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Managing Successful Organizational Change in the Public Sector: An Agenda for Research and Practice

Reform initiatives have swept through governments in the United States and overseas, again and again bringing news about efforts to reinvent, transform, or reform government agencies (Barzelay 2001; Kettl 2000; Light 1997; Pollitt and Bouckaert 2000; Stillman 1999). Some academic theories and popular stereotypes depict large organizations, and especially government bureaucracies, as change resistant. This view conflicts with the reality that organizations, including government agencies, change frequently. Authors report evidence that various forms of organizational change in the public sector succeed frequently, that career civil servants often lead them, and that they succeed as often as change efforts in private business firms (e.g., Borins 1998; Doig and Hargrove 1990; Golembiewski 1985; Holzer and Callahan 1998; Robertson and Seneviratne 1995).

This evidence notwithstanding, recurrent change in government has not induced a high volume of articles in public administration journals that explicitly address the topic of organizational change. There are prominent exceptions to this observation (e.g., Bryson and Anderson 2000; Chackerian and Mavima 2000; Mani 1995; Robertson and Seneviratne 1995; Wise 2002). In addition, many journal articles address topics relating to organizational change, such as the adoption and implementation of "reinventing government" and New Public Management reforms (e.g., Berman and Wang 2000; Brudney and Wright 2002; Grizzle and Pettijohn 2002; Hood and Peters 2004; Julnes and Holzer 2001; Thompson and Fulla 2001). Articles reporting research and theory with titles containing "organizational change" and with that theme as a specific focal topic, however, appear with much less regularity in public administration journals than in the journals of research on general management and organization theory.[1]

In that literature on organization theory, Van de Ven and Poole (1995) reported a count of one million articles relating to organizational change. This vast body of work abounds with complexities, including multiple and conflicting theories and research findings and a good bit of inconclusiveness. This complexity presents a challenge to public administrators and public administration researchers alike. This paper responds to that challenge, first by providing an overview of the vast literature on organizational change that demonstrates its complexity but that also helps to bring some order to the literature. Then, the discussion focuses on the management and implementation of large-scale changes in public organizations. We identify points of consensus in the literature on successful implementation of such changes. These points serve as testable propositions for researchers to examine in future research, and as major considerations for leaders of change initiatives in public organizations. While we draw on studies of all types of organizations to distill these points, we illustrate them with examples and citations about public organizations.

Major Theoretical Perspectives on Organizational Change

The major theoretical perspectives on change present a rather confusing picture, but they provide a very important context for the review of successful change implementation that follows. They provide insights about the nature of organizational change, particularly with respect to the causes of change and the role of the manager in the change process. For example, some theories contend that external conditions and developments drive organizational change. While such theories downplay the significance of human agency as a source of change, they provide insights about factors that impinge on the organization and that can influence efforts to implement change in public organizations. As Doig and Hargrove (1990, 11) observed, innovative leaders in government display an "uncommon rationality" in their ability to discern and take advantage of major developing trends. Leaders seeking organizational change also have to try constantly to assess external forces that may support or impede the change (Denhardt and Denhardt 1999; Rossotti 2005). For example, Frumkin and Galaskiewicz (2004) conclude that public managers may use certain external institutional influences as opportunities to debureaucratize their organizations.

Reviews of the organizational change literature show that researchers place different emphases on the content of change, the process through which change occurs, and the outcomes or consequences of change (Armenakis and Bedeian 1999). Researchers often distinguish between change, innovation, and innovativeness (e.g., Hage 1999), with innovation referring to a more specific new development rather than a larger or more multifaceted change. Studies of innovativeness often concern the ways in which organizations can develop ongoing patterns of innovation (e.g., Light 1998). Researchers also debate whether change usually follows a continuous pattern or occurs more episodically, at times following a pattern of "punctuated equilibrium" in which sporadic outbursts of change interrupt periods of stability and incrementalism (Amis, Slack, and Hinings 2004; Romanelli and Tushman 1994; Sastry 1997; Weick and Quinn 1999).

The literature also contains numerous and sometimes conflicting propositions about the relationship between the likelihood of change and organizational variables such as the level of formalization, leadership tenure, environmental buffering, and organizational size and age. For instance, some prominent organization theorists contend that large organizations have a strong tendency to resist change (Hannan and Freeman 1984; Pfeffer and Salancik 1978; see also Kelly and Amburgey 1991; Scott 2003), while others have argued that larger organizations change just as readily and frequently as smaller organizations

(Aldrich and Auster 1986; Kimberly 1976). Barnett and Carroll (1995) report that empirical studies have not resolved this dispute.

As these points indicate, theory and research on organizational change include many clusters of researchers that seem unable to reconcile their differences. Based on our review of the literature, and often employing the terminology of other reviewers (e.g., Aldrich 1999; Van de Ven and Poole 1995), we identify the most prominent theoretical perspectives on organizational change as follows: rational adaptive theories; institutional theory; life cycle theories; ecological and evolutionary theories (including population ecology models); policy diffusion and innovation models; and dialectical and conflict theories of change. In the discussion that follows, we identify the causes of change and the role of the manager in the change process, as envisioned by each of these theoretical perspectives.

Rational adaptive theories. Among rational adaptive theories we include Lawrence and Lorsch's contingency theory (1967), the structural contingency framework developed by James Thompson (1967), resource dependence theory (Pfeffer and Salancik 1978), transaction cost economics (Williamson 1981), and a stream of research on organizational learning spawned by the work of Cyert and March (1963) and March and Simon (1958). These theories depict managers as agents of change in organizations. According to most of these theories, managers analyze their organization's environment and modify and adapt internal structures and processes so that the organization can thrive in that environment.[2]

Managers' purposeful action thus drives change, although environmental, cognitive, and resource constraints place limits on such action (Cyert and March 1963; March and Simon 1958; Van de Van and Poole 1995). The underlying logic of purposeful action as the primary source of change appears in various approaches to planned change, including organizational development, strategic management, and planning; it is also present in much of the work on innovation, particularly that which focuses on how managers generate or encourage innovation (e.g., Borins 1998; Golden 1990; Light 1998; Sanger and Levin 1992) and how they cull successful micro-level variations emanating from the bottom of the organization (e.g., Kanter 1983; Weick and Quinn 1999).

Institutional theory. Organizations function in an institutional environment populated by public and private stakeholders and authorities, and the norms, values, rules, and cognitive systems they uphold. According to institutional theorists, conformity to these norms, values, rules, and cognitive systems drives organizations to change in order to increase legitimacy and improve chances for survival (DiMaggio and Powell 1983; Meyer and Rowan 1977; Powell and DiMaggio 1991; Scott 2003; Zucker 1987). As Aldrich explains, these theorists see change as primarily "external in origin, generated as organizations are forced to respond to, adapt to, or imitate the ebb and flow of normative and regulatory currents in their environments" (1999, 49).

Institutional theorists tend to regard the institutional environment as a constraining influence that compels the organization to adopt or mimic archetypical practices that enhance legitimacy, even at the expense of technical efficiency. For example, organizations may adopt certain structures and processes, not because managers identify them as the most effective rational adaptation to the task environment, but because professional associations or governmental authorities prescribe them. In this view, the environment overpowers and dominates the organization (Aldrich 1999), severely limiting the discretion of managers to choose how to structure and manage it.[3] In the public sector, political authorities often mandate that agencies undergo various types of change; agencies also experience isomorphic pressures from higher levels of government. Analyzing the National Organization Study data, Frumkin and Galaskiewicz (2004) found that government organizations show more effects of "isomorphic" institutional influences than private business firms. They also interpreted some of the evidence as indicating that leaders in the government organizations took advantage of institutional pressures to support the debureaucratization of their organizations.[4]

Life cycle theories. Whereas rational adaptive theories see managers' purposive actions producing change, life cycle theories emphasize natural and spontaneous change as organizations move through a linear sequence of phases in their development, much like a living organism going through stages of life (Downs 1967; Kimberly, Miles, and Associates 1980; Quinn and Cameron 1983). As Van de Ven and Poole explain, "according to life cycle theory, change is inherent; the developing entity has within it an underlying form, logic, program, or code that regulates the process of change and moves the entity from a given point of departure toward a subsequent end that is prefigured in the present state…. External environmental events and processes can influence how the entity expresses itself, but they are always mediated by the imminent logic of rules, or programs that govern the entity's development" (1995, 515). From the perspective of most life cycle theories, managers are circumscribed in their ability to influence the course of change or development of the organization. For instance, Downs (1967), in theorizing about government bureaucracies, contended that as they develop they go through a "rigidity cycle" and eventually ossify and resist change. Quinn and Cameron (1983), on the other hand, argued that organizations can move into a structural elaboration and adaptation phase, during which organizational members may attempt to find new ways of adapting and renewing the organization.

Ecological and evolutionary theories. Some theorists have employed ideas akin to those in the theory of evolution about natural selection among competing members of populations (Aldrich 1999; Carroll 1984; Hannan and Freeman 1984; Kelly and Amburgey 1991; McKelvey 1982; Weick 1979). Hannan and Freeman (1984) and other population ecologists have contended that large, well-established organizations have a limited capacity to change due to structural inertia. Larger organizations emphasize predictability, formalization, and control, and as a result, they become rigid and less disposed to change. Change within populations of organizations occurs not through managers' rational adaptation to the environment but through a process of selection. Organizations survive when they "fit" their environment and succeed at competing for resources; those that do not fit the environment lose out in the selection process and perish. Variation among organizations comes about through the death of some organizations and the birth of new ones with a form that fills a niche in the environment.[5]

Policy diffusion and innovation models. Most of the literature on organizational change ignores valuable research on the public policy process. Public policy scholars have developed useful models of policy diffusion and innovation to explain why and how public organizations adopt new policies and programs. Berry and Berry (1999) reviewed the literature on policy diffusion and concluded that public officials emulate their peers in other governmental jurisdictions for three reasons: to learn about and borrow successful ideas and practices; to compete with other jurisdictions; and to satisfy public demand for policies implemented in other jurisdictions. Other researchers have tried to identify characteristics of governmental jurisdictions that influence their political leaders to adopt a public program or policy, including political culture, resources, and local economic conditions (Berry 1994; Berry and Berry 1999; Glick and Hays 1991; Mooney and Lee 1995; Walker 1969). Models of policy diffusion and innovation tend to portray elected officials and public managers as rational actors who adopt new policies and programs to improve their political standing or their agency's effectiveness; public managers also can take on the role of the policy entrepreneur who sells an issue to decision-makers and tries to influence the decision agenda.

Dialectical and conflict theories of change. Dialectical theories and conflict theories of change posit that individuals and organizations exist in a pluralistic world filled with conflicting interests, ideas, and values. Through confrontation and conflict, winning interests, ideas, and values emerge to challenge the status quo and ultimately to replace it (Van de Ven and Poole 1995). Kaufman's (1969) seminal analysis of cycles of bureaucratic reform and Wise's (2002) more recent analysis of drivers of change reflect this kind of underlying logic of change in public organizations. Public managers do not merely witness this process. They participate in the political discourse and advocate change (Kamensky 1996; Meier 2000; Stillman 2004).

These major theoretical perspectives illustrate researchers' widely varying and often conflicting views about the causes of change in organizations and particularly about the capacity of managers to bring about change. Some of the theoretical perspectives we just described, including institutional, life cycle, and ecological theories of organizations, imply that purposeful management matters little in organizational change. From these perspectives, managers are overwhelmed by external events or too constrained by the size and structure of the organization to steer the organization on a new course. Conversely, rational adaptive theories, diffusion and innovation models, and dialectical theories treat managers as organizational change agents.

Can managers affect organizational change? Despite the claims made by many population ecologists and institutionalists, a significant body of research indicates that managers frequently do make change happen in their organizations. They do so even though their ability to do so is mediated by forces in the task and institutional environment, as well as by organizational characteristics such as age and size. Burke maintains that even though some scholars claim that leadership matters little for organizational outcomes, the bulk of the evidence indicates otherwise, particularly with respect to organizational change (2002, 271; see also Armenakis and Bedeian 1999; Armenakis, Harris, and Feild 2001; Jaffe, Scott, and Toby 1994; Judson 1991; Kotter 1995). Yukl, for instance, has argued that "leading change is one of the most important and difficult leadership responsibilities. For some theorists, it is the essence of leadership and everything else is secondary. Effective leadership is needed to revitalize an organization and facilitate adaptation to a changing environment" (2002, 273). Some studies have found that changes in top management significantly affect adoption of innovations by single organizations and by organizational fields (Boeker 1997; Kraatz and Moore 2002).

Public sector studies also have offered evidence of the critical role that public managers play in bringing about organizational change (e.g., Abramson and Lawrence 2001; Bingham and Wise 1996; Borins 1998, 2000; Doig and Hargrove 1990; Hennessey 1998; Kemp, Funk, and Eadie 1993). In our review that follows, we concentrate on these kinds of studies that emphasize the roles of leaders, managers, and other participants. As suggested earlier, the theories emphasizing external forces and deemphasizing the role of management provide important insights about organizational change, such as the institutionalizing forces acting on organizations. The theories and studies emphasizing human agency, including the roles of leaders and other members of the organization, obviously devote more attention to such human factors. Therefore, as we seek points of consensus on managing successful, planned, large-scale organizational change, we draw mainly on similar types of studies.

Successfully Implementing Change in Public Organizations

Noting that managers can effect change tells us little about whether or not an intended change actually occurs and what the best strategies are for effecting change. The policy implementation literature teaches the fundamental lesson that the formal adoption of a policy by no means guarantees its implementation as intended by decision-makers, absent great effort. Similarly, meaningful change in public organizations requires that managers exert a concerted effort to implement it successfully. So how does one show managers how to implement change, especially in view of the wide variety of types of changes and of different settings in government, while simultaneously offering propositions for researchers to test or refine further?[6]

Fortunately, a growing number of scholars have focused their research on the implementation of planned change. This stream of research contains various models and frameworks—many of them loosely based on Lewin (1947) and Schein's (1987) steps or phases of change—that describe the process of implementing change within organizations and point to factors contributing to success (e.g., Armenakis, Harris, and Feild 2001; Bingham and Wise 1996; Burke 2002; Greiner 1967; Jaffe, Scott, and Tobe 1994; Judson 1991; Kotter 1995; Meyers and Dillon 1999; Rainey and Rainey 1986; Thompson and Fulla 2001). Despite differences in the conditions for success that these models and frameworks emphasize, one finds remarkable similarities among them (Armenakis and Bedian 1999). Moreover, a number of empirical studies have supported many of the propositions from these models and frameworks. This suggests a pattern of consensus about what accounts for successful implementation of planned change.

We examined streams of research relating to organizational change, including work on public sector reform and innovation and policy implementation,[7] to distill a set of factors that contribute to successful implementation of organizational change in the public sector. While our review covers studies of organizations of all types, and especially business firms, it should be quite clear that we do not intend to apply the points to all forms of innovation and change, but to large-scale, planned, strategic, and administrative changes—of the sort now often referred to as organizational transformations (Abramson and Lawrence 2001; Kotter 1995)—in large organizations such as general purpose government agencies or city and county governments. We also illustrate the applicability of the propositions with examples and studies representing all levels of government and many different types of government organizations.

As outlined in Table 1, we identified eight specific factors conditioning the success of change efforts like these. Several points are noteworthy before addressing each factor. First, the propositions in Table 1 provide useful considerations for change leaders and participants, but our main purpose is to identify points of consensus and then to state them as testable propositions for researchers to test and refine further. Note, as well, that while some experts portray the change process as a linear progression through successive stages similar to those in Table 1 (e.g., Armenakis, Harris, and Feild 2001; Greiner 1967; Kotter

1995), the process rarely unfolds in such a simple linear fashion (Amis, Slack, and Hinings 2004; Van de Ven 1993). Indeed, the eight factors we identified can influence the outcome of change initiatives at different points of the process. For instance, some experts suggest that persuasively communicating the need for change is essential for reducing resistance to change during the early phase of the change process. However, communicating the need for change during later stages also maintains momentum by signaling top management's continued commitment. Similarly, effective employee participation creates readiness for change at the onset of the process, but also contributes to institutionalization of change in later stages.

Table 1 Determinants of Successful Implementation of Organizational Change in the Public Sector

Proposition	**Sub-propositions**
Ensure the need. Managerial leaders must verify and persuasively communicate the need for change.	• Convince organizational members of the need and desirability for change. • Craft a compelling vision of change. • Employ written and oral communication and forms of active participation to communicate and disseminate the need for change.
Provide a plan. Managerial leaders must develop a course of action or strategy for implementing change.	• Devise a strategy for reaching the desired end state, with milestones and a plan for achieving each one of them. • The strategy should be clear and specific; avoid ambiguity and inconsistencies in the plan. • The strategy should rest on sound causal theory for achieving the desired end state.
Build internal support and overcome resistance. Managerial leaders must build internal support and reduce resistance to change through widespread participation in the change process and other means.	• Encourage participation and open discussion to reduce resistance to change. • Avoid criticism, threats, and coercion aimed at reducing resistance to change. • Commit sufficient time, effort, and resources to manage participation effectively.
Ensure top management support and commitment. An individual or group within the organization should champion the cause for change.	• An "idea champion" or guiding coalition should advocate for and lead the transformation process. • Individuals championing the change should have the skill and acumen to marshal resources and support for change, to maintain momentum, and to overcome obstacles to change. • Political appointees and top-level civil servants should support the change.
Build external support. Managerial leaders must develop and ensure support from political overseers and key external stakeholders.	• Build support for and commitment to change among political overseers. • Build support for and commitment to change among interest groups with a stake in the organization.
Provide resources. Successful change usually requires adequate resources to support the change process.	• Provide adequate amounts of financial, human, and technological resources to implement change. • Avoid overtaxing organizational members. • Capitalize on synergies in resources when implementing multiple changes simultaneously.
Institutionalize change. Managers and employees must effectively institutionalize changes.	• Employ a variety of measures to displace old patterns of behavior and institutionalize new ones. • Monitor the implementation of change. • Institutionalize change before shifts in political leadership cause commitment to and support for change to diminish.
Pursue comprehensive change. Managerial leaders must develop an integrative, comprehensive approach to change that achieves subsystem congruence.	• Adopt and implement a comprehensive, consistent set of changes to the various subsystems of the organization. • Analyze and understand the interconnections between organizational subsystems before pursuing subsystem congruence.

Also noteworthy is that researchers generally have treated these determinants of effective implementation of organizational change as having additive effects on the outcome of implementation. We are not suggesting, therefore, that each of these eight factors needs to be present for organizational change to succeed. Rather, we are arguing that each of them has a positive additive effect on the outcome of change. That is, each of these factors contributes to the successful implementation of change, or makes implementation smoother, adding to the effects of the other factors.[8] Some studies indicate that successful change initiatives sometimes implement one or more of the points inadequately (e.g., Young 2001).

Finally, with the propositions in Table 1 having a very general and plausible character, practitioners might react to them by saying that they simply amount to common sense, and that most managers would subscribe to them, but that they face obstacles in realizing them. While managers may endorse the points in Table 1, examples we cite below, as well as many other studies and examples, indicate that leaders undertaking organizational change ignore, overlook, or underestimate them very, very often.[9] Thus, not only will theory on organizational change in public organizations advance by testing and refining the propositions offered in Table 1, but practitioners should find them useful as guidance for themselves and their political superiors as they ponder, make the case for, or pursue change in their organizations.

So, while not intending to present them as a linear sequence of steps, nor to argue that each is absolutely essential in all cases, nor to downplay the constraints on managers trying to attain them, we can now discuss these eight factors and the propositions derived from them.

Factor 1: Ensure the need. Managerial leaders must verify and persuasively communicate the need for change. Research indicates that the implementation of planned change generally requires that leaders verify the need for change and persuade other members of the organization and important external stakeholders of the need for change (Armenakis, Harris, and Feild 2001; Burke 2002; Galpin 1996; Judson 1991; Kotter 1995, 1996; Laurent 2003; Maira and Scott-Morgan 1996; Nadler and Nadler 1998). The process of convincing individuals of the need for change often begins with crafting a compelling vision for change. A vision presents a picture or image of the future that is easy to communicate and that organizational members find appealing (Kotter 1995); it provides overall direction for the change process and serves as the foundation from which to develop specific strategies for arriving at a future end state.

Some research on private organizations indicates that it is easier to convince individuals of the need for change when leaders can craft a vision that offers the hope of relief from stress or discomfort (Kets de Vries and Balazs 1999; see also Suchman 1995). Nadler and Nadler (1998) even suggest creating dissatisfaction with the current state of affairs in order to get members of the organization to embrace change. Also, to convince individuals of the need for change and begin the process of "unfreezing" the organization, Armenakis, Harris, and Feild (2001) suggest the need to employ effective written and oral communication and various forms of active participation in order to transmit five core messages to those in the organization. These are: change is needed;

we have the capability to change successfully; it is in our best interest to change; those affected support the change; and the change is desirable for the organization.

The public management literature also contains evidence of the importance of determining the need for change and persuasively communicating it, through a continuing process of exchange with as many stakeholders and participants as possible (Abramson and Lawrence 2001; Harokopus 2001; Rossotti 2005; Young 2001). For instance, Kemp, Funk, and Eadie (1993) concluded that successful implementation of strategic management in the Equal Employment Opportunity Commission was partly attributable to the top executive's continual efforts to convey clearly the message that change was high on his list of priorities. Bingham and Wise (1996) found that federal agencies often failed to adopt fully alternative dispute resolution (ADR) techniques due to the inability of top management to disseminate information about the new policy and convince employees of the need for it. Denhardt and Denhardt (1999) describe how effective local government managers verify needs for change through "listening and learning" and then communicate those needs in ways that build support for change.

Relatedly, researchers also observe and illustrate public sector leaders' efforts to take advantage of mandates, political windows of opportunity, and external influences to verify and communicate the need for change (Abramson and Lawrence 2001; Daniel 2001; Harokopus 2001; Lambright 2001; Stillman 2004). Rossotti (2005, 39 and 48), for instance, describes how he identified a sufficient level of "aligned forces" and a "real commitment" to change on the part of major authorities and stakeholders when he decided to accept the position of Commissioner of the Internal Revenue Service (IRS).

Factor 2: Provide a plan. Managerial leaders must develop a course of action or strategy for implementing change. Convincing the members of an organization of the need for change is obviously not enough to bring about actual change. The new idea or vision must be transformed into a course of action or strategy, with goals and a plan for achieving it (Abramson and Lawrence 2001; Carnall 1995; Daniel 2001; Judson 1991; Kotter 1995; Lambright 2001; Nadler and Nadler 1998; Redwood, Goldwasser, and Street 1999; Thompson and Jones 1994, 38ff; Young 2001). This strategy serves as a roadmap for the organization, offering direction on how to arrive at the preferred end state, identifying obstacles, and proposing measures for overcoming those obstacles.

As Kotter (1995, 1996) explained, the basic elements of the vision should be organized into a strategy for achieving that vision, so that the transformation does not disintegrate into a set of unrelated and confusing directives and activities. Denhardt and Denhardt (1999) describe how effective, change-oriented local government leaders "plan strategically but pragmatically." Conversely, Thompson and Fulla (2001) attributed the failure to implement National Performance Review (NPR) reforms in many federal agencies to a poorly conceived change strategy. While the NPR advocated mostly micro-level or intra-agency changes, the White House and Congress relied on a top-down implementation strategy that failed to provide public managers with the discretion they needed to implement changes at the group or work-process level.

Two aspects of a course of action that also appear crucial for organizational change in the public sector include the clarity, or degree of specificity, of the strategy and the extent to which the strategy rests on sound causal theory. Policy implementation analysts have noted the importance of clear, specific policy goals and coherent causal thinking about the linkage between the initiative to be implemented and the desired outcomes (Bishop and Jones 1993; Grizzle and Pettijohn 2002; Mazmanian and Sabatier 1989; Meier and McFarlane 1995). Specific goals help to ensure that the policy implemented in the field corresponds with the formal policy by limiting the ability of implementing officials to change the policy objectives and by providing a standard to hold implementing officials accountable.

As Bingham and Wise (1996) and Meyers and Dillon (1999) discovered, policy ambiguity can sow confusion, which allows public managers to reinterpret the policy and implement it in a fashion that brings about few of the changes that policymakers intended. Montjoy and O'Toole (1979) examined the relationship between goal specificity and the provision of new resources and found that a specific goal accompanied by new resources was the most effective way of ensuring that a policy was implemented as designed. Finally, a mandate for change based on sound causal theory helps to eliminate inconsistent or conflicting directives that can undermine efforts to implement change. Rossotti (2005, 68) shows how he and others leading major organizational changes at the IRS set forth a clear, well-conceived, well-organized plan for the change process.

Factor 3: Build internal support for change and overcome resistance. Managerial leaders must build internal support for change and reduce resistance to it through widespread participation in the change process and other means. Students of successful major organizational changes typically report that the leadership of the change must involve an essentially political process of developing and nurturing support from major stakeholders and organizational members. Individuals in organizations resist change for a variety of reasons (Kets de Vries and Balazs 1999). Some ideas for change are simply bad ones, and people in organizations have often had experiences with ill-conceived change initiatives that they did not consider legitimate or justified. Major changes often have bad consequences for some members of an organization. Moreover, and ironically, reform movements in government, in which reformers prescribe major organizational changes for government agencies, can aggravate the problem of resistance to the changes.

Hood and Peters, in analyzing surprises and paradoxes in the New Public Management reforms in many nations, note that "uncritical and universal adoption of poorly grounded recipes for institutional design is a commonly observed feature of administrative reform processes" (2004, 278). Ferlie, Hartley, and Martin observe that "reforming may be no more than a governmental fashion statement...with highly superficial impact" (2003, S2). In such instances, agency leaders have not verified and justified the need for the changes, and have not provided an effective plan and strategy for them, as described in the preceding sections. Employees have good reason to resist. Ongoing waves of attempted reforms can induce a general skepticism that confronts even well-planned and well-justified change. Experts on organizational change agree that major change almost always sparks controversy and resistance. Even assuming a well-justified and well-planned change initiative, leaders must build internal support and overcome resistance.

How can they do so? Several researchers have observed that a crisis, shock, or strong external challenge to the organization can help reduce resistance to change. Van de Ven (1993) explained that because individuals are highly adaptable to gradually emerging conditions, a "shock" or stimulus of significant magnitude is typically required for them to accept change as inevitable. In a similar vein, Kotter warned managers against the risk of "playing it too safe" and noted that "when the urgency rate is not pumped up enough, the transformation process cannot succeed" (1995, 60). He even observed that in a few of the most successful cases of organizational change, the leadership manufactured crises (see also Laurent 2003; Thompson and Fulla 2001).

For many decades, other social scientists have emphasized the value of effective and ethical participation, as well as other means, in supporting group and organizational change and in lowering resistance to it (Coch and French 1948; Lewin 1947).[10] Since then, experts have further explored ways of reducing resistance to change. Judson (1991) identified a variety of tactics managers can employ to minimize resistance to change, including threats and compulsion; criticism; persuasion; inducements and rewards; compromises and bargaining; guarantees against personal loss (e.g., offering job security or retraining to employees); psychological support; employee participation; ceremonies and other efforts to build loyalty; recognition of the appropriateness and legitimacy of past practices; and gradual and flexible implementation of change. According to him, these approaches can be effective at reducing resistance to change, with the exception of threats, compulsion, and criticism, which have counterproductive effects and increase resistance further.

Kets de Vries and Balazs (1999), in turn, cited similar measures for reducing resistance to change, but stress the importance of offering employees instrumental and emotional support. Instrumental support entails giving employees the resources to take on the new responsibility of implementing change. Emotional support involves reassuring members of the value of the change, bolstering their self-esteem during stressful times, offering them time to mourn, and creating an environment where concerns and fears can be openly discussed. A "dual approach" that creates pride in the organization's history and past success, while also arguing for a new way of doing things, can be effective in this regard.

The scope of participation is also important. Widespread participation in the change process is perhaps the most frequently cited approach for overcoming resistance to change (e.g., Abramson and Lawrence 2001; Young 2001). Many scholars focusing on private organizations have asserted that planned change requires extensive participation by members at multiple levels of the organization during the various stages of change (Bunker and Alban 1997; Carnall 1995; Greiner 1967; Johnson and Leavitt 2001; Nadler and Nadler 1998; Pasmore 1994). The literature indicates that involving organizational members helps to reduce barriers to change by creating psychological ownership, promoting the dissemination of critical information, and encouraging employee feedback for fine-tuning the change during implementation.

Participation presents a particularly important contingency in the public sector. As Warwick (1975) asserted, career civil servants, allegedly motivated by caution and security, can use to their advantage the frequent turnover among top political appointees; they can simply resist new initiatives until a new administration comes to power. However, their participation in the various stages of change can help to reduce this kind of resistance to planned change. Rossotti (2005), for instance, recounts a continuous process of meetings with all types of stakeholders—frontline employees, union leaders, taxpayers and taxpayer groups, managers, Treasury Department executives, members of Congress, and others. Denhardt and Denhardt describe how local government leaders followed a strategy of "open communication and significant employee involvement in the change process" (1999, 19). Kemp, Funk, and Eadie (1993) found that widespread participation created a sense of ownership that helped to build momentum (see also Poister and Streib 1999). Goldsmith (1999, 68ff) describes how employee "empowerment" played a key role in his change efforts as mayor of Indianapolis. Kelman (2005), in his analysis of the federal procurement reform process, provides evidence that we should avoid overestimating change resistance. A significant number of employees welcomed reforms, and their support needed to be "unleashed."

Buttressing Kelman's point, Thompson and Sanders' (1997) analysis of change within the Veterans Benefits Administration suggests that successful change may require various bottom-up participatory elements, such as delegating decision making to middle management and granting frontline workers greater discretion to implement changes. They note, however, that top management still must play a critical role by encouraging and rewarding innovation and expressing support for the change. Successful implementation of organizational change, therefore, often resembles a hybrid form that combines elements of lower-level participation and top management direction.

Even widespread participation, however, does not offer a magic bullet for overcoming resistance to change. Piderit (2000) distinguishes between participation aimed at generating employee approval of a change and another more open form of participation that encourages discussion among employees. According to her, participants typically show initial ambivalence toward change, and she urges managers to engage in the latter form of participation, which allows employees to openly voice their ambivalence. Relatedly, Bruhn, Zajac, and Al-Kazemi (2001) advise that participation should be widespread and span all phases of the change process, but they stress that leaders must take participation seriously, commit time and effort to it, and manage it properly. The failure to do so can be counterproductive, leading to wasted time, morale, and resources (see also Quinn 2000). Bryson and Anderson (2000) made a similar observation in their analysis of various large-group methods increasingly used to diagnose problems and implement changes in organizations. Another study of a planned change effort at the United States Postal Service found that employee participation was insufficient for bringing about a change in organizational culture (Shareef 1994); lasting cultural change required changes in other organizational subsystems in addition to employee participation in the early phase of the transformation process.

Factor 4: Ensure top management support and commitment. An individual or group within the organization should champion the cause for change. Top management support and commitment to change play an especially crucial role in organizational change (Burke 2002; Carnall 1995;

Greiner 1967; Johnson and Leavitt 2001; Kotter 1995; Nadler and Nadler 1998; Yukl 2002). Some studies of organizational change have stressed the importance of having a single change agent or "idea champion" lead the transformation. Top managers need either to play these roles or to support strongly those who do. An idea champion is a highly-respected individual who maintains momentum and commitment to change, often taking personal risks in the process (Kanter 1983). Thompson and Fulla's (2001) study of the implementation of NPR reforms in federal agencies found that an effective change agent with in-depth knowledge of the changes and who served as an effective advocate and manager of the change process played a key role in successful transformations. Policy implementation scholars also have offered evidence of how a skillful and strategically placed leader or "fixer" can, even in the absence of a hierarchical implementation structure, still successfully coordinate the behavior of disparate actors and overcome obstacles by leveraging close personal ties and pursuing informal avenues of influence (Bardach 1977; O'Toole 1989).

Other authors have stressed the need to have a guiding coalition to support the change. A guiding coalition is a group of individuals who lend legitimacy to the change and marshal the resources and emotional support required to induce organizational members to change (Carnall 1995; Kets de Vries and Balazs 1999; Kotter 1995; Yukl 2002). Kotter (1995, 1996) asserted that one or two managers often launch organizational renewal efforts, but that successful transformations require a broader leadership coalition that grows over time. "Whenever some minimum mass is not achieved early in the effort, nothing much worthwhile happens" (1995, 62). Change in pluralistic organizations with diffuse centers of power and conflicting objectives poses an even greater challenge to achieving lasting change. It may require a collective leadership group composed of members who can play complementary roles and help to link or "couple" the organization's leaders, the leaders with their organizational constituencies, and the leadership team with the external environment (Denis, Lamothe, and Langley 2001).

Whether in the form of a single change agent or a guiding coalition, considerable evidence indicates that top management support and commitment play an essential role in successful change in the public sector (Abramson and Lawrence 2001; Berman and Wang 2000; Bingham and Wise 1996; Daniel 2001; Denhardt and Denhardt 1999; Harokopus 2001; Hennessey 1998; Kemp, Funk, and Eadie 1993; Lambright 2001; Laurent 2003; Rainey and Rainey 1986; Thompson and Fulla 2001; Thompson and Jones 1994, 38ff; Weissert and Goggin 2002; Young 2001). Boyne (2003), in his analysis of research relevant to public service improvement, found that "management" was one of the two most important factors. Conversely, Barzelay (2001), in his analysis of New Public Management reforms in various nations, reports that Aucoin (1990) attributes failure of these reforms in Canada to lack of support from the cabinet ministers, who simply did not care much about the reforms.

Finally, in the public sector, top management support often requires the support of top-level career civil servants in addition to politically appointed executives. The need for leadership continuity and stability raises particular challenges in the public sector, given the frequent and rapid turnover of many executives in government agencies, as compared to business executives. This may explain why, contrary to stereotype, many significant changes in government need to be, and have been, led by career civil servants (Borins 1998; Holzer and Callahan 1998; Rainey and Rainey 1986).

Factor 5: Build external support. Managerial leaders must develop support from political overseers and key external stakeholders. Organizational change in the public sector also depends on the degree of support from political overseers and other key external stakeholders. The impact of these actors on the outcome of change efforts stems in part from their ability to impose statutory changes and control the flow of vital resources to public organizations. Political overseers also can influence the outcome of planned change by creating and conveying a vision that explains the need for change, as well as by selecting political appointees who are sympathetic to the change and have the knowledge and skills required for managing the transformation. As Golembiewski (1985) suggested in his assessment of organization development in the public sector, attaining support from governmental authorities and political actors involves serious challenges, given the constraints imposed by the political context in which public organizations operate. Public agencies often have multiple political masters pursuing different objectives, and politically appointed executives often have very weak relationships with career civil servants. Despite these challenges, public managers implementing change in their organizations must display skill in obtaining support from powerful external actors.

Public policy scholars have often observed the impact of support from political overseers or sovereigns on the outcome of policy implementation (Goggin et al. 1990; Hill and Hupe 2002; Mazmanian and Sabatier 1989). They are now joined by more recent studies of public sector reform which have begun to stress the importance of external political support (Berman and Wang 2000; Julnes and Holzer 2001; Wallin 1997). Berry, Chackerian, and Wechsler (1999) noted that the governor's high level of commitment and support for particular reforms in Florida had a substantial influence on the degree of implementation (see also Chackerian and Mavima 2000). Changes that could be implemented quickly and cost-effectively seemed to generate more support from elected officials than those with higher implementation costs and requiring much more effort and time to implement. Reforms that appear to target public employees, that occur simultaneously with cutbacks, and that involve political risk require the highest levels of support from political overseers.

Support from other key external stakeholders also figures importantly (Abramson and Lawrence 2001; Daniel 2001; Denhardt and Denhardt 1999; Harokopus 2001; Mazmanian and Sabatier 1989; Rossotti 2005; Wallin 1997). Thompson and Fulla (2001) concluded that the interest group environment acted as an important determinant of agency adoption of NPR reforms. They found that strong interest groups opposed to an agency's NPR reforms served as a constraint on change; outright opposition by such groups at times forced modification of the proposed changes in order to satisfy the groups. Conversely, Weissert and Goggin (2002) found that proceeding with implementation without garnering the support of interest groups can speed up the implementation process, although at the cost of dissatisfaction and criticism among these groups.

Factor 6: Provide resources. Successful change usually requires sufficient resources to support the process. A consistent finding in the literature is that large-scale change is never cheap or without tradeoffs. Planned organizational change involves a redeployment or redirection of scarce organizational resources toward a host of new activities, including developing a plan or strategy for implementing the change, communicating the need for change, training employees, developing new processes and practices, restructuring and reorganizing the organization, and testing and experimenting with innovations (see Burke 2002; Carr, Hard, and Trahant 1996; Mink et al. 1993; Nadler and Nadler 1998). Failure to provide adequate resources in support of a planned change leads to feeble efforts to implement the change, higher levels of interpersonal stress, and even neglect of core organizational activities and functions.

Boyne's (2003) review of research, for example, found that "resources" was one of the important factors for improving public services (and, hence, bringing about change). Borins (2001) found that in innovative organizations at all levels of government, leaders invested resources in innovation. Rossotti (2005, 40) invested resources heavily in major changes at the IRS, and expressed regret that at the outset he had not sought assurances of budgetary support for the reforms from Treasury Department officials. Laurent (2003) found that entrepreneurial governmental managers show effectiveness at building and maintaining financial reserves to support their changes and innovations.

Policy implementation scholars have long recognized this need for adequate resources to implement policy changes (Goggin et al. 1990; Hill and Hupe 2002; Matland 1995; Mazmanian and Sabatier 1989; Montjoy and O'Toole 1979; Riccucci et al. 2004; Van Meter and Van Horn 1975). Ample funding is necessary to staff implementing agencies and provide them with the administrative and technical capacity to ensure that they achieve statutory objectives. Similarly, students of recent administrative reforms have observed that resource scarcity can hinder organizational changes (Berry, Chackerian, and Wechsler 1999; Bingham and Wise 1996; Chackerian and Mavima 2000; Kemp, Funk, and Eadie 1993; Moon 2002).

Bingham and Wise (1996), for instance, found that the implementation of ADR techniques often failed at the federal level, because no new financial and human resources were provided for training and disseminating knowledge of the innovation throughout the agencies. Similarly, efforts to implement Total Quality Management and various personnel reforms in Florida suffered from a lack of adequate staffing and funding for training, development, and other activities (Berry, Chackerian, and Wechsler 1999). As Chackerian and Mavima (2000) discovered in their analysis of government reform in Florida, the issue of resource munificence becomes even more complex when multiple organizational changes are implemented as part of a comprehensive reform agenda. The authors found that multiple organizational changes interact with one another, causing synergies and tradeoffs. For example, the pursuit of multiple changes that demand modest amounts of similar resources can lead to synergies, which increases the likelihood that all changes will be implemented successfully. The pursuit of multiple changes that require large amounts of similar resources, on the other hand, tends to result in tradeoffs. Tradeoffs, in turn, create winners and losers, with low-cost changes taking precedence over, or even displacing, more costly changes.

Factor 7: Institutionalize change. Managers and employees must effectively institutionalize changes. To make change enduring, members of the organization must incorporate the new policies or innovations into their daily routines. Virtually all organizational changes involve changes in the behavior of organizational members that they must learn and routinize in the short term and institutionalize over the long haul, so that new patterns of behavior displace old ones (Denhardt and Denhardt 1999; Edmondson, Bohmer, and Pisano 2001; Greiner 1967; Kotter 1995; Rossotti 2005). Recognizing the need to institutionalize change dates at least as far back as Lewin (1947), who observed that changes in group behavior require a new state of permanency. Unless new patterns of behavior become securely adopted, the new behaviors eventually dissipate.

Doing so, however, involves major challenges. Armenakis, Harris, and Feild (2001) developed a model of how to institutionalize change so that gamma change occurs (i.e., so that the paradigm through which organizational members interpret and understand events changes; Golembiewski 1986). According to the model, leaders can adopt various strategies to reinforce and institutionalize change. They can modify formal structures, procedures, and human resource management practices; employ rites and ceremonies; diffuse the innovation through trial runs and pilot projects; collect data to track the progress of and commitment to change; and engage employees in active participation tactics that foster "learning by doing." Judson (1991), too, strongly emphasizes the need to collect data and monitor the implementation process to keep managers aware of the extent to which organizational members have adopted the change. Evaluation and monitoring efforts should continue even after the change is fully adopted to insure that organizational members do not lapse into old patterns of behavior (see also Carnall 1995; Riccucci et al. 2004).

The evidence, however, is mixed as to the optimal pace for institutionalizing change. Some experts underscore the need to adopt a change gradually or incrementally on a small scale before the entire target group tries to adopt and institutionalize it (Armenakis, Harris, and Feild 2001; Cohen and Eimicke 1994; Greiner 1967; Kotter 1995, 1996; Rainey and Rainey 1986). Successful adoption on a small scale builds momentum and demonstrates benefits to organizational members. Conversely, others have argued that a rapid pace of change can overcome inertia and resistance to change (Romanelli and Tushman 1994; Tushman and Romanelli 1985). Small-scale or gradual implementation may pose more of a challenge in the public sector than in business, since frequent shifts in political leadership and short tenures for political appointees can cause commitment for change to wane.

Factor 8: Pursue comprehensive change. Managerial leaders must develop an integrative, comprehensive approach to change that achieves subsystem congruence. The literature frequently refers to the need to coordinate changes in the different subsystems of an organization to bring them into alignment (Armenakis, Harris, and Feild 2001; Beckhard and Pritchard 1992; Bingham and Wise 1996; Burke 2002; Meyers and Dillon 1999; Nadler and Nadler 1998; Rossotti 2005; Shareef 1994; Thompson and Jones 1994, 223ff; Tichy 1983). Advocates of subsystem congruence argue that organizations consist of various subsystems (e.g., training, recruitment, incentive, work design, information, and control subsystems) that shape and reinforce behavior. For fundamental change in behavior to occur, leaders must make systemic changes to these various subsystems to ensure that they are all consistent with the desired end state; changing only one or two subsystems will not generate sufficient force to bring about organizational transformation (Mohrman and Lawler 1983; Nadler and Tushman

1980, 1989). As some have warned, however, implementing multiple changes without understanding the structure and nature of the interconnections among subsystems can result in additional costs and a longer implementation period than managers anticipated (Hannan, Polos, and Carroll 2003). Amis, Slack, and Hinings (2004) even argue that the actual sequence of change matters; they found that beginning the transformation process by changing "high-impact" decision-making elements of the organization helps to build momentum for the broader array of changes that follow.

Several other empirical studies on private organizations have demonstrated the importance of achieving subsystem congruence. According to Robertson, Roberts, and Porras (1993), planned change interventions influence the organization's work setting, which comprises four subsystems: organizing arrangements, social factors, technology, and physical setting. Using meta-analytic techniques, the authors found that the four work setting subsystems were highly interdependent, so that changes in one subsystem often resulted in changes in one or more of the other subsystems. The authors, therefore, advised practitioners to begin a change effort with systematic changes in the work setting and to "insure [sic] that the various work setting changes are congruent with each other, sending consistent signals to organization members about the new behaviors desired" (1993, 629).

The public management literature also contains evidence of the need for subsystem congruence when implementing planned change. Shareef (1994) found that an effort to implement a participative culture in the United States Postal Service fell short due to management's failure to modify organizational subsystems to make them congruent with the desired cultural change. Golembiewski (1985) emphasized the fruitlessness of attempting to change attitudes and behaviors toward more teamwork and participation if the organizational structure remains strictly hierarchical and fails to support a team orientation (see also Bingham and Wise 1996; Meyers and Dillon 1999). Robertson and Seneviratne's (1995) study, however, suggests that subsystem congruence may be more difficult to achieve in the public than in the private sector. They found that changes in the work setting were more difficult to make in the public sector, perhaps because change agents in the public sector exercise less discretion than their private sector counterparts. Overall, however, the authors found few differences in planned change outcomes between the two sectors.

Conclusion

After providing an overview of the complex topic of organizational change, we reviewed research and theory to distill a set of factors that contribute to successful implementation of organizational change in the public sector. We drew extensively from the work of an increasing number of researchers who are working to identify these factors, as well as from the policy implementation literature, to develop testable propositions about what accounts for the success of change implementation efforts in the public sector. These propositions have received some empirical support in the literature, including evidence from the public sector. Moreover, together they tell a compelling story of how managers should go about implementing planned change. In addition, we seek to support additional research to further validate or refine these propositions.[11] One immediate need involves refining the general propositions. For example, how do leaders make effective decisions about when they have sufficient stakeholder support for change? How do they verify a sufficiently widespread acceptance of the need for change (for example, see Rossotti 2005, 48)? The sub-propositions in Table 1 provide additional refinements of the more general propositions that researchers can analyze and test.

While interested researchers can usefully employ many research designs and strategies, we believe that we should consider multivariate statistical techniques and large-sample datasets of organizations at different levels of government and in different public management settings. Such designs will be very challenging and expensive, but we should seek ways to conceive and execute them, possibly through consortia of researchers (e.g., Huber and Glick 1993) and proposals for large research grants.

Many types of studies, but especially large-sample ones, would also be useful for addressing some very basic questions about the extent and content of change. These include questions about how frequently public organizations undergo change, the incidence and magnitude of different types of changes, and whether public organizations show more resistance to change than private firms. Some research already provides evidence, such as indications that public organizations change frequently as a result of planned efforts (e.g., Meyer 1979).

Our initial review covered various theories of organizational change, with each theory highlighting a particular mechanism or driver that acts as the cause of change. Few studies have tried to synthesize these theories and test rival propositions. For instance, does the concept of a natural life cycle of development explain change in the public sector better than theories that emphasize planned change, such as rational adaptive theories and policy diffusion and innovation models? Are elements of a top-down approach to change, such as the extent of political control over an agency, better predictors of organizational changes than bottom-up factors, such as an entrepreneurial or risk-taking culture (Weick and Quinn 1999)? Also, are public organizations more receptive to pressures for change that emanate from the task environment or from the institutional environment? That is, does the desire to gain legitimacy trump the drive for greater efficiency and effectiveness at delivering services and implementing policies (Frumkin and Galaskiewicz 2004; Scott 2003, 140)? Pursuing these questions can help us gauge the validity of these theories, help explain the role of public managers in the change process, and clarify the strategies public managers can use to lead change.

Finally, researchers must confront the challenge of analyzing the relationship of the content and process of change to organizational outcomes such as performance. Experts have noted that public management scholars have faced difficulty measuring the effects of recent reforms on public organizational performance (Boyne 2003; Kettl 2000; Overman and Boyd 1994). Generic management scholars have faced similar difficulties. Pettigrew, Woodman, and Cameron conclude that "in few empirical studies do researchers seek to link change capacity and action to organizational performance" (2001, 701). Researchers need to design empirical studies that assess the impact of change on organizational performance, as measured by indicators of efficiency and effectiveness, but also in terms of individual-level outcomes, such as employee commitment to the organization and employee stress levels (Armenakis and Bedeian 1999; Becker 1992; Becker et al. 1996; Schabracq and Cooper 1998).

As we have stated, many of these research initiatives will be extremely challenging. We offer this review and the set of propositions we have identified in support of researchers who seek to address these challenges. In the interim, we hope that they will serve not as a roadmap, but as a compass for practitioners seeking to find their way amid the sustained, persistent, and challenging pressures for change they confront daily.

Notes

1. As one example of evidence of the limited attention to "organizational change" as a focal point in public administration journal articles, we searched for that keyword in JSTOR, in the set of public policy and administration journals. Of the one hundred most recent articles located in this search, thirty-five appeared in *Public Administration Review* (*PAR*) or the *Journal of Public Administration Research and Theory* (*JPART*). Over half of the articles located in the search appeared in *Administrative Science Quarterly* (*ASQ*). Although *ASQ* is included in the JSTOR public policy and administration journals, it does not explicitly focus on public administration, and most of these articles were about business firms or other organizations besides government agencies. Moreover, only a few of the *PAR* and *JPART* articles had "organizational change" in the title. Many were obviously linked to the topic of organizational change but did not focus on it as a concept or variable. The most recent article in *PAR* or *JPART* appeared in 2002.

2. Some of this theoretical work recognizes that managers can also act to influence or change their environment. For instance, Thompson (1967) notes that through smoothing, managers can reach out into the environment to reduce fluctuations that cause uncertainty for the organization. Similarly, Pfeffer and Salancik (1978) argue that organizations often employ political means to create a friendlier environment in which to operate.

3. More recent research by Greenwood and Hinings (1996), Oliver (1991), and others, however, has begun to examine the ways in which organizations undergo radical change that rejects dominant organizational forms, including how autonomous action by organizational members can overcome institutional constraints.

4. The National Organization Study involved a large probability sample of organizations in the United States. Frumkin and Galaskiewicz (2004) analyzed "mimetic" isomorphism (organizations imitating each other), coercive isomorphism (organizations responding to regulatory or legal requirements), and normative isomorphism (organizations becoming more alike due to influences of such normative sources as professional associations). They conclude that, "Our results suggest that public sector managers respond to external oversight and professional norms by finding ways to capitalize on the presence of these external pressures to move their organizations away from hierarchy and formalization…." (2004, 303). This conclusion can be interpreted as an effort to integrate the institutional theoretical perspective with the other perspectives emphasizing human agency as a force for change.

5. Some organizational ecologists have begun to relax the assumption that organizational adaptation is a rare occurrence (Aldrich 1999, 45-46; see also Barnett and Carroll 1995). Aldrich's (1999) evolutionary approach allows for human agency to play a larger role in organizational transformation, in terms of "intentional variations" in organizational routines and traditions as well as human selection of successful variations.

6. We are grateful for a critique by an anonymous reviewer who emphasized this point.

7. Much of the implementation literature focuses on interorganizational implementation and not on single-agency implementation, as is generally the case with planned organizational change. However, the concepts and empirical evidence that have accumulated in this body of work provide critical insights into the kinds of factors that influence the success of planned change in the public sector.

8. This assertion about additive effects by no means implies that many of the factors can be missing or insufficient. We hypothesize that each factor that is missing or insufficient sharply reduces the probability of success.

9. Note that Kotter's (1995) *Harvard Business Review* article concerns why transformations *fail*, when leaders simply fail to apply or adhere to points such as those in Table 1.

10. Lewin (1947) observed that one could overcome entrenched behaviors either by adding force in the desired direction or by diminishing opposing forces. He preferred the second method, because the first method creates higher tension, aggressiveness, and destructiveness.

11. As we stated earlier in the manuscript, researchers have usually treated these determinants of effective implementation as having additive effects on the outcome of implementation. Work by Nutt (1983, 1986), Bryson and Bromiley (1993), and others, however, suggests that we need to explore for interactive effects and treat seriously the possibility of a contingency approach to implementing organizational change.

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