THE BEST OF PRACTICES, THE WORST OF TIMES

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Before I built a wall I'd ask to know
What I was walling in or walling out.

--Robert Frost

By definition, it is better to be the "best" than to be "not best." It thus seems obvious that engaging in "best practices" must be a better way to do your work than any alternative. Find out what has worked best in your field and do that—and, of course, stop doing that other stuff that is "not best." Wall in the best, and wall out the rest.

This prescription seems particularly attractive in times such as these, when museums have found themselves criticized for being inefficient and "unbusinesslike," and have been urged to change their ways. Museums, we are told, should be "rationally organized institutions directed toward articulable purposes" and should "accomplish those purposes with maximum effect and with minimum waste" (Weil 2002: 3). Standardizing practice on those activities that have already been proven to have "maximum effect" should eliminate waste and ensure that we are returning "value for money" to the communities that support us.

Most of the time, this prescription makes sense, and does indeed make things better. "Best Practices" is a sound strategy for an organization that is operating in a stable environment with a well-developed core technology. In such circumstances it is possible to know what worked well yesterday, and it is likely that what worked well yesterday will work well tomorrow.

Under other circumstances, though, following the "best practices" of the field is likely to make things worse. When the environment is changing in ways that alter the conditions for success, a rigid standardization of practice is a recipe for disaster. What worked yesterday probably will not work tomorrow, and we have no reliable way of predicting

what will. Such times call for experimentation and innovations that might prove to work well in the new environment. Rigidly following the best practices of the past suppresses such innovations.

Museums today operate in the midst of fundamental changes in our social and cultural environment. Certainly these changes have been widely acknowledged, and museums have attempted to change in response. They have redoubled efforts to meet Weil's criterion of "maximum effect with minimum waste," to improve efficiency and to document results. The "Best Practices" strategy is one such response. Unfortunately, many of these responses have been counterproductive. Their effect is to improve our performance of old technologies that were well adapted to the old environment. But concentrating on improving those old technologies locks us into the past, and interferes with our ability to change in the ways that are actually needed.

To adapt successfully to newly-emerging circumstances, museums today need creative rethinking of their underlying assumptions, and wide ranging experimentation with new forms of practice. But if that is our present need, and if the strategy of "Best Practices" is antithetical to such experimentation, then why has "Best Practices" become such a popular prescription at this very time? To answer this question, I will turn to the literature of organizations theory.

Threat-Rigidity Effects

The problems that museums are encountering in dealing with change are characteristic of all kinds of organizations in similar circumstances. They are not the result of some peculiarity or shortcoming of museums that makes them different from other organizations. Contrary to popular illusions, businesses are no more "rational" than museums or other non-profits. When threatened by a changing environment, businesses routinely misdiagnose the problem and follow strategies that undercut their own viability and that often lead to the organization's demise.

Staw, Sandelands and Dutton have studied business corporations that exhibit "maladaptive or pathological cycles of behavior" when coping with adversity. They argue that "Many well-publicized corporate collapses can be viewed as failures to alter response in the face of environmental change" (1981: 501), citing Penn Central Railroad, Chrysler Corporation and the *Saturday Evening Post* among other examples. Their research suggests that "there may be a general tendency for individuals, groups and organizations to behave rigidly in threatening situations." Summed up as a general thesis, "a threat to the vital interests of an entity, be it an individual, group or organization, will lead to forms of rigidity….threat-rigidity effects can be maladaptive. When the environment has changed radically, flexibility and diversity in response have survival value. Thus, maladaptive cycles are predicted to follow from threats which encompass major environmental changes since prior, well-learned responses are inappropriate under the new conditions" (1981: 502).

Threat-rigidity effects include "an increased use of formalized procedures and greater standardization of activities." "Efficiency concerns are manifested in the tightening of available budgets, increased emphasis on cost cutting, and intensification of efforts to insure accountability." As with businesses, "in times of sustained resource scarcity in the public sector there is increased technological efficiency and increased pressures for accountability which may, in turn, eliminate the use of creative or novel strategies in decision making" (1981: 515). Indeed, "There is a general inverse relationship between decline and innovation" (Greenhalgh 1983: 241). Studies of watershed periods when radically new technologies have displaced old ones have shown that in most cases "the old technology continued to be improved and reached its highest stage of technical development *after* the new technology was introduced" (Cooper and Schendel 1976:67). Vacuum tubes, sailing ships, mechanical watches, manual typewriters and gas lighting are examples of industries that poured their creative efforts into improving exploitation of an old technology when they should have been pursuing radical innovations.

When the environment is changing in fundamental ways, Staw and his colleagues conclude, "increased efficiency and control can prove maladaptive….In essence, doing better at what one already knows is, at best, a mixed blessing" (1981: 520). Just because we're getting better, more efficient, or more accountable doesn't necessarily mean that we're responding appropriately.

Nonetheless, it seems counterintuitive and even absurd to say that we can harm ourselves by becoming better at what we do. A closer look at organizational dynamics will help to explain this seeming paradox.

Discontinuous Change in Museums and Other Organizations

It is a common observation that complex organizational systems are tenaciously resistant to change. Nonetheless, sometimes they do change, in radical, fundamental ways (Rounds 1984). Research has shown that organizations typically experience a cyclical process of long periods of relative stability punctuated by occasional episodes of fundamental change (Gersick 1991; Tushman and Romanelli 1985; Anderson and Tushman 1990; Kuhn 1970; Burke 2002). This cyclical pattern appears to be driven by the nature of the organization's relevant environment, and by the strategies that the organization uses to manage environmental contingencies.

Just as organisms are closely tied to the physical environment within which they live, organizations are closely tied to their social/cultural/economic environment. It makes a big difference for organisms whether their environment is stable or changing; it does for organizations as well. Organizations struggle to manage two contradictory modes of operation in order to cope with the differing demands of their environments: "exploitation" and "exploration" (March 1991, 1994; Weick and Westley 1996).

Exploitation refers to processes by which an organization takes advantage of its existing ideas, competencies, strategies, knowledge, core technologies or paradigms (March 1994). Organizations proficient at exploitation progressively refine their methods for achieving the full potential of those assets. They take what they already know how to do, and improve, extend, elaborate, and routinize how they do it. The Exploratorium, for instance, built its reputation on the creative exploitation of a core idea about interactive exhibits.

"Best Practices" is one such mechanism for exploitation. It involves standardizing practice in an organization or field so that effort is focused on actions already "proven" to be effective. The practices that are considered "best" are those actions that, when taken in the past, have reliably produced our most preferred outcomes. Definitions of the "best" are thus rooted in the past. We define best practices by consulting our own experience, or that of others in the same field. We identify certain past events that we judge to have been valuable, and interpret those events as having been the outcomes of certain deliberate actions. We then seek to repeat those actions, believing that they will produce the same results in the future.

Exploitation is essential for the success of organizations operating in a stable environment. When the environment is stable, what has worked well in the past is likely to work well in the future. Incremental improvements in the existing technology for exploiting the environment have a high probability of success, since both the technology and the environment are relatively well understood. Experience, in this circumstance, is a good teacher.

Exploitation thus serves the goal of "efficiency," of getting the most benefits out of your technology with the minimum of wasted effort and resources. We become more efficient the better we understand our work (as it is presently conceived), the better we know how to go about doing it and the more closely our actual practice follows that knowledge.

Exploration is a very different process. Exploration leads the organization away from what it already knows how to do, to discover other possibilities for things that it might be doing. Where exploitation uses and refines an existing technology, exploration invents a new one. An organization explores in order to innovate, to make radical changes in what it does. It is a process for breaking continuity with the past. The City Museum in St. Louis, for instance, deliberately defies conventional wisdom about how museums should be (Sandweiss 1999; Cheney 2002).

Exploration is particularly important when the environment is changing. Under conditions of change, what worked in the past may not work in the future. It is difficult to predict what *will* work well, since relevant aspects of the environment are changing in unpredictable ways. Experience may prove an unreliable teacher. (Weick and Westley 1996)

Exploration thus serves the goal of "adaptiveness." Adaptiveness refers to all the things we do in an organization to achieve and maintain consistency between our practices and relevant aspects of our environment (March 1994). Sometimes the environment changes, and in the new environment our old practices no longer seem valuable, sensible or productive. We explore in order to invent new practices that will serve us better in the new environment.

Conflicts Between Exploitation and Exploration

Organizations that only pursue efficiency, ignoring adaptiveness, often manage to thrive for the short term. They become highly competent at exploiting an original big idea. Their creativity is expressed not in developing innovative products, but rather in refining production techniques that allow them to produce familiar products with higher quality and/or lower prices. But sooner or later, the environment changes and the marketplace passes them by. They have become extremely skilled in producing a product that nobody wants to buy anymore. They go the way of the proverbial manufacturer of buggy whips.

On the other hand, organizations that solely pursue adaptation, ignoring exploitation, are equally doomed. They're good at the explorative learning that produces exciting new ideas with huge potential. But that potential can only be realized by the application of exploitative learning, which this type of organization doesn't do very well. As a result, they generate lots of ideas, but they seldom manage to bring a product successfully to market. They lack the patience to invest in the long developmental processes of efficiency. They keep jumping from one thing to another without giving any idea the opportunity to mature. Other organizations wind up reaping the benefits from the explorer's new ideas, because those other organizations know how to do exploitation. (March 1994)

Ideally, then, museums and other organizations should simultaneously pursue both efficiency and adaptation, combining the best practices of the past with experimentation and radical innovation. However, this is not an easy prescription to follow. The things that we do to exploit, and the things that we do to explore, are not only different from one another; in fundamental ways, they are antagonistic to one another. By their natures, exploitation interferes with exploration, and vice versa. "Best Practices" for the one may be "Worst Practices" for the other.

According to James G. March, efficiency "thrives on focused attention, precision, repetition, analysis, sanity, discipline, and control." But an environment marked by those particular virtues is not one that nurtures adaptation. Adaptiveness "thrives on serendipity, experimentation, novelty, free association, madness, loose discipline, and relaxed control"(1994: 1). Following are a few specific examples of how these contrasting needs generate conflicting priorities within the organization.

Predictability versus Surprise -- An organization pursuing efficiency strives for predictability in its operations. It develops reliable technologies for production that will produce the same results every time, with a minimum of waste. It trains workers to follow the technology precisely. Variations and surprises are not tolerated; they constitute failures or inefficiencies in the organization's drive toward complete predictability.

By contrast, surprises are the lifeblood of exploration in the pursuit of adaptation. We explore to discover things that are presently unknown, and we can't predict what we will find. When existing practices no longer serve the demands of a changed environment, it is essential to cultivate actions that will produce surprising new possibilities. This entails experimentation and playfulness that are completely at odds with the demands of efficiency. Predictability, so important a component of the pursuit of efficiency, becomes stagnation when the goal is adaptation.

Goals – Efficient behavior is strongly oriented toward goal achievement. In a stable environment the organization has time to develop a clear sense of what it wants to accomplish, and how to recognize outcomes that constitute achievement of its goals. It can (and should) judge the value of its actions by their contributions to goal achievement.

In a changing environment, though, goals may become problematic. Useful accomplishments in the old environment may turn out to be pointless in the new environment. Adaptation involves discovering new goals, and shedding the old.

In a highly efficient organization, no actions are taken unless they can be justified in advance in terms of existing goals. This hinders discovery of new goals. Exploration requires that the organization find ways to engage in activities for which no clear goal can presently be specified, in the hope that those activities will generate interesting outcomes that might lead to discovering new goals. These are fundamentally incompatible approaches. Exploitation starts from goals and leads to actions. Exploration starts from actions and leads to goals. (March 1979)

Rationality and Intuition – Goal-oriented behavior is closely associated with our value on rationality. In fact, rationality is often *defined* as selecting behaviors that will maximize goal achievement. Since exploration involves activities that do not have well-defined goals, it is stigmatized as "irrational," "random" and "pointless."

Some exploration is deliberately random, such as certain techniques for "conceptual blockbusting" (Adams 1986). But exploration is often guided by intuition, a sense of "rightness" that defies translation into rational logic. We can know something without knowing what it is that we know (Myers 2002). Our intuition may tell us that we have a great exhibit idea, even though we can't provide a "rational" explanation for why it is great, or specify what goal it will serve. Efficient organizations suppress such

foolishness; but organizations skilled in exploration deliberately cultivate "a technology for foolishness" (March 1979).

Variety – Efficiency advances in part through a process of elimination. Of all the things we might be doing, only a small number will be highly efficient in exploiting our core technology. As we learn, we are able to discard those that prove inefficient. Improvements in exploitation thus tend to reduce the variety of activity within an organization. They aim toward standardization on the "best" actions. "We do one thing and we do it well."

In contrast, variety appears to be essential for exploration. Linus Pauling said that the only way to get a good idea is to get a lot of ideas. Most new ideas turn out to be bad ideas, but we can't tell up front which those are. Ideas have to be tried out, so that we can see what happens and consider how we feel about what happened. The greater the variety—the more "diversity in the gene pool"—the better the odds that we'll find an answer that is truly adaptive in the new environment.

Evaluation – For purposes of efficiency, evaluation measures activities by their contributions to the achievement of pre-existing, articulated goals. Ideally, actions are taken only if we can specify in advance why and how they will achieve our goals. This is both possible and sensible in exploiting a stable technology in a stable environment.

This approach to evaluation is problematic in regard to exploration, since goals are not pre-existing. Instead, goals are to be discovered through the action. Exploration requires open-ended techniques of evaluation that help us understand what we actually did and what resulted, and that facilitate our interpretation of the value of those outcomes for adaptation to the new environment.

Allocation of resources – A perfectly efficient organization "makes every dollar count." It spends money only on activities that exploit well-understood, low-risk technologies that will produce tangible and immediate "value for money." Efficiency inevitably focuses on short-term returns on investment.

Adaptiveness requires an eye toward the long term. Exploration is inherently inefficient in the short term. It requires the organization to spend money now in the hopes of a return some time in the future. Since most exploration leads to dead ends, the organization must hope that the occasional success will be big enough to cover the costs of the many failures. In difficult times, exploration is usually the first thing to be cut from shrinking budgets, as attention becomes even more tightly focused on short-term results. Recognizing the risks inherent in exploration, many organizations avoid it completely.

Because the needs of efficiency and adaptation are antagonistic to one another, organizations find it difficult to manage both with equal success. Some organizations try to compartmentalize the two, accommodating exploitation in production units while exploration is conducted in "skunk works" that are administratively (and often physically) separated. Most organizations, though, seek to separate the two in time rather than in space. While the relevant environment remains stable, they focus on efficiency, and hope that when change comes, they will be able to switch over to an adaptive mode. Major changes in the environment are relatively rare, so most organizations, most of the time, can safely focus on efficiency. We spend most of our time working within an established technology or paradigm, exploiting its potential and improving our efficiency in doing so. Our experience makes us skilled in exploitation, but gives us little opportunity to develop expertise in exploration.

As a result, organizations often flounder when the time for adaptation comes. Complex organizations (and the human beings who work in them) are notoriously resistant to change. The old technology is "tried and tested." It has been the basis of the organization's past success, and of the rewards that have been enjoyed by its members. It is what they know how to do, and for a long time it has served them well. Why should it be questioned now? Why shouldn't the "Best Practices" of the past serve the needs of the future?

As discussed above, this situation frequently evokes the threat-rigidity effect. Realizing that its position is slipping, the organization misdiagnoses the problem, and focuses its efforts on perfecting the existing technology and advertising its benefits more aggressively. Efforts are directed toward standardization of "Best Practices" and elimination of activities that are seen as wasteful or are difficult to justify. Because exploitation and exploration require such different actions, but must compete for the same resources, an increase in one necessarily comes at the expense of the other. The more tightly the organization focuses on gains in efficiency and accountability, the more that focus squeezes out the inefficient and unpredictable processes of exploration.

This counterproductive tendency may be exacerbated by the "sunk costs fallacy" (Arkes and Ayton 1999). Humans frequently make decisions to continue certain courses of action simply because they have already invested considerable resources in that course of action—even when more attractive alternatives are known to exist. In the case of an organization using a well-developed technology, sunk costs may in fact correlate highly with success. The costs will have been invested precisely because the technology has reliably produced desirable results. Thus, even though the reasoning is faulty, basing decisions on sunk costs may lead to success.

However, this is true only so long as the relevant environment remains stable. In a changing environment, investments that led to success in the past may lead to failure in the future. Arkes and Ayton noted that use of the sunk costs rule "fails in precisely those circumstances in which additional resources do not result in a concomitant increase in future benefits. The inability of humans to identify such situations a priori is the reason

the sunk cost fallacy occurs" (1999: 599). Even in stable conditions predicting the future is iffy. In times of change, it is impossible.

A final reason why museums and other organizations find it so difficult to switch from exploitation to exploration lies in what anthropologists call "culture lag." The need for change in the organization is driven by change in the relevant cultural environment. However, not all parts of the relevant environment are changing at the same rate. Some lag behind.

Among those that lag behind may be those upon which the museum is most directly dependent. Government agencies and private foundations that provide funds may be experiencing their own threat-rigidity effects. In order to tighten up their own perceived efficiency, they pass along to the museum demands for increased efficiency documented in more formalized statements of goals and methods, standardized operations, and research-based demonstrations of concrete results. Individual donors who have been cultivated over long periods have sunk costs in the traditional technology that they may be reluctant to abandon. Members and other visitors have established expectations and may be disturbed to find things changing. Funding for exploration thus becomes harder to come by exactly when it is most needed. Even when they sense the need for fundamental change, museums remain enmeshed in a network of interdependencies that undercut their ability to innovate.

Science museums (and other museums) today are caught in this dilemma. On the one hand, the world is changing and it is essential to rethink the fundamentals of the ways in which we serve society and serve visitors to the museum. This demands exploration. On the other hand, we are being pressured to implement a variety of schemes that are appropriate to exploitation in a stable environment, and so are antagonistic to exploration. "Best Practices" is one such technique. If followed exclusively, these practices could severely constrain our ability to adapt.

Instead we need strategies that can counter these inertial tendencies and can foster innovation, exploration and discovery of new possibilities for what our field might become. For "Best Practices," these are the worst of times.

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