, 1984), the National Park Service is challenged to work with diverse publics to define evolving park purposes. If we think of parks as entities that are created to answer cultural needs, it is not surprising to find the Park Service working closely with individuals and groups outside the agency to determine the meaning of parks. However, the extent of outside involvement in recent years and the intensity of disagreement over directions represent a major break with agency history.

In the ongoing task of working with the public to create the parks, we believe the Park Service must enhance its ability to learn from its encounters with outside forces in the temporary
society. In what follows, we present a conceptual approach based on the work of John Friedmann, Donald Schon, Chris Argyris, and Gareth Morgan which might offer a useful framework for enhancing agency learning.

Enhancing Agency Learning

Efforts to characterize the policy making process often begin with a rational, goal-seeking model. As presented by Dahl and Lindblom (1953), the functionalist orientation requires that policy makers try to learn all the value preferences in a society, assign each a relative weight, discover all available alternatives and their consequences, and then select the most efficient alternative.

The rational-comprehensive model is attractive in the clarity of its logic. However, in its pure form it is philosophically untenable (Popper, 1963) and practically unworkable (Rittel and Webber, 1973; Schon, 1983). The uncertain, unique, value-laden situations facing public agencies like the National Park Service lead to policy processes that are bureaucratic, practical, incremental, conservative, and limited. These processes function to reduce uncertainty. Further, there are cognitive limits on centralized agency intelligence; rational-comprehensive approaches are inherently unable to inform the agency about large, rapidly-changing and complex social problems.

In place of a linear, rational model, it is suggested by a growing number of scholars that the policy process is best understood as a form of social learning, which occurs in decentralized, task-oriented, short-lived groups. In calling for a new form of planning to respond to new sets of problems, Friedmann emphasizes the idea that interpersonal transactions form the basis for the exchange of information and perceptions necessary to produce public policy. Through small working groups supported by "technical secretariats," the processed knowledge of the experts and the personal knowledge of the client, both of which are essential to shaping effective public policy, fuse in a reflexive process of mutual learning (Friedmann, 1973).

Similarly, Schon considers policy as the outcome of a learning process (Schon, 1971). In Beyond the Stable State, he contrasts this conceptualization of the policy process with the centralized, expert-driven process derived from the rational-linear model:
Government cannot play the role of 'experimenter for the nation', seeking first to identify the correct solution, then to train society at large in its adaptation. The opportunity for learning is primarily in discovered systems at the periphery, not in the nexus of official policies at the center. Central's role is to detect significant shifts at the periphery, to pay explicit attention to the emergence of ideas in good currency and to derive themes of policy by induction. The movement of learning (and ideas) is a much from periphery to periphery or periphery to center as from center to periphery. (Schon 1971:177)

According to Schon, however, a major barrier to agency learning is the way individuals function in their organizational lives, particularly their belief in the "Stable State":

Belief in the stable state is belief in the unchangeability, the constancy of central aspects of our lives, or belief that we can attain such constancy. Belief in the stable state is strong and deep within us. We institutionalize it in every social domain. We do this in spite of our talk about change, our apparent acceptance of change and our approval of dynamism. (Schon 1971:9)

In Schon's view, when we are confronted with change we maintain belief in the stable state through automatic responses of which we are largely unaware, like "revolt" and "mindlessness." Taken together, these "anti-responses" constitute what Schon labels "dynamic conservatism." Dynamic conservatism fails to confront reality and therefore is doomed to failure.

Our unwillingness to constructively confront change is rooted in self-interest. The stable state generated for individuals in their organizational lives enables them to make sense of things. As Schon (1971:51-52) asserts, "change threatens this framework and brings uncertainty and anguish for the members of the organization." Accordingly, we can expect that these individuals will resist change through the strategies of dynamic conservatism.

However, due to such phenomena as system failure, innovation, and societal demands for change, change is inevitable for most social systems. Change typically forces a social system from one relatively stable state to another relatively stable state, but during the transition it is difficult for system members to see clearly where they are going. What they can see clearly is the danger to their present way of organizing their lives and making sense of them. It is this individual perception of danger which impedes organizational learning.
Organizational learning can occur in various ways. Perhaps the best known is the "rational-experimental," based on premises similar to the rational-comprehensive model of the policy process. This approach to organizational learning requires the definition and quantification of problems, the development of hypotheses and controls, and experiments which generate quantitative outcomes. Successful demonstrations are replicated. Most telling for this discussion, the rational-experimental approach is guided by a centralized intelligence.

As a depiction of how agencies learn, this model might be misleading. Organizations generally learn either through responding to crises or by engaging in limited scans of their environments.

We consider crisis learning first.

A crisis "....threatens the social system and sets up a demand for new ideas that will explain, diagnose, or remedy the crisis" (Schon 1971:126). However, these new ideas must struggle and compete successfully with ideas already adopted by the social system. This inhibits a rapid response to the present crisis. And even when ideas are adopted, the time lag for their acceptance often weakens their effectiveness. As Schon explains:

Ideas in good currency emerge in time, and the situations to which they refer change underneath the very process of deliberation. Ideas are often slow to come into good currency and, once into good currency and institutionalized, they are slow to fade away. By the time ideas have come into good currency, they often no longer accurately reflect the state of affairs. (Schon 1971:127)

The lesson is that we must infuse organizations with the ability to respond more promptly and effectively to changes in the environment. Schon proposes the development of "learning systems" led by "learning agents." Three steps are required to accomplish this. First, we must realize that we can no longer assume that our current stable states—even new ones—will survive. Second, institutional managers must learn to manage the changes that inevitably occur. Third, managers must learn to facilitate organizational change in ways that do not threaten the identities of the organization and its members:
A learning system...must be one in which dynamic conservatism operates at such a level and in such a way as to permit change of state without intolerable threat to the essential functions the system fulfills for the self: Our systems need to maintain their identity, and their ability to support the self-identity of those who belong to them, but they must at the same time be capable of frequently transforming themselves. (Schon 1971:60)

The second way most organizations learn is through "single-loop" learning (Argyris 1983). In this approach, organizations learn by scanning their environments for critical events, monitoring these events, and then setting objectives appropriate to the shifting environment. Although information systems technology has facilitated this type of learning, it may also disserve organizational learning. It may "....keep the organization on the wrong course, since people are not prepared to challenge underlying assumptions." (Morgan 1986:90)

Considering these limitations, Argyris proposes "double-loop" learning. Double-loop learning involves the same steps as single-loop learning, but it also permits the questioning and adjustment of the organization's operating norms, if necessary. Double-loop learning facilitates the emergence of conflict and its resolution as processes that enable organizations to learn.

Morgan extends this idea in his metaphor of an organization whose learning processes and functions mirror the brain. He emphasizes the "minimal critical specification" of organizational processes in which the focus is on goals rather than means. For example, Morgan points to the organizations identified as innovative by Waterman and Peters, based on their use of experimental, "learning-through-action" processes, rather than rigorously predesigned responses. As he explains, in learning-through-action processes, ".....inquiry rather than predesign provides the main driving force. This helps to keep the organization flexible and diversified, while capable of evolving structure sufficient and appropriate to deal with the problems that arise" (Morgan 1986:102). This enhances organizational learning.

Morgan adds that cybernetic principles also can stimulate organizational learning since they ".....create degrees of freedom within which the organization can evolve (which permits the formulation of) organizational mission in terms of 'noxiants' to be avoided rather than in terms of targets to be achieved" (Morgan 1986:106).
In summary, Friedmann, Schon, Morgan and Argyris offer ways of thinking about organizational guidance in the sorts of uncertain situations increasingly facing the National Park Service. Friedmann advocates making policy through a mutual learning process between expert and client. Schon suggests that for any organization to succeed it must profit from experimentation at the lower decision-making levels and account for automatic resistance to change by its members. Argyris proposes a double-loop learning process, which permits a system to guide itself through an uncertain environment by developing and retaining a capacity to question and adjust organizational norms. Morgan's conceptualization of the organization as a brain provides for double-loop learning through organizational processes that emphasize clear goals and minimally specified means. In this way, self-design principles modify functionalist ones.

Creating a learning agency is a difficult task. Management's challenge is to assess accurately the need to implement changes in policies and procedures, but to do so without damaging the core values of the organization. Joseph Sculley faced this challenge at Apple Corporation. Several years ago, Apple was in a downward spiral with the departure of Stephen Jobs, the failure of the Lisa system, and the inability to have the McIntosh regarded as anything but an underpowered toy. Change was required, but it had to occur in harmony with Apple's particular organizational culture. As Sculley explained recently at the Stanford Business School:

> Apple's culture and values required that we find a way to manage through a crisis, but do it without violating the basic values of the company. If we did something to violate those roots, then I felt that was far worse than how much money we lost, or errors in strategy, or things like that, because it wasn't clear to me there was going to be another Apple computer. (Washington Post, 1987)

**Redesigning the National Park Service**

Concluding his exhaustive and frequently critical analysis of the Park Service's travail in recent, turbulent times, Foresta (1984) argues that the agency has a vital role to play in the future:
A creative Park Service with equal dedication to experimentation in meeting new social demands (as it had in the early years), to a tough pragmatism in evaluating those experiments, and to protecting the integrity to the System entrusted to its care would remain an important part of the federal government and would ensure that the national parks remain an important part of American life. (Foresta, 1984:287)

The most salient words here, in terms of this chapter, are "creative," "experimentation," and "evaluation." Foresta's challenge to the National Park Service fits well with the ideas we have presented. Friedmann, Schon, Argyris, and Morgan describe agency learning as occurring through a decentralized, experimental process. For the National Park Service, the center of attention becomes the individual park units. Working with citizen groups and other units of government, park superintendents and their staffs should be afforded considerable leeway to discover new ways of responding to evolving social demands.

Training the spotlight on the lowest administrative levels, however, immediately raises questions about the role of the upper levels—i.e., the Washington and regional offices. Clearly, simply turning the individual parks loose to strike whatever bargains they can would be ill-advised. After all, the primary concern behind the agency's 1916 organic act was that the individual parks established since 1872 would be lost to exploitative interests unless they were part of a larger system. Therefore, if the National Park Service is to move in the direction we advocate and become more of a learning agency, what is the proper role of the central administrative units?

In answering this question and concluding this discussion, we recognize that our suggestions may reflect our lack of understanding of current agency practices. To the extent the Park Service is already doing what we suggest, we hope to support them in transforming the agency. To the extent our suggestions represent new directions, we hope they will provoke discussion of ways the agency can respond to the changing needs of a changing society.

First, central administration should engage in an ongoing process of clarifying and articulating the Service's central purposes. Recent critics of the agency have called for policy clarification beyond the ambiguous original congressional "develop and preserve" mandate (Foresta, 1984; Chase, 1987), and policy actors outside the agency have become increasingly
vocal about the directions of the National Park System (Sax, 1980; Conservation Foundation, 1985).

As this is being written, the National Parks and Conservation Association, responding to a challenge from former NPS director Russell Dickenson, is preparing a broad-gauged plan for the system. Dickenson's intent was to obtain an agenda that did not reflect agency biases (Coffin, 1988). This is a laudable action, but it cannot stand alone. The National Park Service has full legitimacy to play its role in administering the U.S. Constitution (Rohr, 1986), and it must develop and articulate its own, internal sense of purpose. That is not to say it should not listen to outside forces, only that it should not abdicate its responsibility to them. As decision-makers at the periphery struggle with specific problems, they must have in mind an overall sense of purpose, a gyroscope that helps them maintain their bearings, and it is central's job to develop that guiding sense of purpose.

Given that the parks exist as part of a pluralistic society with rapidly evolving social wants, the policy guidance we suggest must involve personnel at all levels. The central offices must seek out the "ideas in good currency" that are accumulating at the field levels, and subject them to rigorous evaluation, both scientific and judgmental. Nor is it enough to develop policy statements and consider the task completed. The policy development process must be viewed as an ongoing task. Surely there will be points in the process where more formal statements are necessary, but they cannot be considered sufficient. As the scholars we have reviewed suggest, continual attention to agency purposes is required for success in a fluid environment.

A second broad area where central administration can encourage the Park Service to become a learning agency is in personnel practices. The following ideas are largely adapted from Mosher (1971), but they fit well with the more abstract concepts reviewed above. The agency can rely more heavily than it does on ad hoc teams comprised of individuals with varying professional orientations to work on specific problems, thereby breaking through the constraints imposed by professionalism. It can increase personnel mobility, for example by moving talented young people into responsible positions rapidly, and by encouraging extra-agency experience to broaden administrators' perspectives. It can support ad-
advanced education both through intramural and extramural coursework, thereby countering dynamic conservatism. It can engage in more active and positive recruitment of individuals who are comfortable working on the "wicked" problems that characterize contemporary national park management. And it can reduce the constraints on initiative posed by careerism and position classification, thereby supporting the spirit of experimentation that is one of the hallmarks of learning agencies. In these and other personnel practices, the central administration of the National Park Service can help field level officers respond creatively to the changing demands of the temporary society.

Conclusion

America's national parks should convey a sense of timelessness. Whether they celebrate natural systems or cultural objects, our parks are meant to serve as a permanent standard of reference (Sax, 1980). This is an especially important duty, since American society may be the most changeable in human history. Yet that same temporary society insists on participating in the governance of the National Park System. Our desires for permanence and our demands for change are thus at war in the national parks.

Finding ways to reconcile this dilemma demands great creativity and flexibility in the National Park Service, at the same time there is an unceasing search for a sense of


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