Adaptive Leadership Challenges
At Smaller Nonprofit Organizations:
A System Dynamics Approach

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Abstract

Dwindling government resources and demands for increased accountability have challenged nonprofit organizations to meet their primary missions while also creating efficient and effective back-office accounting and information systems. Even though many nonprofits say that accounting and information support systems are mission-critical, they tend to staff these systems weakly and to be less efficient than they could be. The present paper uses a system dynamics model to show how the “Limits to Growth” and “Shifting the Burden” systems archetypes help explain this situation. The model runs show that the exercise of leadership is the underlying issue—nonprofit managers must challenge organizational cultures and mindsets that act as limiting factors, causing the nonprofits to avoid implementing fundamental solutions to their problems. The paper discusses several action recommendations.
Many nonprofit organizations with limited staff and budgets face challenges in managing support activities because their key focus is on primary activities. Support activities, such as accounting and information systems, often call for specialized knowledge and dedicated staffing, but many organizations underestimate the importance of managing them for accomplishing their primary mission or goal. Nonprofits view these activities largely as a cost, and therefore they are prime targets of cost reduction efforts. The problem is especially acute for small and mid-sized nonprofits because scale economies work against them (Bradley, Jansen, & Silverman, 2003). The adaptive challenge facing these nonprofits stems from the realities of increased competition for dwindling public resources, the effects of technology, and growing public and private demands for accountability.

Funding issues

Cutbacks on state and federal levels, because of an inability or unwillingness to increase taxes or float bonds, and because of slow economic growth (Corder, 2001; Sheth, 1993), have affected nonprofit organizations. These effects have shifted many organizations toward increased reliance on private financial support. The Nonprofit Audit Risk Alert for 2004, published by the American Institute of Certified Public Accountants, reports that contribution revenue for 2003 was generally up from 2002; however, contributions were still below the annual giving levels of prior years (AICPA, 2004). Although wealthy donors responded to the improving economy by increasing their contributions, the giving levels of less wealthy donors have depended on how the economy affects them individually (AICPA, 2004). Further, charitable giving by most of the largest U.S. corporations decreased in 2003 for the second year in a row (Lewis, Murray, & Gardyn, 2004). Many corporations indicated, however, that they expected to maintain or increase their giving levels in 2004 so long as the economy remained strong (Wilhelm, Kerkm an, Krauze, Moore, & Schwin, 2004). Endowments have recovered somewhat after significant losses from 2001 through 2003 (AICPA, 2004). Because of some of these trends, many nonprofits have been optimistic about the future, expecting improving conditions and continued revenue growth in 2004 (West, 2004).

Accountability issues

Despite recent improvement in private funding sources, costs of operations continue to rise in the form of increasing liability and health insurance costs. Nonprofits have survived financial pressures by cutting back on operating budgets and reducing administrative overhead (AICPA, 2004). Nonprofits often cut administrative costs disproportionately, even though program service costs may be more of a problem (Bradley, Jansen, & Silverman, 2003). The requirements established by many funding organizations reinforce this tendency. For example, the Combined Federal Campaign requires participating nonprofits to certify that their combined fund-raising and administrative costs make up no more than 25 percent of the organization’s total support (NCCS, 2004). In addition, nonprofits face increasing demands for accountability from both public and private sources. At the individual level, donors want accountability but often have trouble obtaining information about the legitimacy of the organizations soliciting funds and how the donations are spent, and large donors may request financial statements and IRS 990 forms (which nonprofits file with the U.S. Internal Revenue Service [IRS] in lieu of tax returns) before agreeing to provide support. This appears to be a result of the increased emphasis on accountability connected with the issuance of Sarbanes-Oxley (AICPA, 2004), a U.S. federal law
intended to improve organizational governance and financial accountability. Thus, pressures on administrative support functions are growing.

Staffing and other infrastructure issues

Information technology is a continuing source of pressure for support operations. Personnel may have widely varying levels of expertise or training, or may shoulder a support responsibility for which they have no training at all. Even if trained IT and accounting personnel are present, turnover is a continuing problem because of higher salaries in the for-profit sector (Barrett & Greene, 2001). For new and continuing staff, training is often shortchanged (Barrett & Greene, 2001; Hecht & Ramsey, 2002; Light 2002). The staff also needs training to keep up-to-date with software upgrades, changes in hardware, networking, etc. (Smith, Bucklin & Associates, 2000). Because many small-to-mid size nonprofits face these issues of small staff and constrained resources, they operate as “adopters” of technology; that is, they operate in crisis mode by “making do” with existing technology (Fried, 1995). A cultural component supports this behavior—nonprofits often shortchange themselves on resources that do not appear to enhance the primary mission (McCarthy, 2003).

As nonprofits turn to private and public grants for sources of funds, they face increasing overhead in both fund accounting practices and in grant writing and preparation. Grant terms often extend across a nonprofit’s fiscal years. Ensuring that nonprofits use grant funds in accordance with the grantor’s terms often requires careful tracking of expenditures that extend into multiple accounting periods. This requirement places additional administrative burdens on the recipient organization. Grants also often come with restrictions on their use that may not account for the total cost of the technology investment. Funding bodies such as United Way and government bodies such as the IRS also require nonprofits to comply with their reporting requirements (Smith, 2002). Because of all of these factors, nonprofits often have greater record-keeping requirements compared to their for-profit counterparts (Cutt, Bragg, Balfour, & Tassie, 1996). In an era of dwindling government resources and demand from donors and grantors for increased accountability, nonprofit organizations are increasingly faced with the challenges not only of meeting their primary missions, but of supporting those missions through efficient and effective accounting and information systems.

Motivation for the Current Study

This paper grew out of a previous consulting experience, which the authors conducted at a mid-size nonprofit organization in Maine in the U.S. Private nonprofit organizations employ one out of every eight workers in Maine; 78% of those workers are in health care and social services (“Notes on nonprofits,” 2003). In a 2000 report produced by the National Council of Nonprofit Organization, the charitable sector alone accounted for 12.8% of the Gross State Product, much higher than the national average of 7.8% (Maine Association of Nonprofits, 2001). During the consulting experience, the authors studied a charitable organization’s accounting and information systems. We found many problems, such as lack of trained staff to perform accounting functions, part-time staff shouldering full-time responsibilities, lack of training in database design or systems analysis, lack of error tracking and resolution of technical problems, and unclear lines of responsibility for accounting and information system functions. Our case study led us to develop a survey of other Maine nonprofits to see if these problems were typical in a state that depends on its nonprofits as a source of employment and revenue.
We presented the results in an earlier study (author information withheld during review), which highlighted issues in these support areas. We noted that although many issues appear to be technical problems, these organizations face underlying leadership challenges. We now explore the leadership challenge, which, if successfully met, could help solve the immediate technical issues. This would lead to better utilization of support activities to enhance, rather than detract, from the mission of the organization.

**Adaptive challenges: The typical nonprofit’s response**

Because of the increase in competition for dwindling public resources, the effects of technology, and growing public and private demands for accountability, small nonprofit organizations are facing a changing environment that adds up to what Heifetz and Linsky call an adaptive challenge (Heifetz, 1994; Heifetz & Linsky, 2002). One characteristic of adaptive challenges is that they are not amenable to technical solutions, but require organizational learning. Learning must take place in two ways—the organization’s management must recognize that the problem is an adaptive challenge, and then the organization’s members must learn how to meet the challenge. This means that small nonprofit organizations need to change their systems, including their information technology and accounting systems, to address the new circumstances that confront them.

However, our survey results showed that most small nonprofits have not met this challenge in the area of information and accounting systems. Their management personnel exhibit classic behavior in the face of adaptive challenges—they tend to think, initially, that the problems they face are amenable to technical fixes. Our results show that the managements of most nonprofits say that their back-office systems are critical to their organizations’ success, but they act as if they are relatively unimportant grafts onto the truly important primary activities that their organizations perform. In this respect, they exhibit a disconnect between what Argyris and Schon (1974) called the “espoused theory” (that information and accounting systems are critical to organizational success) and the “theory in use” (information and accounting systems are poorly funded and staffed). Accordingly, nonprofit management merely patches up inadequate systems, or tries to find cheap or underutilized labor to manually perform many information-based activities, or both. In reality, information systems are crucial support activities (Porter, 1985) that, if properly designed, maintained, and used, would greatly leverage the small nonprofit organization’s primary activities.

**The role of systems archetypes**

This typical approach to adaptive challenges is reminiscent of two systems archetypes first discussed by Senge (1990): the “Limits to Growth” archetype shown in Figure 1, and the “Shifting the Burden” archetype shown in Figure 2. In the “Limits to Growth” archetype, the organization seeks to grow or change but its efforts are held back by slowing actions (often called resistance [Block, 2000]), which are governed by a limiting factor of some sort. (See Senge, et al, 1999, for an extended discussion of this archetype and its implications.) In the case of the organizations examined here, the limiting factors are the mindsets and culture of typical managers and employees of small nonprofit organizations. These people are passionate about the services they deliver on behalf of their organizations, and this is where they focus their efforts and training. Time and effort spent on upgrading back-office systems are considered time and effort poorly spent. The key to breaking free of this archetype is to find the limits and
release their hold on the organization’s members. In the case of small nonprofits, this means changing the culture or mindset, a point to which we will return shortly.

In the “Shifting the Burden” archetype, an organization faced with a problem may choose to address it with a “quick fix,” or symptomatic solution, or it may choose to implement a more fundamental solution, even though the latter takes a long time and may be more expensive. Should it choose the quick fix, which is common, it typically does ameliorate the problem in the short term (since quick fixes are, indeed, fixes). But it runs the risk of getting on a treadmill—as the first quick fix’s effects wear off, the organization must find another quick fix, and then another, and so on. It is not difficult for such an organization to reach the point where its ability to implement a fundamental solution is forever compromised. We believe that the small nonprofits in our survey are ensnared in this archetype. Rather than redesign and upgrade their back-office systems for long-term effectiveness in the new reality, many of them instead use patchwork software and hardware solutions and employ manual labor to get many of the functions done. This approach is no doubt motivated by the same things—culture and mindset—that create the “Limits to Growth” archetype in the small nonprofit. The leverage in this archetype is to be willing to live with the temporary worsening of the problem that occurs while the organization works on the more time-consuming fundamental solution of implementing new hardware and software and their attendant training and learning curves.

Leadership is what is needed in either of these situations. Heifetz and Linsky (2002) define leadership as “disappointing your own people at a rate that they can absorb.” If mindset and culture are at the root of what is holding back change, then it seems obvious that relaxing the limits, or moving towards time-consuming solutions, or both, would be tremendously disappointing to the people who work in these organizations. Yet, what is required is that leaders (who may or may not be authority figures in the organizations—see Heifetz, 1994) step forward,
first, to make their people aware that they indeed do face an adaptive challenge, and, second, to work with them to make the necessary, fundamental, changes to the back-office systems.

A system dynamics model of the leadership challenge in small nonprofit organizations

Figure 3 shows a system dynamics model that captures the “Limits to Growth” and “Shifting the Burden” archetypes inherent in this situation. The model has three stocks: “Tasks done using old methods,” “Tasks done using new capabilities,” and “Adherence to old culture.” The nonprofit may try to accomplish its support activities in one or a combination of two ways. It may rely on its old support capabilities (the first stock mentioned in the model), or it may adopt new support capabilities (the second stock mentioned in the model), or both. This is a “Shifting the Burden” archetype because relying on its old support methods is the quick fix—it gets the job done more quickly, but less efficiently. Adopting the new support capabilities is more effective and efficient, but takes longer. The “Limits to Growth” archetype shows up in the nonprofit’s adherence to its old culture (the model’s third stock). If it closely adheres to it (which is the default under the “Shifting the Burden” archetype), the nonprofit will tend to continue using the old support methods. If it departs from the old culture, it will eventually adopt newer, more efficient methods for its support activities. However, taking the longer fundamental solution route will create pain for the nonprofit’s members and stakeholders, as its “Augmented IS and Accounting capability” falls short of its desired capability during the lengthy process of fundamentally improving the support systems. The model contains an auxiliary variable, “Dissatisfaction,” that captures this pain.

There are three other noteworthy features of the model. One is a “culture switch” on the inflow to “Adherence to the old culture.” This allows the model to switch from rigidity to flexibility in capturing the nonprofit’s adherence to the culture. The second feature is the structure of the change to “Adherence to the old culture.” It is a standard “goal-gap” formulation
controlled by the “Time to change adherence to old culture.” The latter variable allows testing of the effects of various speeds of change. A third feature is an auxiliary variable called “Desired capability.” Changing this variable allows us to simulate changes in the nonprofit’s environment. We did this in all the scenario test runs to follow by creating a step increase in the desired capability. The final noteworthy feature is the cost structure captured in the model. This is a stylized model, so we did not use real numbers. However, the model incorporates lower costs associated with the use of new, more efficient methods, higher costs associated with the older methods, and total costs of all methods used. This allows comparison of the cost implications of various scenarios.

**Model runs of various scenarios**

We set the model to simulate substantial change in the environment (operationalized as a step increase in desired capability), ran the model under two scenarios—traditional (high) adherence to the old culture (which we called the “old culture” scenario), and low adherence to that culture (which we called the “new culture” scenario)—and compared the results. In both scenarios, we allowed “Adherence to the old culture” to vary (i.e., the culture switch was on) and we set the time to change culture to 5 years. The difference between the two scenarios was that in the “old culture” scenario we set both initial and desired adherence to the old culture to 1, while in the “new culture” scenario we set those to zero.

**Results of comparison of “old culture” and “new culture” scenarios**

Figure 4 shows the results for costs, which are about 40% higher at the end of the period if the traditional culture continues its sway. This is a straightforward result, as one would expect the higher adoption of new methods to be more efficient than the continued use of the older ones. Adherence to the traditional culture also leads to lower capability for the nonprofit, as shown in Figure 5, of about 25%. This is a clear illustration of the “Shifting the Burden” archetype in action—the more the nonprofit continues to rely on older methods, the less will be its ultimate capability level. However, there are two other noteworthy aspects of this archetype that show up in these scenario runs. First, since abandoning the traditional culture is the fundamental solution, it takes longer. This is evident in Figure 6, which shows that the “augmented” capability of the nonprofit is lower for most of the period (until rising to the highest level at the end) for the firm choosing to adopt new methods. This leads to a backlash, captured in the higher level of dissatisfaction during the change period, as shown in Figure 7.

![Figure 4 Total costs under “old culture” and “new culture” scenarios.](image-url)
Figure 5 Capability increases under “old culture” and “new culture” scenarios.

Figure 6 “Augmented Capability” under “old culture” and “new culture” scenarios.
Dissatisfaction

![Graph showing dissatisfaction over time for old and new culture tasks]

Figure 7 “Dissatisfaction” under “old culture” and “new culture” scenarios.

These results clearly show the “Limits to Growth” archetype at work. When the cultural limit is in place in the “old culture” scenario, no growth (in this case no improvements in efficiency) occurs. When it is lifted, greater efficiency occurs. The “Shifting the Burden” archetype also manifests itself, in that the greater adjustment period required by the nonprofit’s going after the fundamental solution results in greater dissatisfaction, even though the organization is better off in the end.

One problem with these comparisons is that they make reasonable assumptions about the old culture scenario—a nonprofit that adhered to the old culture and stayed that way—but not for the new culture scenario. That scenario, as run in the model, assumed a nonprofit that, from the beginning, had low adherence and stayed that way. In other words, the comparisons in Figures 4 through 7 are between the stodgiest nonprofits and very-early-adopter nonprofits. The latter are the ones, which are very rare, that adopt more-efficient methods in advance of being forced to do so. The results of the runs shown in Figures 4 through 7 support the oft-noted superiority of being ready before the crisis hits (see, for example, Nystrom and Starbuck, 1984 and Starbuck, Greve and Hedberg, 1978), even though that advice is rarely put into practice.

Results of “organizational change” scenarios

A better, more realistic, comparison would be between, on the one hand, a stodgy nonprofit that wanted to stay that way and, on the other, a stodgy one that made a decision to change to a new culture. Accordingly, we tested two other scenarios: “moderate change,” where the “time to change” was lowered from ten years to three years, and “fast change,” where that variable was further lowered to one year. Figure 8 shows the results for costs, where the improvements, even with a one-year change in cultural adherence, were astonishingly small—roughly one percent. The improvements for capabilities, shown in Figure 9, were also modest, at about two percent. The reason for these results is that the nonprofits in this scenario never totally abandon the old culture (see Figure 10). The change and the nonprofits’ abilities to adjust are too slow, and they continue to use many of their old methods, thereby losing the potential
New Capabilities Under Moderate or Fast Change Scenarios

Figure 9 New capabilities under “moderate change” and “fast change” scenarios.

Total Cost Under Moderate or Fast Change Scenarios

Figure 8 Total cost under moderate change and fast change scenarios.
efficiency benefits of the newer ones. Apparently, what is called for is more rapid or radical change.

Accordingly, we decided to try two other change scenarios: “rapid change” with a time to change of six months and “radical change” with a time to change of three months. Figure 11 shows the results for costs, which are about four percent better under rapid change and about nine percent better under radical change. This compares unfavorably to the forty percent improvement under the “new culture” scenario. Improvements in the nonprofit’s capabilities are shown in Figure 12, and they are about seven percent for rapid change and eighteen percent for radical change. This compares quite unfavorably to the sixty-five percent improvement under the “new culture” scenario. We will have more to say in the discussion section about these results, but it is worth mentioning here that it is unlikely that most organizations would be able to change in three months, let alone six months or a year. It is nevertheless instructive to see the results of these runs, and to note that the inertia shown by them is probably realistic in the
nonprofit (and probably the for-profit) world.

Effects on dissatisfaction

Before moving on to the discussion of the results of the various runs, it is interesting to examine what happens with “stakeholder satisfaction” under some of the scenarios. Figure 13 shows satisfaction for the “old culture,” “new culture” and “radical change” scenarios. As one would expect, the least amount of dissatisfaction is under the “old culture” scenario, because the organization takes relatively little augmentation from the new systems and so “wastes” little time in adjusting. The most amount of dissatisfaction is under the “new culture” scenario, because the opposite happens—the nonprofit’s members use no augmentation from their old systems as they
take the time to learn the new ones. This is also an unsurprising result.

What is a bit surprising is what happens under the “radical change” scenario—dissatisfaction is relatively low compared to what happens under the “new culture” scenario. This is because the adoption of the new culture is not instantaneous. Even with radical change, it takes almost a year for the nonprofit to adopt the new culture (see Figure 14). During that time, the organization continues to use some of its old systems, and indeed, it never lets go of all of them (see Figure 15). Hence, its “augmented capability” never gets as low as it does for the nonprofit in the “new culture” scenario, and so it never irritates its stakeholders quite so much. In addition, in the “radical change” scenario the nonprofit remains in change mode for a relatively brief period, as compared to the “new culture” scenario. Of course, the reason for this is that it never fully adopts the new methods, so it gets to its somewhat-but-not-fully-changed new state in a relatively short period.
Discussion

The scenario test runs shown in Figures 4 through 15 have many implications. First, it is clear that, in the presence of an adaptive challenge that calls for greater efficiency, nonprofit organizations are better off questioning their traditional culture and adopting higher-efficiency methods, despite the slower implementation. As the “new culture” scenario showed, nonprofits that are early adopters of the new systems save the most, although they also must weather the greatest amount of stakeholder dissatisfaction. Second, removing the limiting factor of the old culture leads, despite a delay, to a higher-capability organization. Both of these results are straightforward. Unfortunately, our earlier research showed that early adopters in the nonprofit world are rare.

Third, members (and stakeholders) of the nonprofits that choose to adopt more efficient methods will have to live with how “augmented capability” will, for a time, lag behind what they would get with continued quick fixes. This is a situation where leadership must come to the fore. The nonprofit’s management, its membership and its stakeholders must remain patient as it implements the changes. Fourth, management of those courageous nonprofits that choose to abandon the quick fixes of the past will have to weather some complaining from their stakeholders, as the latter express their dissatisfaction during the adjustment period. This is another area where leadership is crucial.

Fifth, we must remember that leadership involves “disappointing your own people at a rate that they can absorb.” If the level of dissatisfaction created by very early change is too high, then the scenarios showed that there is some value in waiting until after the crisis hits and then slowly relaxing the grip of the old culture. However, there is not much improvement under this change management approach. It appears to be better to change quickly once the crisis hits. In the rapid and radical change scenarios, the organization made better improvements, and experienced less dissatisfaction, than it did when it tried to respond slowly. This was because it made enough changes to adapt a bit better and get some efficiency improvements, but held on to enough of the past methods to end its change process quickly enough so as not to ruffle feathers for too long.

Recommendations

From these scenario tests, we believe that we have learned enough to make several useful recommendations.

1. Leaders in small nonprofits come to grips with the realities facing their organizations. They must recognize that their organizations face adaptive challenges stemming from economic constraints, changes in technology, and stricter accountability expectations.

2. The scenarios showed quite convincingly that making this realization, and taking action on it, before an adaptive challenge has reached crisis proportions was by far a more powerful approach. The gains in efficiency and capability were much greater.

3. The leaders must also labor to help their subordinates and stakeholders learn these lessons, so that they are more amenable to making the changes.
These three recommendations, taken together, should start to loosen the limits on change that are rooted in the mindsets and cultures of most small nonprofits. The second recommendation requires *learning* on the part of the nonprofit organization’s members and especially its stakeholders, especially its funding sources. These stakeholders may need to learn that, as the organization implements longer-term solutions, the short-term effects may not be positive. For example, it might happen that for a time a nonprofit’s administrative costs would rise above 25% of its total expenditures. It is crucial that the organizations’ stakeholders and members understand and accept that this short-term pain will, in the long term, make them better able to deliver services—perhaps in greater quantity and with greater quality than ever before.

4. Leaders should involve the rank-and-file heavily in the information systems change processes. This will help all concerned to deal with their inevitable disappointment as they work on “less interesting” or “less important” things like support activities.

5. If the nonprofit chooses to wait until after the adaptive challenge has hit with full force, the scenario tests showed that *radical change*, implemented very quickly, was preferable to moderate or even fast change. Gains in efficiency and capability, while not as great as those under for nonprofits that changed during the early stages of the adaptive challenge, were greater than for those who changed more slowly.

**Conclusion**

Recent evidence shows that small nonprofit organizations are in a new, more difficult environment (that is, they face an adaptive challenge) with regard to their information and accounting systems needs. These organizations would be much better off were they to adopt better, more efficient systems for these support activities. Yet, our previous research showed that small nonprofits tend to be ensnared in two systems archetypes—“Limits to Growth” and “Shifting the Burden.” Using a system dynamics model, this paper examined the implications of these archetypes for those types of organizations. Examination of scenarios run with the model showed that they would be better off, despite some downsides, meeting this adaptive challenge as early as possible. They would also be better off recognizing the need to deal with disappointment and dissatisfaction among their members and other stakeholders. Lastly, they would be better off changing *radically*, once the adaptive challenge has reached crisis proportions, to gain as much benefit as possible.

In all these scenarios, the underlying need is for the exercise of leadership, which requires that the managements of small nonprofits disappoint their stakeholders at a rate that they can absorb. In the case of early change, this is likely to require managers to find ways to increase their members’ and stakeholders’ ability to absorb the lengthy dissatisfaction they will notice as the organization adopts new methods and abandons old ones. In the case of late adopters, this is likely to require small nonprofits’ managers to provoke radical change, to gain the most efficiency and capability as possible while keeping the change period short. In all cases, the task for nonprofit managers who want to exercise leadership is to help their organizations better use their support systems to provide the highest, most efficient level of service possible.
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