Chapter 7

Affecting Organization Change

The Management Attribute

Think about the following claim: “Every position exists to drive change.” How does our perspective about public or nonprofit organizations change when we view them through the lenses of change? There is a paradox, especially in the public sector, wherein organizations simultaneously stay the same yet change. Public organizations are expected to stay true to certain values and traditions, but organizational life is not motionless. Change happens, and healthy organizations are ones that can adapt to changes.

Confucius once said, “What I hear, I forget, what I see, I remember, what I do, I understand.” It is not enough to alter practice or action; we must alter behavior, which is action plus intention. To change an organization is to make something different, set a new goal, transform, transition, or strategically innovate in the name of organizational improvement. It is important to talk about change because everyone faces increasingly fragmented, evolving, and complex situations. Public administrators must be aware of the need for change and of various orientations toward reacting and adapting to it.

Change is part of individual and organizational life. It just occurs. Circumstances and attitudes impact the way we adjust to change. Do we see change as an opportunity or a negative event? Is it expected, so we can plan for it, or unexpected, so we cannot?

For purposes of this chapter, we must clarify that there are different kinds of changes: organization-wide versus departmental, strategic, procedural, incremental, sudden, or collaborative directed from above or others. The point of considering types of changes is not to develop an exhaustive or mutually exclusive list that allows for conclusive selection of strategies but rather to recognize that not all change is the same and that the differences may imply variations in change-management approaches. So while organization-wide change may be more about changing things like mission, structure, major processes, technology, partnerships, collaborations, mergers, or totally new administrations—things that impact and transform the way the entire organization works at a fundamental level—process change may focus on procedures for production of goods or services, practices of information dissemination, or methods of decision
making. The strategies and approaches to accomplishing organization-wide change are likely
to be quite different than managing procedure level change. Distinguishing between types of
change enables us to think in more precise ways about what approaches to change are likely to
be most effective in various settings.

Sometimes radical changes happen, and then it’s about reacting and dealing with the after-
math in effective and well-planned ways. We will touch on that, but we are primarily talking about
planned or anticipated change at the level of an entire organization. It is important to note that all
change is not easy, anticipated, good, or bad. Change can be positive or negative—anticipated or
unexpected—but change happens. It is the attitudes about and reactions to change that determine
whether we sink or swim.

Organization theory (OT) has evolved over time to reflect changes in focus on the actual
change agent. Thinking has gone from the manager as a change agent—reminiscent of Frederick
Taylor’s scientific management thinking in which change was done to individuals and organi-
sations, to people as change agents—to thinking that is evident in work done by Mary Parker
Follett and the Hawthorne studies, where change is done with individuals.

According to William Bridges, transition is the psychological process that accompanies
change. How we adapt to change influences the outcome. Change requires transformation,
which involves the following:

- **Ending**—loss of attachments, turf, structure, future, meaning, control
- **Neutral zone**—strategies, temporary policies and procedures and lines of authority in
  place. Do what is needed to create cohesion; old issues will resurface—don’t choke them,
  be prepared for them. Keep reasons clear and at forefront of people’s minds so that anxi-
  ety doesn’t lead to escape.
- **New beginning**—new idea at heart of change? Who will make decisions? Vision? How?
  What? When? In what order? How will this fit? Training?

Reactions to change are based either on feelings of threat or seeing the potential benefits of
change. For any change, some may like it and some may not. Some want to stick to old habits
and may feel threatened by the unknown. Some will anticipate the need for change and connect
themselves to the idea proactively. Others might go along with the change rather than openly
support it and wait out the settling of the dust before choosing a course. Others might sabotage
change, resist, or undermine efforts. Not all resistance is bad either; sometimes it helps us to
think about consequences we hadn’t previously considered.

Lester Coch and John French, in a 1948 study of transition, found that the degree of par-
ticipation in a change was directly related to resistance (the more involved, the less resistance). Direct participation, rather than participation by representation, was more effective. They rec-
ommend open and ongoing communication in planning and in implementation of change. There
is great power in just asking someone what he or she thinks. Let go of personal agendas. If you
are the only one who stands to benefit then rethink.

According to John Kotter, a successful model for implementing change (and in some cases
reacting to it) is as follows:

- Establish a sense of urgency.
- Create a guiding coalition.
• Develop a vision and a strategy.
• Communicate that vision.
• Empower employees to act.
• Generate short-term wins.
• Consolidate gains and produce more wins.
• Anchor new approaches in the culture.3

Among the variables that change theorists view as being critical for transformations to be successful are the following:

• **Training**—Do individuals understand their role? Have they been given clear expectations about their work? Do they have the tools or skills to be successful?

• **Information**—Has information about the change been presented to the individuals in a clear and effective way? Are we expecting them to act on issues without giving them all the information? How much information is too much information, and how much is too little? Significant organizational change may require input from employees because they know the whys and reasons for change before it occurs.

• **Participation**—Why are folks not participating? What would motivate them to participate more? Will engaging them in organizational issues actually increase their participation? If folks have limited amounts of time, what forms of participation would be most valuable to the department or organization? Group participation in planning change reduces their resistance to it, decreases turnover during and after changes, and accelerates relearning curves.

• **Support**—The minute a change is implemented, the gravity of old ways begins to pull against new behaviors. In the beginning, novelty can be an adequate source of energy, but over time a deeper and more sustainable force must be found. Once folks become motivated, how do we keep up the momentum? What can we do to continually support their efforts so they don’t lapse into inactivity and disengagement again?

In the following sections we describe four distinct models of organizational change. We do so, as we have done with our examination of other organizational activities, by first examining the assumptions associated with the approach to change. Our examination of the assumptions imbedded in each approach serves two purposes. First, the theoretical assumptions allow us to demonstrate the explicit and implicit connections between these models and the theories we outlined in Part I. Second, by outlining the assumptions, we give you the opportunity to explore the extent of their validity, and the implications of that assessment on practice. In other words, if the assumptions on which an approach is grounded are valid, the likelihood of success would seem greater. If, however, the assumptions are dubious, at least in some contexts, then the efficacy of the approach bears closer examination. Beyond the outline of the assumptions of each approach, we also describe the core techniques advocated within each model as a way of providing a preliminary map of how administrators can implement these approaches in their current or future organizations. Finally, we conclude our exploration of each model with a description of expressions of the model in contemporary public affairs settings. We’ve attempted to identify and describe real, contemporary organizations that have intentionally or implicitly adopted the techniques we’ve described, and we have endeavored to describe these settings so that you can critically and contextually consider their use.
Part II: Issues, Strategies, and Tactics

Key Theories of Change

As was the case with our approach to earlier management issues, there are many models and theories of organizational change. In the following pages, we examine four different models that are largely distinct from one another: business process reengineering (BPR), the Burke-Litwin change model, action research oriented organization development approaches, and chaos and complexity theory approaches to change. These are not the only theories of organizational change to be found in the literature, but they are among the most widely considered in practical and academic treatments of change, are used and considered widely, and offer interesting analytic and action possibilities.

One thing you should look for and give consideration to as you examine each of these models is the extent to which these models can be differentiated from one another both conceptually and in practice. As we have done in the previous chapters in Part II, we begin our examination of each model with a description of the assumptions, epistemological and ontological, that underpin each. We then present and examine some of the specific approaches and techniques that can be adopted by managers and administrators and conclude our treatment of each with a description of how these models appear.

Business Process Reengineering

BPR is a change management and performance improvement strategy, originally developed in the early 1990s, that focuses on the examination and redesign of work flows and work processes. BPR is intended to help organizations fundamentally rethink how they do their work as a means of substantially improving performance in areas of customer service, expenditures, or resource use as a means of becoming more competitive and more efficient.

In 1990, Michael Hammer authored an article in the *Harvard Business Review* titled “Reengineering Work: Don’t Automate, Obliterate.” A management and information technology (IT) consultant, Hammer argues that the emerge of powerful information management technologies afforded organizations the opportunity not to just speed up existing work processes but to radically rethink the way work was done. In his words, the idea was to “use the power of modern information technology to radically redesign our business processes in order to achieve dramatic improvements in their performance.” At its core, BPR entailed identifying and breaking away from fundamental assumptions and rules that have guided operations overtime. Anything less than an examination of these assumptions and the associated technologies (processes by which inputs are turned into outputs)—many of which had been in place for decades, if not to the Industrial Revolution itself, without being evaluated—was merely a “rearrangement of the deck chairs on the Titanic.”

Within a few years of this first reengineering article, Hammer in collaboration with James Champy, Thomas Davenport, and others had built an extensive model for changing the core working processes of organizations not only in the United States but around the world. At the same time BPR was emerging, Osborne and Gaebler were advancing their work on
the reinvention of government, and Al Gore was advocating for administrative and efficiency improvements in the federal government under the National Performance Review initiative and eventually the Government Performance and Results Act. The conceptual parallels between BPR and new public management will be described further after looking at the assumptions animating BPR.

**Assumptions**

The assumptions underlying BPR are rarely directly identified. Eliezer Geisler identifies a set of what he describes as critical beliefs that share by BPR initiatives in his book *Managing the Aftermath of Radical Corporate Change.* Imbedded in Geisler’s description of shared beliefs are a set of underlying assumptions about the core nature of organizations, actors within organizations, and what can be known. In other words, Geisler’s description reveals a set of ontological and epistemological assumptions contained in BPR.

The first of several beliefs shared by BPR initiatives is that **vision proceeds obliteration.** Breaking that claim down in reverse order, a central premise of BPR since Hammer’s first description of it in his *Harvard Business Review* article, is that “obliteration,” or radical change in work processes, is required in order for dramatic performance improvements to occur. Here, vision, or a strategic “blueprint” of what the organization will be and how it will get there, is required for reengineering initiatives. With such a vision in place, obliteration of work processes will allow organizations to accomplish dramatic course changes. Geisler points out that imbedded in this conception of change is that a complete vision of both the critical and routine attributes of the organization, all the way down to basic work processes, is necessary for this sort of reengineering change to be possible and effective.

A second belief of BPR is that managers, as well as leaders, have a **full understanding of work processes.** In other words, accurate, timely, and adequate information—not even full or comprehensive information—can be acquired and transferred from line or operational levels of the organization, to mid-managers and ultimately to leaders.

BPR efforts also share a conviction in the need for and availability of **unabridged, unbiased, and definite evaluation criteria.** In order to assess and subsequently enact radical work process change, organizations must have valid and definitive criteria by which to evaluate existing work processes. Organizations must know, with no uncertainty, what improvements result from which changes and what level of change.

The drive to obliterate also reveals a presumption about the **obsolescence of current logic.** As much as we may experience some organizational practices as being ridiculous under some conditions, the existence of those practices doesn’t emerge without some motivating rationale. Organizational practices and policies emerge from experience, have intentional design attributes, and are developed with some instrumental function or purpose in mind. This is also not to say that, as John Meyer and Brian Rowan indicate, that organizational processes don’t become decoupled form their original intent or function either. However, BPR operates from the notion that whatever original logic existed, it is no longer valid. This presumption reinforces the assumption noted that the world operates in essentially positivist ways and that we can know those ways. Changes in the environment of an organization may be the driving force behind the need to abandon old logic for new, but underlying that causal force is a world that operates in stable ways and study of it can yield stable knowledge.
In the previous chapter, we described quality-based and continuous improvement management approaches like total quality management (TQM). BPR departs from these management theories in asserting that *improvements are no longer enough*. The claim that constant, systematic improvements are insufficient in current environment suggests a model of change in the environment that is characterized by punctuated equilibrium. If obliteration of old processes is necessary, but the new processes are assumed to be sufficient for some period of time, then the environment must have gone through significant turbulence followed by relative stability.

Finally, Geisler argues that BPR operates from a belief that the culture of organizations is relatively transferable or malleable. If change initiatives result in the abolition of old processes and the replacement of them with new and dramatically more efficient and effective ones, then the existing culture under the old processes—if functional and supportive of organizational objectives—must either be transferable into or sufficiently flexible to adapt to a new set of practices.9

Contained within these notions are at least two other deeper sets of assumptions. The first is more obvious but bears some scrutiny in its implications for the applicability of BPR in governance settings. BPR improves the performance of organizations by obliterating old work processes and replacing them with new ones that are substantially more efficient, allowing organizations to produce or accomplish more with the same investment of resources. In any situation where public resources are being expended, and particularly in tight or declining fiscal climates, enhancing efficiency is a reasonable strategy. In this way, BPR shares a perspective with new public management, and inefficient processes are assumed to have unacceptably high transaction costs. The question is, what are the transaction costs and why are they there? As noted previously, organizational processes and procedures evolve in order to serve some organizational function. BPR assumes that whatever that function may have been in the past, the environment has to change sufficiently to require its radical reexamination and reengineering. There are functions in public and nonprofit organizations operating in governance environments that encounter transaction costs that exist not because of shifts in the environment but because, as Graham Allison points out, we have different expectations of public sector activities in terms of transparency, equity, accountability, and other values. Reporting, oversight, review, and regulation activities that don’t directly contribute to the output efficiency of the organization may be critical to the organization’s function nonetheless.

There are also two other deeper and interrelated assumptions in BPR as well about the nature of organizations and what can be known of them. One is a belief that organizations and their work processes are objective and stable and that they operate in ways that comport with basic rules applicable in fairly universal ways. There are “laws” of governing the basic behavior of humans and thereby the organizations they population. The second assumption has to do with the nature of knowledge. In this case, that knowledge is objective and that conclusive knowledge exists and can be acquired by and acted upon by the organization. The claim reveals an extension of the assumption that was previously described—that the organization can be known in no uncertain terms not only by leaders but by staff at all levels of the hierarchy. Embedded in this assumption are claims. They are rooted and, correspondingly, they can be known in this way by leaders or change agents.

Assumptions about the nature of the world (ontology) and what can be known about it (epistemology) bear some interrogation. Geisler points out that BPR assumptions about knowledge for radical change, both in terms of quantity and quality, are problematic. The notion that
a “full understanding” is possible, or that unabridged, unbiased, and definitive evaluation data be available is problematic given the complexity of organizations and their environments, the potential impact of small quantitative changes and the potential for distribution of that knowledge across the organization. The notion of unity of comprehensive actionable knowledge is also in tension with the organizational reality that vision, even in the most coherent of organizations, rarely enjoys high levels of unity for long. Again, conditions of complexity and diversity of activities and personnel as well as limitations of comprehensive communication, all serve to challenge the possibility of complete or shared vision, let alone the knowledge require to evaluate let alone obliterate and reengineer new processes.

We noted previously that BPR and much of the early energy and thinking about reinvention, new public management, and BPR emerged at roughly the same time. Beyond timing, there are strong conceptual parallels as well. Christopher Pollitt identifies five core beliefs of managerialism, which on reflection are shared here too.

1. The main route to social progress now lies through the achievement of continuing increases in economically defined productivity.

2. Such productivity increases will mainly come from the application of ever-more-sophisticated technologies—communications, production technology. The larger, multidivisional form is now dominant.

3. The application of these technologies can only be achieved with a labor force disciplined in accordance with the productivity ideal.

4. Management is a separate and distinct organizational function and one that plays the crucial role in planning, implementing, and measuring the necessary improvements in productivity. Business success will depend increasingly on the quality and professionalism of managers.

5. To perform this crucial role, managers must be granted reasonable room to manage.

These beliefs and assumptions should be apparent in the techniques and practices associated with BPR.

**Techniques and Practices**

Because organizations are diverse and their work processes complex, there is no single turnkey or step stage approach to BPR. However, there are a set of common organization elements that tend to be the focus of BPR initiatives. Not surprisingly, the first element is the work processes of the organization themselves. BPR adopts any number of specific techniques or approaches to improve work processes by reducing duplication of activities or efforts, reduce unnecessary complexity, and eliminate unneeded transaction costs such as control or information management processes. For example, Hammer admonishes organizations to subsume information processing work into the real work that produces information in the first place and to capture information once and at the source. Hammer and Champy advocate for efforts to ensure that unnecessary checks and controls are eliminated and that hand-offs and reconciliations are minimized to the greatest possible extent.
BPR initiatives also focus on shifting the attention of the organization from activities to outcomes. Hammer and Champy make this point explicitly in their argument that results rather than activities should be the focus of performance evaluation and compensation systems in the organization. They also advocate shifting both practices and culture in such a way as to emphasize production over protection. Hammer also makes this point in emphasizing the importance of organizing around outcome rather than tasks.

Consistent with efforts to streamline processes and focus on outcomes, BPR also expresses a shift in thinking about how and where decisions are made. Hammer advocates that organizations move to processes that place the decision points where the work is being done rather than locating it in a more centralized node with designated supervisors or “deciders.” The logic of centralized decision has typically been linked to the importance of efficiency, consistency, and standardization. If decision making is decentralized, the likelihood of unnecessarily duplicated search processes, variation in criteria and approach, and general inconsistency increases. Hammer suggests that rather than vesting control for ensuring consistency and continuity with supervisors, control can be built into the processes. Hammer and Champy later reiterate this notion that decision making should fall to workers and not managers, in no small part because those who do the work are in a better position to understand both the needs of the end user and the unique contextual factors that shape the potentially successful decisions.

This shift in decision making hints at another broad attribute of BPR initiatives with respect to personnel. In practical terms, Hammer and Champy describe the need to combine jobs in ways that support the integration of processes described previously. They also recognize the importance of formalizing work process shifts and point out that position descriptions need to be revised correspondingly to reflect broader and more multidimensional work. In no uncertain terms, Hammer and Champy encourage organizations to empower people rather than control them. Correspondingly, as decision making is distributed and empowerment increases, the locus of responsibility changes as well, being vested with those individuals. As the role of those doing the work expands and evolves, Hammer and Champy also see that the role of managers and supervisors must adapt as well. Rather than being control points, BPR suggests that supervisors and managers in the reengineered organization become facilitators and coaches.

In addition to these changes—the focus on work processes, a results orientation, decision points, and shifts in personnel responsibilities—BPR also gives attention to the structure of the organization. Hammer and Champy advocate flattening the organization. It’s important to recognize that doing so is both a strategy in and of itself and a consequence of many of the other organizational attributes BPR seeks to improve. As a stand-alone objective, structural changes like reducing the hierarchy can be viewed as a way to reduce the overall complexity of the organization. Reducing the levels of hierarchy can have the effect of streamlining communication channels and decision cycles. And other BPR changes, such as streamlining working processes, expanding personnel responsibilities and position descriptions, and distributing decision-making authority all have the potential to result in a flatter organization as well.

In fact, this mutually reinforcing relationship between hierarchy and other focus elements of BPR is typical for each of those elements. For example, shifting personnel priorities, roles, and
responsibilities is mutually reinforcing of decentralized decision-making systems. The evaluation and redesign of work processes, especially when driven by line-level knowledge held by workers, supports and bolsters both personnel and structural changes.

Case 7.1

Current Expressions: Business Process Reengineering at the Jefferson County Alabama Board of Personnel

In 1974 two separate class action suits were filed against the Jefferson County Alabama Board of Personnel alleging violations of the Civil Rights Act. Through a series of rulings and negotiations among the parties to the suit, a consent degree was crafted that required the board to take certain actions to mitigate against the effects of the past and to ensure no future discriminatory practices would occur. In 2002, the US District Court in Alabama held the County Board of Personnel in contempt and appointed a receiver to take over the operations of the board. As a part of the ruling, the court also ordered other actions to be taken to update and ensure that the work processes used by the board would be brought into compliance with the Civil Rights Act.

In 2004, after the appointment of the receiver, the board began the implementation of a new human resource information management system (HRIMS) that was designed to respond to issues identified in the court’s contempt ruling. The new HRIMS was designed to replace a legacy system. The legacy system was highly inefficient and left the board struggling to meet its mission, let alone the performance standards established by the court.

While these circumstances are not typical of most BPR initiatives—let alone those in the public sector—the focus, approach, and elements of the initiative are very much at the core of BPR processes. The design and implementation of the new HRIMS resulted in a phased approach, which embodies important elements of the BPR model described by Hammer and Champy, Davenport, and others. The five phases, according to Roger McCullough and Ronald Sims, are as follows:

1. visioning—creation of a high-level business vision
2. scoping and planning—development of a detailed implementation plan
3. designing—development of detailed designs
4. constructing—building the new organization structure
5. implementing—validation of information and business processes

First, recognizing that the new system would present and require change not only for the board itself but also for all of the agencies and municipalities served by the board, a management plan articulating a high-level business vision was created. The plan was created in such a way as to keep the involved jurisdictions engaged in the design and development of the system throughout the project.

The scoping and planning phase focused on ensuring that the new system would meet several organizational objectives, including the following:
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- radical efficiency gains including cycle time reduction
- improvements in high-impact areas, a reduction in manual or duplicative data collection and entry
- flexible and scalable IT infrastructure that could be more responsive to customer expectations and business requirements
- access to operational data in a way that approaches real time availability

These attributes reflect the efforts of the board to create systems that focus on results, subsume and integrate information processing, and move to a focus on production rather than process for the sake of process.

As the HRIMS was developed, detailed test scripts were crafted to confirm the software’s support for new business processes. The design process was crafted to intentionally and carefully replace antiquated legacy systems that had been in place of decades and that had spawned countless high labor and low return processes and procedures. Initially much of the design was tested for validity and reliability in an isolated environment, but ultimately the system was crafted such that multiple data sources and processes could be effectively integrated and streamlined.

Finally, after systems options, parameters, tables, security roles, and authorizations were established in a test environment, interfaces and integration strategies needed for passing information between systems and for reporting processes were developed for implementation. In addition to supporting the integration of work processes at this stage, the validity of the strategies and processes were validated by external consultants, but the validation was done with significant, explicit support from top administrators and with awareness that the shifts in process had a short-term negative impact on productivity while the transition occurred but that as gaps were closed and processes became institutionalized, quality and efficiency would exceed old performance levels.

As we noted at the front end of this case, the impetus for this reengineering effort was a court order rather than changes in market demand or community need as would typically be the case in a BPR initiative. Nevertheless, this initiative does embody many of the attributes described in the conceptual literature developed by Hammer, Champy, Davenport, and other BPR advocates.

Business Process Reengineering: Summary and Conclusions

BPR is an approach to organizational change that has garnered fairly widespread attention in that it promises dramatic performance improvements. The apparent promise of BPR is couched in terms that are contained within a relatively simple set of principles and phases. The model does retain some elements of systems thinking in that BPR focuses awareness on how elements of the system function effectively together, but its promise seems greater than other systems theories like TQM in arguing that incremental improvement isn’t enough. However, as we noted earlier in this section, there are assumptions within BPR that pose difficulties, specifically the possibility of having exhaustive knowledge or understanding of critical work processes in highly complex production, social, political, or other environments seems increasing challenging. Regardless, the language of change through BPR practices resonates well within the current administrative and political climate that seeks to dramatically improve performance and to do
so while containing or reducing transaction costs. As a result, it seems likely that BPR will continue to be an important influence on change strategies into the future.

**The Burke-Litwin Change Model**

The Burke-Litwin change model is grounded in an open systems framework. As W. Warner Burke and George Litwin state, “We strongly believe in the open system framework, especially that represented by Katz and Kahn.” As such, Burke and Litwin’s model functions with a presumption that the organization is grounded in and open to the wider environment and that its relationship with that environment is characterized by a basic input-throughput-output-feedback loop cycle.

The external environment, in open systems models, serves as the source of inputs, and individual and organizational performance are the outputs. The other elements of the model are the central throughput features. In terms of thinking about the relationship between the organization and its environment, it’s worth noting that the feedback loop includes a bidirectional arrow as a way of revealing that the relationship is mutually influential. Change in environmental condition obviously has an impact on the organization, but the organization too, has the capacity to influence or impact the environment as it provides services, regulatory interactions, and so forth.

So to be clear, the factor that most likely triggers organizational change is the external environment. Within Burke and Litwin’s model, the sort of change that receives attention is at the level of the mission, culture, leadership, and its operating strategies of the organization.

Their model of change centers on developing an understanding of the cause and effect relationship among twelve organizational dimensions that are key to organizational change. Let’s take a look at how this change model can make the process easier.

All the affecting factors put together affect the motivation level of the individuals in an organization, which in turn impacts the overall performance.

**Assumptions**

Like BPR, the Burke-Litwin model adopts elements of a systems perspective on organizations and the mechanisms of change within organizations. For example, a key assumption is that the organization is open to its environment and receives direct and important feedback from the environment. The Burke-Litwin model also sees the organization in terms of a complex set of relations between critical attributes of the organization (see Figure 7.1). And finally, the model sees the relationships between these attributes as highly complex and variable and largely mechanically causal.

In describing the development of the model, Burke and Litwin acknowledge that while the model is informed by existing conceptual work, including open systems theory, the model largely emerged from their management consulting work. As such, their model seeks to facilitate change and improvement of performance either in the organization as a whole or within subgroups of the organization by creating and improving various internal and external links—between and among throughput factors. This change model is based on assessing the organizational as well as environmental factors that can be affected in support of successful change.
Figure 7.1  Burke-Litwin Change Model

Before describing specific practices under this change model, it’s important to understand the overall structure and operation of the model. Consistent with an open systems approach, the external environment box represents the source of inputs for the system, and the individual and organizational performance box represents the outputs of the system. The model also includes a feedback loop consistent with Daniel Katz and Robert Kahn’s work as well. All of the other factors within the model represent the critical throughput aspects of organizations. Burke and Litwin subdivide the throughput portion of the model into two separate sets of


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factors. The first set, which they describe as transformational factors, includes leadership, mission and strategy, and organizational culture. Drawing on James McGregor Burns' work, Burke and Litwin describe transformation leaders as those who bring about broader or more fundamental change in their situation, be that the organization, community, or some other setting.16 This notion of leadership and change is also parallel to Abraham Zaleznik’s work distinguishing between leaders and managers.17 Leaders who focus on operations at this level tend to have a more fundamental impact on the nature of the organization, its mission, and its fit within a broader environment. In other words, this level of leadership and change is also parallel to Selznick’s notion of critical decisions.

The second set, or transactional factors, includes management practices, organizational structure, systems and policies, work climate, task requirement, motivation, and individual needs and values. Burke and Litwin see operations at the transactional level as just that: a series of transactional if-then interactions with workers. If you, the worker, do X for me, I as the manager will do Y—likely provide reward or remuneration—for you. Burke points out that while change can occur at this level, that change is not likely to be at a deep level, or one fundamental to the organization.18

- **External environment**: This is the factor that generates the need for change in the organization. While not a homogeneous factor, the external environment is the source of energy or inputs that drive both regular operations and create the need for change within the organization, or at the level of throughputs.
- **Mission and strategy**: The vision, mission, and the strategy of the organization, as defined by the top management, provides a set of guiding and orienting claims about the central character and orientation of the organization.
- **Leadership**: As prior research has shown, leadership can have a significant impact on the performance of the organization and is closely linked to its mission and strategy, both in terms of establishing mission, visions, culture, strategy, and so on but also in terms of creating a climate where actions are consistent with stated directions.
- **Organizational culture**: While not working from Schein’s model of culture specifically, Burke and Litwin’s understanding of culture is consistent with a model that includes artifacts, espoused values, and underlying beliefs and assumptions.
- **Structure**: Consistent with our discussions of structure throughout the book, the study of structure should not be confined to formal or hierarchical structure but instead needs to be inclusive of other stable patterns of behavior within the organization.
- **Systems**: Systems include all types of policies, procedures, and organizational practices that involve both the people and the operations of the organization.
- **Management practices**: The management practices are the specific things that managers do to support the organization’s activities to accomplish the mission. For example, this might include what managers do to encourage subordinates in their efforts.
- **Work climate**: Although somewhat abstract, climate is something we have a feel for and might best be articulated in terms of workers’ perceptions of how well they feel they are managed, how they feel about how expectations are established and maintained, how they feel their performance is or is not recognized, and so forth.
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- **Tasks and skills:** Most concisely or simply, this is the instrumental person-job match and is focused on the knowledge, skills, and abilities (KSAs) of employees to accomplish the duties of their positions.

- **Individual needs and values:** If tasks and skills have to do with the fit between the person and his or her ability to do the job, this factor has to do with the extent to which the job is able to fulfill needs and values of individuals. This and the last one (*tasks and skills*, and *individual needs and values*) represent two major influences on the subsequent factor: *motivation*.

- **Motivation level:** Motivation as well as climate and culture are concepts often discussed in organization settings but seldom defined with any precision. One useful way of thinking about motivation is to consider it in terms of arousal to engage in activities that enhance achievement, affiliation, and esteem.

- **Individual and overall performance:** This factor is the output of the system model and can include measures of individual and collective measures of productivity, quality, efficiency, budget performance, customer satisfaction, etc.

As we previously noted, Burke and Litwin acknowledge that their model is a simplification of the complex reactions that exist within and among all of the factors that they identify in their model. That model is also a simplification in that each one of the factors may well be exploded into further subsystems and greater complexity as well. When considering the systems factor, for example, it should be understood that the way that policies, practices, and procedures are operationalized in many organizations reveals both variation in implementation and use across large, diverse operational structures as well as the downstream effects of those systems. The way in which any unit operationalizes and then implements a given system reveals subsequent practices, which themselves become stabilized into structures and systems of their own.

Finally, in considering the techniques and approaches implied by the Burke-Litwin model it’s also important to understand that the approach to change is not oriented toward a particular set of steps or menu of options. In other words, the Burke-Litwin model is not focused on how to change but rather helps leaders determine, based on new or evolving influences from the environment, what is in need of change. Rather than focusing on utilizing new technologies intended to dramatically reorganize work processes with the end of improved efficiency, or focusing on continuous improvement or flux, Burke and Litwin emphasize the importance of understanding the effect that variation in the external environment has on the broad structures of the organization and what new or different demands emerge from environmental conditions requiring change to one or more of the factors within the throughput elements of the organization. To that end, Burke’s case examples describing the use of the model in change initiatives reveal a variety of techniques that provide benefits of improved diagnostic quality and guidance for change initiatives. Those examples include collection of data, especially survey data, about the system performance and the collective understanding and perceptions of that performance. Table 7.1, then, is a propositional set of areas of inquiry that might be of use in such diagnostic and guidance inquiries. To be clear, the proposals in Table 7.1 are neither exhaustive nor comprehensive. They are merely provided as a starting point for considering the sorts of inquiry that might be useful to an organization as its leaders consider what is in need of change.
Table 7.1  Burke-Litwin Areas of Inquiry

<table>
<thead>
<tr>
<th>Factor</th>
<th>Inquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>A study of the leadership structures and practices of the organization should be conducted with the purpose of identifying the central or shared role models in the organization.</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>A study of organizational culture should collect and examine information on the explicit and implicit rules, policies, customs, principles, and values that shape organizational behavior.</td>
</tr>
<tr>
<td>Structure</td>
<td>Structure should be function-based, focusing on other core factors such as authority, communication, responsibility, decision making, and control mechanisms that exist between members of the organization.</td>
</tr>
<tr>
<td>Systems</td>
<td>Here, study involves the possibility of both quantitative and qualitative assessment of performance, perceptions, and experiences.</td>
</tr>
<tr>
<td>Management practices</td>
<td>Assessment of this factor might include a study of how well the managers conform to the organization’s strategy when dealing with employees and the resources.</td>
</tr>
<tr>
<td>Work unit climate</td>
<td>This is a study of how the employees think, feel, and hope with respect to the kind of relationships they have with their team members and members of units.</td>
</tr>
<tr>
<td>Tasks and skills</td>
<td>Assessment in this area involves developing understanding about specific job positions and its demands as well as the kind of knowledge, skills, and abilities (KSAs) that an employee must have in order to fulfill the position responsibilities. This allows for an assessment of how well jobs and employees have been matched.</td>
</tr>
<tr>
<td>Individual needs and values</td>
<td>Study of this area seeks to understand the employee’s attitude about their work in order to identify the quality factors that lead to job enrichment and better job satisfaction.</td>
</tr>
<tr>
<td>Motivation level</td>
<td>Identifying the motivation level of the employees will make it easier to determine how willingly they would put in their efforts to achieve organizational goals. This would also involve identifying motivational triggers.</td>
</tr>
</tbody>
</table>

Case 7.2

Current Expressions: Burke-Litwin in Texas Public Schools

In 1990, the US Immigration and Control Act was passed by the US Congress and among its provisions was the creation of a new visa category, the foreign professional specialty occupation, or H-1B visa. This visa was created for individuals who hold at least a bachelor’s degree and qualify for a specialty occupation. Public school districts in Texas have been among the highest users of H-1B visas, and the 2010 study by Sergio Fernandez and Lois Wise seeks to
understand this high use level as a change and innovation strategy adopted by Texas public school organizations. Fernandez and Wise's analysis reveals many striking attributes of Burke and Litwin's model and approaches to managing change.

At the very outset of their study, the authors acknowledge the external environment. In this particular case, changes in two sets of inputs—students and human capital—combined to prompt change in organizational practices among various school districts in Texas. Specifically, as the demands for multicultural and multilingual education have increased, and the availability of professionals to fill those needs has remained roughly constant, the use of H1-B visas has increased to the point where US Department of Homeland Security (DHS) reports have indicated that education is one of the leading professional fields recruited under the program.

After identifying the environmental factors that drove organizational change, Fernandez and Wise turn their attention to internal factors, or throughput factors that were instrumental in the adoption of change by the organizations they studied. Although their analysis does not reveal every element of the Burke-Litwin model, it does identify several, starting with leadership as a key transformational factor. Drawing directly on Burke's work, Fernandez and Wise point out the importance of leadership in both the theoretical and empirical literature. More specifically, by operationalizing leadership in part as being focused on perceptions of leadership being instrumental as a change agent, they place their work squarely within the transformational end of the Burke-Litwin model. The results of their study found that leadership, both in terms of the extent to which leaders saw themselves as change agents and the time on the job, which was used as a proxy for leadership experience, was related to the success of change.

Fernandez and Wise also give their conceptual and empirical attention to several transaction factors as well. In discussing the conceptual framework and treatment of that framework in the literature they note several factors including structure, systems and policies, and task requirements. At the structural level, they include factors like organizational size and resulting structural attributes that allow effective coordination as the number and complexity of interactions and activities increase. With respect to systems and policies, Fernandez and Wise recognize administrative practices—in this case specifically in the area of human resources practices and corresponding policies that support change are critical to the success of innovation and change. Finally, task requirement attributes clearly and directly connect to the input characteristics that drive change in the first place. In this case, task attributes include the capacity to provide bilingual and vocational education as well as gifted classes within the districts being studied.

One other attribute identified by Fernandez and Wise bears mentioning here—namely the output factor of organizational performance. Obviously organization performance is the ultimate concern of leaders. Interestingly, however, Fernandez and Wise recognize that while this factor lies at the back end of the model, the factors do have a mutually influential character. Organization performance both influences the larger environment as Katz and Kahn's model indicates, but it also has a direct influence back on the throughput factors of the model, in this case on task requirements as well as internal systems.
Burke-Litwin: Summary and Conclusions

We noted at the outset of this section that it adopts elements of open systems theory and orientation shared with BPR approaches. One of the significant differences between Burke-Litwin and BPR is that the former is less mechanical in its approach to change. In acknowledging the complexity of the systems in which change is occurring, this model is less prescriptive about what should change and instead prompts administrators to think more about how to consider and approach change. In adopting this orientation, the model offers a range of proposition elements to consider. These elements aren’t intended to be exhaustive, nor are they prioritized into a predetermined hierarchy but instead allow members of the organization to conduct their own context dependent assessment from which a change strategy can be developed.

Organization Development

Of the theories of change presented in this chapter, organization development (OD) is the most conceptually diverse and heterodox of the four. OD is an ongoing, systematic process to effectively manage and facilitate change in an organization. OD is known as both a field of behavioral science having to do with understanding and managing organizational change and as a field of scientific study and inquiry drawing on disciplines including sociology, psychology, and theories of motivation, learning, and personality.

OD emerged as a self-identified approach in the mid-1960s as a way to manage organizational change. OD focuses on helping employees change as the organization changes, keeping in mind that it can take time to change basic patterns and assumptions. OD focuses on enhancing jobs by enhancing employees. The aim shifts from the specific job to the person’s career and well-being and pays attention to life planning and intellectual motivations. OD is a form of planned change that includes the values of the OD perspective discussed in previous chapters. It assumes that change is purposeful and is concerned with how change is implemented and the situation in which it will be implemented. OD processes typically utilize outside facilitators (change agents) who diagnose, consult, team build, manage conflict, coach, help set goals, and design task forces to assist ongoing organizational improvement. It comes from the term development group and evolved through T-groups, to be called OD, meaning systemwide change effort. That system can function at any number of different scales including a single work site, multiwork site unit, department, work group, or entire organization.

OD is a planned change process, managed from the top, taking into account both the technical and human sides of the organization and using inside or outside consultants in the planning and implementation of the changes to be made.

—Edgar Schein
Organization development is a process by which behavioral science knowledge and practices are used to help organizations achieve greater effectiveness, including improved quality of work life and increased productivity.\textsuperscript{21}

In the 1950s and 1960s a new, integrated approach originated known as OD: the systematic application of behavioral science knowledge at various levels (group, intergroup, and total organization) to bring about planned change.\textsuperscript{22}

In the late 1960s OD was implemented in organizations via consultants, but was unknown in theory and relatively unclear in practice. Richard Beckhard, an expert in OD and change management, defined OD as “an effort, planned, organization-wide, and managed from the top, to increase organization effectiveness and health through planned interventions in the organization’s processes, using behavioral-science knowledge.”\textsuperscript{23}

Throughout the 1970s and 1980s OD became a more developed area of study and practice, with courses and programs being offered in academic business, education, and administration programs. In the following decades, OD grew and evolved, and its influences could be seen in theories and strategies such as TQM, team building, job enrichment, and reengineering.

OD emerged through the National Training Laboratories’ (NTL) development of training groups known as sensitivity training or T-groups. Work in this area began in 1946 when Kurt Lewin and his staff at the Research Center for Group Dynamics at MIT were asked by the Connect Interracial Commission and the Committee on Community Interrelations of the American Jewish Congress for help training leaders in the community. Initially, the researchers met at the end of each day of training to discuss privately the types of behaviors and group dynamics they had observed during the trainings. The group leaders subsequently asked for permission to sit in on these feedback sessions. Although they were reluctant to do so at first, the researchers finally agreed, and the first T-group was formed in which people reacted to information about their own behavior.\textsuperscript{24}

A second line of OD that was critical to its development and evolution—and that we will focus on here—was the work in action research done by social scientists interested in applying empirical, contextual research to managing change. Kurt Lewin, whose work on leadership and participation we’ve explored already, was instrumental in early work in the development of T-groups and survey feedback and is credited for having coined the term \textit{action research}.\textsuperscript{25} As we noted before, OD is broad and heterodox both in terms of its influences and its expressions. In the following description of OD, we work from Lewin’s approaches and follow that line of work and thinking into an area of OD developed subsequently by a practitioner and theorist, Neely Gardner, who extended the idea of OD in the public sector into an approach described as \textit{action training and research (AT&R)}.

\textbf{Assumptions}

As with all of the theories and models we’ve explored, OD works from a series of assumptions about the world in which it operates, some of which are explicit and some not.

- \textit{About individuals}: Gardner’s approach to OD assumes people strive to grow and make a higher contribution to organizational goals.
• *About people in groups:* AT&R forms of OD assume that people wish to interact in groups and that work groups have great psychological impact on people. It assumes that suppressed attitudes have an adverse effect on the group. It also assumes level of trust and support is lower than it should be.

• *About leadership:* Leaders cannot be all things at all times so groups must assist each other.

• *About the nature of organizations:* Organizations are assumed to be socially constructed, and while there are manifest artifacts of organizations, their activities, and their effects in the world, the organizations themselves are constructed and constituted out of recurring patterns of behavior among members of the organization and those connected to it.

Further, development and change are not merely moments of punctuation. Although Lewin’s initial model of change (unfreeze-move-refreeze) suggests otherwise, OD embraces the idea of the creation and subsequent reinforcement of change, and it explicitly moves beyond the implementation of a change initiative to a long term focus on stabilizing, institutionalizing, and augmenting new activities within the organization. The idea of *development* should be understood as ongoing.

• *About knowledge of organizations:* Within an AT&R approach to OD, knowledge too, is socially constructed. In other words, the important information about what the organization does, why it does it, and how it does it resides within and among those in and around the organization. One of the implications of this assumption is that the critical knowledge required to effectively manage change does not reside with single individuals. Instead, it resides among all those who are involved with the activities of the organization.

• *Inherent values:* People are important, valued, and can grow within organizations. Moreover, work and life are richer if feelings are allowed to be part of the culture. Doing so intentionally and with purpose can support processes to express feeling and emotion in a functional way. AT&R, as its name suggests, has an inherent commitment to research and action. AT&R is an ongoing and interactive process, based on data, goal setting, interaction, participation, and empowerment toward the improvement of the organization.

Several consequences flow from these assumptions and values. One consequence is that OD approaches that share AT&R orientation take the view that we don’t live in a world where the pure bureaucratic machine organization can operate (nor have we ever), but it’s increasingly difficult to make bureaucracy’s component features operate. As such, we have to understand that information flows more widely and rapidly, due both to evolving technology and more open culture, than the bureaucratic model would suggest. We also live in a larger sociopolitical culture informed by political liberalism (legitimacy of multiple and varying interests). And finally, the organizational setting of our work, not just society broadly but of governance organizations specifically, is characterized by ongoing environmental change, both the political environment and the economic environment. Another consequence is that it seems increasingly unlikely that we’re going to identify “one best way” to do the work of structuring and coordinating organizational operations.
**Techniques and Practices**

OD looks at how the organization and its constituents or employees function together. As a form of inquiry, it asks a range of questions that might include the following: Does the organization meet the needs of its employees? Do the employees work effectively to make the organization a success? How can the relationship between employee satisfaction and organizational success be facilitated? Based on such inquiry, OD looks carefully at the human factors and the performance data inherent in the observation organizational relationships. The results of inquiry lead to the selection of OD strategies that can be used to help employees become more committed and more adaptable, which ultimately improves the organization as a whole.

Organizations initiate the OD process when there is a need, gap, or dissatisfaction either at the upper management level or within the employees. Ideally, the OD process involves the entire organization, with explicit support and involvement from upper management and engagement in the effort by all members from all levels of the organization.

Lewin’s model broke this process down into three discrete, distinct phases: unfreeze, move, and refreeze (see Figure 7.2).

- **Unfreeze**—This first step typically focuses on reducing those forces that maintain the organization’s current behaviors or patterns of interaction. Unfreezing is often accomplished through a process of “psychological disconfirmation” or the presentation of information that reveals the inconsistencies, discrepancies, and even paradoxes between those behaviors and practices desired and espoused by the organization and those currently exhibited by its members.26

- **Move**—This step entails changing the behavior of the organization or some portion of the organization to a new pattern. This is the step that is often associated with a more or less formal intervention by an external or internal consultant who brings to bear some technique for engendering new behaviors, values, or attitudes and corresponding shifts in practices, processes, and structures.

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**Figure 7.2  Lewin’s Model of Organization Development**

![Figure 7.2 Lewin’s Model of Organization Development](image)

• **Refreeze**—This final step stabilizes the new behavior. Early OD efforts and thinking viewed this stage as a return to equilibrium. Equilibrium is characterized by a new, more functional pattern of behavior but stable equilibrium nonetheless. Contemporary approaches to OD are more likely to view the new state as being more dynamic, as requiring continued focus, though perhaps not with the same investment of energy and resources as was required in the prior step.

Another important concept that Lewin contributed to our thinking about organization change is the idea of the force field analysis, or a systematic examination of the forces that support efforts toward organization change, and those that work to inhibit or constrain potential change. The simple model of a force field analysis (see Figure 7.3) includes several components. First, it includes a description of the current state or status quo as well as a concise articulation of the desired or future state that is the objective of change. The central feature of the force field analysis is a thorough listing of the driving forces and constraining forces. The driving forces are all of the major conditions and resources present that support the effort to move from the current state to the desired state. The constraining forces are those that present barriers of one form or another to the successful movement of the organization. It’s also important to recognize that the articulation of driving and constraining forces is not merely a list of those factors but rather includes an effort to assign relative weights or strengths to both. Not all forces are created equal, and any effort to create successful change will need to take into consideration an assessment of the relative strengths of those forces. Within the model, the relative strength can be depicted in different ways, including visually—making arrows larger or smaller to depict strength or by assigning relative or absolute numerical weights to each force on both sides of the model.

To start the process, consultants with experience in OD and change management are often utilized. These consultants may be internal or external to the company, with the cautionary understanding that there are pros and cons to internal versus external consultants. Internal consultants might be too much a part of the existing company environment to effectively coordinate and enforce the action plans and solutions required for successful change. Outside consultants might not be around to see their work implemented and might not understand the culture. Also, they might run the risk of “going native,” or making recommendations under pressure from leadership.

Thomas Cummings and Christopher Worley suggest that Lewin’s original change model (see Figure 7.2 shown earlier) has evolved into at least two other action research models associated with OD (see Figure 7.4).

The third model, then, is Gardner’s AT&R model (see Figure 7.5). Several similarities and differences should be recognized among the three models. First, all three make intentional and explicit use of empirical data collected from the organizations. That data—and this is true of all action research regardless of focus or setting—is problem and action oriented. It is collected with the intent of helping the organization respond to a particular problem. Data in action research OD is never collected in the abstract. Embedded in all three is a tendency to use survey or interview data as the basis of its empirical work. All three also have a cyclical feedback or evaluation component. While most OD practitioners recognize the iterative and ongoing nature of development work, Gardner’s circular model most clearly embodies that character.
Because Gardner’s early work developed in a largely separate though parallel track from the scholarly research of Lewin and other pioneers in the field, we believe it is worth identifying the connections between those two lines of work as well as our rationale for reintroducing Gardner to the field. Many of the specific links between Gardner’s working approach and those of Lewin, Chris Argyris, and other action research and OD scholars are described in the following section. Broadly, however, both action research and OD are derived from applied behavioral science and both share an action oriented, data driven, and practical problem-solving orientation. As Wendell French and Cecil Bell argue, “that is why we believe a sound organization development program rest on an action research model.”27 Moreover, in the AT&R model of Gardner, the action is undertaken by people in the organization in an effort to change themselves in terms of their work lives, experiences, and practices through a learning process supported by research of their own actions. This basic orientation links action research and AT&R in a fundamental way. Finally,

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**Figure 7.3  Lewin’s Model of Force Field Analysis**

![Lewin's Model of Force Field Analysis](http://finntrack.co.uk/images/force_field_analysis1.gif)

following the rationale of John Drummond and Markus Themessl-Huber, our reintroduction of Gardner is an effort not to contest existing work but rather to further enrich the thinking and practice of action research and OD.²⁸

Gardner’s thinking and practices, which he describes as AT&R, were not initially informed by the conceptual research being done by social and organizational scholars like Lewin and Argyris but were surprisingly consistent with them. For example, Michael McGill points out Gardner’s move away from expert-based approaches and his oft-repeated claim, “I know very little.”²⁹ Gardner worked in a profoundly participatory way. For Gardner, the responsibility and the knowledge necessary for effective OD permeates the organization rather than residing with an expert. In a directly parallel way, Robert Marshak and Loizos Heracleous advocate for an increasingly holistic understanding of
organizational context. Their advocacy is based, in part, on Argyris and Donald Schon’s, Lewin’s, Schein’s, and others’ understandings of organization structure and culture.

Leadership and development of organizational culture are recurrent concerns throughout the action research literature and are central concerns for organizational practice. One area that Gardner’s work highlights is what he perceives to be the critical relationship between the role of leaders and the impact that role has on the construction of a culture that is imbued with the capacity to internalize and sustain a reflexive development orientation—that is, Gardner’s approach to AT&R and development was essentially oriented toward putting himself out of a job. Through his approach, organizations developed the capacity, culture, and relationship with leadership wherein the reflexivity and robustness of engagement in ongoing practices of action research make OD a way of life rather than an intervention.

While this orientation toward leadership is critical, it also moves sole responsibility and privilege for decisions away from the top of the organization and into a distributed leadership model. Like Lewin, Gardner and many researchers who follow his line of work point out that both responsibility for change and the requisite knowledge to make that change successful reside through the whole organization and not with elite individuals or roles at the top of the hierarchy. For example, John Hook describes the shift that occurs when moving from initial contracting stages in an intervention—when a manager is the sole client—to the point at which the whole organization becomes the client.

The AT&R approach recognizes these attributes of contemporary organizations in several ways. First, like most action research–based approaches, it is participatory. It is participatory not because participation is inherently good, which it may or may not be, but because participation well managed can elicit critical information that makes the likelihood of success greater. It brings

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**Figure 7.5** Gardner’s Action Training and Research Model

![Gardner’s Action Training and Research Model](image-url)

more information and data to the table, reduces the chances of unanticipated consequences, and it develops a shared understanding of the situation and in so doing helps avoid blocking behaviors. Along this line, it is also context driven, not ideologically driven. AT&R recognizes that each situation has important attributes that combine in unique ways. This emphasis on context implies that “improvement” is a functional consideration—negotiated and renegotiated—not predetermined, static, or immutable. Finally, it also means both the process and the desired outcomes are flexible and adhere to the notion that “what works” can change.

The AT&R is a process approach (not outcome approach) in that there are no prescribed outcomes resulting from the process. There are no particular authority or power or communication structures, no particular communications or decision processes, no prescribed policies or procedures. Also, as will be seen with the last stage in the cycle, the process is ongoing. It implies the continuous development of the capacity of the organization. It also means that the cycle is iterative and that while it’s presented in a circle or cycle to demonstrate the looped nature of the process it’s also possible to move backward or across the cycle if necessary. Finally, while it does have a bias toward participation over time—and that bias is more practical and the process is oriented toward data driven change—the position on participation is more practical than it is an ideological position (see Table 7.2).

Table 7.2 Stages of the Action Training and Research Process

<table>
<thead>
<tr>
<th>Stage</th>
<th>Action Component</th>
<th>Training Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>This is the opportunity to raise and answer questions that support the development of trust between parties. This is also the time to learn about the nature of the setting being studied and the manner in which the process will occur. All clients should come to understand that this process is highly participatory and tends to highlight the position of the individual and diffuse sources of power. Effectiveness is based on the perspectives of the individuals doing the work and the organization as a whole.</td>
<td>The implicit training that takes place at this stage is partially about participatory management, the establishment of trust, the action and training processes, the range of possible actions, and outcomes.</td>
</tr>
<tr>
<td>Contract setting</td>
<td>A contract need not be written, though a memorandum of understanding may be useful. Contracts from this action research perspective should be considered psychological agreements, derived through open and tough-minded interaction. During the contract-setting process, participation is made meaningful to the extent that the consultant is able to model and elicit effective and authentic communication. It should be a model and example of the sort of interaction that will be the basis of all future interaction.</td>
<td>Training is focused on process skills necessary for the process ahead—active listening, leveling or self-reflexive or other regarding speech (at the least, I statements—more sophisticated leveling would include recognition of how one’s assumptions appear in speech, reaction, etc.), values analysis.</td>
</tr>
</tbody>
</table>

(Continued)
### Stage

**Reconnaissance and exploration of the issues**

Exploration is the action; this is not an exhaustive study of the situation and issues but an estimate of the situation. It’s based in data relevant to the change project and may evolve into a collection of perceived opportunities, problems, and potential solutions.

Exploring issues can be understood as a sort of brainstorming. The idea is to examine what we see as issues in the organization without getting too deeply involved with identifying the problems, opportunities, or solutions.

Trainers can help client and researchers to become aware of their values and preconceptions in order to minimize the interference with the data collection. It is not essential that clients participate in the reconnaissance process, but it is useful. Clients appear to receive a fair amount of education by being involved in the data collection.

The training impact here is a significant contribution to the cohesiveness of teams through participation and exploration of issues through processes including brainstorming techniques.

### Action Component

Activities at this stage are directed toward developing a “feel for the situation.” Data collected from the reconnaissance stage is classified and tested for agreement and degree of importance. If the problem identification is occurring in a group that owns the information, the task is to develop agreement if not a consensus.

### Training Component

Training helps build skills and methods for ongoing problem identification and problem solving.

### Identification of problems and opportunities

In AT&R processes, aspiration refers to the issues that people would like to influence as they begin to solve their problems and exploit their opportunities.

One approach that can work well is to organize the issues at this stage (now that problems and opportunities have been identified). The participants can convert the descriptions into “how to” statements or questions. This process (aspirations, data analysis, definition of strategic action steps, etc.) would typically be done in a workshop or retreat setting, though any venue that facilitates interaction could be used—groupware, Internet chat rooms, focus groups, etc.

Through the training function at this stage, the organization is developing the skills and capacities associated with setting goals, writing objectives, and creating vision scenarios.

### Aspirations

Any number of analytical methods might be used to examine high-priority action options: force field analysis; strengths, weaknesses, opportunities, and threats (SWOT); assessment; and any systems or data analysis tools or problem-solving methods.

Training is focused on helping participants build the capacity to determine what significant action options seem attainable, which require further exploration, and which must be deferred until the critical constraining vector is removed or neutralized.

### Development of action options

When clients agree to undertake a change, they are predicting success. Even though the change action is based on carefully

At this stage, participants test and further develop their ability to determine which assumptions about the
### Chapter 7: Affecting Organization Change

#### Stage Action Component

developed data, the experimentation stage is a logical safeguard in a process in which all the action is considered conditional and subject to testing in a tentative and time-limited way before the change is fully operative. Research designs at this stage might include participative team building, group work dynamics, systems, and work flow analysis.

#### Training Component

issue, problem, or opportunity are most critical to people and to the success of the changes envisioned.

#### Experimentation results analysis

The primary effort at this stage is the assessment and evaluation of the results of the prototype implementation. Efforts at this stage are directed toward answering questions such as the following:

- Are we doing what we said we would and as well as we said we would (formative and summative evaluation)?
- What new data do we need?
- Shall we go ahead with the change action?
- What can we do to adapt the change that will improve it further?

Training at this point includes survey and feedback processes, and research methodologies.

#### Program design

The next step then is designing the continuing program for change following the analysis of the experiment. Here, participants are learning program-project design and management methods.

#### Implementation

There are many ways to introduce and implement a program. By this stage in the AT&R approach, however, it is hoped that those affected know about and have participated in the decision to implement the change initiative. There is considerable merit in using the process known as the risk approach in disseminating information concerning change initiatives. In this process the affected persons are brought together and invited to contribute two types of feedback: critical comments and suggestions for overcoming the problems identified.

It is called a risk approach because frequently changes are called for that are necessary or expedient and that ask for redesign or even abandonment of the proposed program.

This includes participative management, work group dynamics, project management, and research methods. Constantly cycle back through previous steps with the new knowledge learned from the current step. Document the process as you go along. One major research obligation for SEAR projects is to add to the body of knowledge about changing organizations. Each new action step is an opportunity for new knowledge. The first to benefit from this new knowledge should be the project participants themselves. Therefore, it is paramount to maintain this iterative approach at every step.

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(Continued)
Having presented the “stages” or steps in the AT&R approach, one other critical aspect of this change should be recognized here. As Raymond Bruce and Sherman Wyman point out, and Gardner acknowledges as well, the AT&R process is best understood as a menu not a recipe. Because it’s iterative and because organizations might start at any of the various stages of the process, the menu metaphor better captures the flexibility of the process.36

One of the key strengths can be found in the observation that organizations are collections of individuals and the entirety of the AT&R process works at that level. We have become increasingly aware, since the Hawthorne experiments, that organizations are complex compilations of individuals who interact in structured ways. Those structures are both formal and informal and range from highly productive patterns for the organization to highly dysfunctional patterns. But because they emerge from the interaction of individuals, crafting a change process that works from individuals to the organization creates a more robust set of outcomes that emerges from those dynamics rather than being overlaid on top of those dynamics. AR/OD, by embodying the variability and flexibility entailed in Gardner’s model, has the potential to better engage the interactive character of organizational behavior.

Moreover, the process is flexible as well as being clearly oriented to the specific context of the organization. Within that context, it is also highly data driven. Empirical evidence indicates that experience works better than pure reason; if you experience the processes, if you experience the change, you’re more likely to embody it in the future.
Case 7.3

Current Expressions: Organization Development in the Montana State University Research Library

In early 2008, library administration at Montana State University (MSU) began the process of acquiring compact shelving as a partial response to ongoing discussions about space constraints in the Renne Library Building. In a separate but parallel process, the dean of the library created the diverse group focused on leadership, professional development, and training, as a part of her efforts to generate greater engagement with library employees in support of organizational decisions and initiatives. The group was comprised of classified, professional, and faculty members from across the library’s teams and was created to support the dean’s efforts to enhance professional development opportunities within the organization.

In the spring of that year, the dean; the chair of the Leadership, Education Ability, and Potential (LEAP) group; and an outside consultant who is director of the MSU public administration program began a series of preliminary conversations about the possibilities for further developing the participatory culture of the library and its staff. During these discussions, two issues emerged. The first and primary issue was the library’s need to do short-term strategic planning around the use of space and the acquisition of compact shelving. The relevance of space discussions was heightened in the summer of 2008 when a significant gift for the planned development of an “information commons” in the library was announced. Taken together, the addition of compact shelving and the conceptualization of an information commons created an opportunity for the library to consider a wider range of issues about physical space use, including the location of collections, the services provided, and how these are prioritized relative to the library’s vision and mission within the larger university. A secondary discussion focused on the possibility of using a space-planning initiative to enhance the library’s capacity for ongoing functional and cultural development. It was felt that discussions about the use of space provided a unique opportunity to build on the cultural development work already being done by LEAP.

The specifics of the process used here were heavily influenced by both Gardner and Bruce and Wyman.37 This approach was used for the project because the intent of the project was to develop a change plan for the organization out of a minute and nuanced understanding in an effort to develop a rich or thick description of the relationships, processes, and activities of the organization that would both enhance the likelihood of success and reduce the chance that significant unanticipated consequences would emerge. The AT&R process encompassed two broad goals—to elicit relevant information about critical issues from across the entire organization and to model and experience an interactive and collaborative decision process that can be replicated in future initiatives.

The information gathered through this process revealed a detailed picture of the possibilities, risks, hopes, and concerns across the organization regarding potential changes. The research strategy developed by the AT&R team combined the use of extensive interviews with select individual members of the library organization, in conjunction with four...
additional focus groups of inter-team library employees. Between these two methods, every member of the organization was invited to participate. This approach was selected because it offered the greatest opportunity for participation from across the organization without the logistical difficulties of conducting one-on-one interviews with every faculty and staff member. Following the review of the findings from this project conducted in 2008, an analysis of the next four years following the study for examples of capacity building, including effective skills in change management and distributed leadership in the organization, is provided.

To some degree, this broader awareness set the stage for a second and slightly broader area of impact of the AT&R intervention, which has to do with the broader learnings and practices that emerged from the project. One result of the intervention was the emergence of a clear sense that the majority of faculty and staff members have the strong desire to be involved in some way. Further, there was a sense that members of the organization and those who are most likely to be affected by change should also be given intentional and due consideration both for normative reasons and because there was a growing awareness that those affected by decisions also had important information about the effects of those decisions on day-to-day work processes and their effectiveness.

In some ways, these impacts serve as a bridge from the short-term instrumental results of the project to the more fundamental and long-term impacts related to the organizational culture, capacity, and distributed leadership, which have had a longer and more substantial impact on how the organization functions. These cultural, capacity, and leadership shifts remain embodied in the work processes of the organization.

**Organization Development: Summary**

Of the three theories of change we’ve described so far, OD is perhaps the most open in that it is the least dogmatic or mechanistic in either its assumptions or its approaches. As a result, OD also runs the risk of being the most abstract and difficult to use in practical, instrumental ways. For this reason, OD tends to be much more process oriented, whether in the form of Lewin’s early unfreeze-change-refreeze model, or Gardner’s AT&R “menu.” It is also the approach, especially in the case of AT&R, that has the most fluid understanding of organizations. OD is the most likely of the three approaches discussed so far to assume that change is a given and constant and that conceptions of organizations and change that assume the possibility of highly stable, let alone static, structures are inaccurate. AT&R suggests instead that organizations are always in flux, to a greater or lesser degree, and therefore administrators must be constantly attuned to that change lest it result in dysfunction. The promise of constant change, however, is the possibility of improvement in both instrumental performance and the human experience of the organization.

**Reflection Questions**

Given that OD and AT&R tend to view change as ongoing, what are the strengths and weaknesses in dealing with sudden and/or forced change?

What do you see as the major strengths and weaknesses of the AT&R cycle and approach?
New Sciences and Organizations

Of the theories we explore in this book, chaos and complexity theories are among the most difficult to apprehend both because the work, such as Ilya Prigogine’s Nobel Prize–winning work in physical chemistry, is technically challenging and because these theories describe a world that is highly counterintuitive in many ways. In some respects, the application of new sciences, including chaos and complexity theories but also quantum theory and fractal geometry, makes little sense in that the collection of influences is so diverse as to make them unrelated or even unrelatable to organizational or other social settings. Considering the new sciences in terms of scale, from subatomic particles to cosmic equations, or scopes ranging from closed fluid systems to abstract mathematical equations, the work across these fields could scarcely be more diverse. Despite, or perhaps because of that diversity, there has been a great deal of interest in the application of the new sciences to OT, and the body of work does seem to reveal some important attributes of organizations and their behaviors.

Assumptions

The starting point for exploring the assumptions that are essentially shared across the new sciences has to do with a shared perspective on the nature of the world in which we live. As we’ll describe in the following section, the new sciences diverge dramatically from early twentieth-century positivism that held out great hope for the precise predictive abilities of modern science and engineering; the new sciences see the world as being probabilistic rather than deterministic. Although there are variations across the new sciences with respect probabilities expressed, the new sciences don’t make claims about the determinism of the systems they study.

While the new sciences break with modernist positivism on the issue of determinism, they do share with classical science the assumption that the causes of system behavior are real and can be empirically measured—that is, they are not socially constructed. Moreover, while causes in the new sciences don’t function in a linear, causal way, if isolated they can be understood in ways that leave little if any uncertainty as to their effects. What makes systems complex is the interaction of variables but not their ambiguousness or constructed qualities.

Concepts and Insights

To this point we have focused on the techniques and approaches; here, the challenge is different. Partly because the application of ideas from the new sciences has emerged so recently and partly because the operationalization of the theories into social and organizational settings is both challenging and heterodox at this point, the literature does not reveal as much in the way of concrete techniques and applications as we have seen with other theories we’ve covered thus far. As a result, our strategy here is to describe what seems to be a coherent set of concepts with direct application to social and organizational settings and the corresponding insights and implications of those concepts. It’s also important to recognize that we’ve broken out our treatment of the “new sciences” based on the natural sciences from which the concepts were derived. In part, we’ve done this to highlight the conceptual diversity that characterizes the new sciences.
and in part because we feel that some treatments of the new sciences in organizational applications mix concepts from different fields of science in ways that are scientifically inaccurate and that convolute their utility to organizational analysis and action.

Chaos and Complexity Theories

In our view, it’s perhaps easiest to grasp the application of concepts from chaos and complexity theory by thinking about those concepts in terms of claims about preconditions that exist in the systems we’re studying, implications of those conditions for the systems’ behavior, and finally, the implications for administrative practice.

System Preconditions

There are several attributes and preconditions of chaotic systems that can be understood as a starting point for their use in organizational settings. First is that such systems should be understood as being nonlinear and sensitive to initial conditions. This means that chaotic or complex organizational settings don’t change in direct, linear, or incremental ways. In linear systems, small changes in initial conditions result in correspondingly small changes in output conditions. In nonlinear systems, small quantitative changes in the inputs to systems—whether personnel, policy, budgetary, or otherwise—can have dramatic qualitative impacts on the outputs of those systems.

Moreover, these dynamic, nonlinear systems are also characterized by conditions of mutual causation. Unlike simple linear systems, where discrete and distinct independent variables cause some change or effect in dependent variables, in a dynamic, chaotic system, all variables are both dependent and independent simultaneously.

Chaotic and complex systems also have to be understood as being open, in some sense, to the wider environment. In a way not dissimilar to Katz and Kahn’s description of open systems, which also draws on natural systems theory to understand organizational settings, chaotic and complex systems import energy. This importation of energy results in a certain level of dynamism. In other words, as dynamic systems continue to draw new energy from the wider environment, they may exhibit recurrent patterns of behavior, but they are not static.

One result of these preconditions is that the behavior of these systems is probabilistic rather than deterministic. Because organizational systems are dynamic, sensitive to initial conditions, and nonlinear, they function within a set of parameters; they are neither random nor are their behaviors totally unpredictable. However, our ability to predict their behavior falls within an identifiable set of parameters allowing us to predict their behavior within a range of likelihood rather than with deterministic certainty.

System Behaviors and Consequences

As a consequence of these conditions, chaotic or complex social systems can exist in states of relative equilibrium and in far-from-equilibrium states. Under relatively stable conditions, organizational systems can exist in equally stable states. However, when there are changes in the
system’s conditions, perhaps because of political, budgetary, or other crises or perturbations, the system can bifurcate, or move into a qualitatively different phase state in which the system is far from equilibrium. While these far-from-equilibrium conditions may appear on the surface, to be random, chaos theory suggests that there may be emergent patterns that are qualitatively different but patterned nevertheless.

Looking to another concept drawn from chaos theory, the idea of self-organization captures this idea of new patterns being revealed in different phase or behavioral states within a system. The patterns that reveal themselves in different phase states can sometimes be depicted by tracking different variables within the system. The butterfly fractal we presented in Chapter 4 is one such example. The three-winged bird attractor (see Figure 7.6) is another example of the patterns that can be revealed by tracking the status of the system over longer periods or iterations of the system.

Integrating these ideas into organizational and administrative settings has a number of potential implications. One is an explicit recognition of the complexity of organizational systems in that factors and variables are extensively interconnected and mutually influential. The consequence is something we intuitively and experientially know about organizational life: actions necessarily have unintended consequences. However, that shouldn’t be understood as wholly unpredictable. We may not be able to predict, with high levels of confidence, but we should recognize that the consequence array themselves into new patterns, and those patterns may well fall within a set, probabilistic range.

**Fractal Geometry**

In the years just following the end of the First World War, mathematicians in Europe began studying and graphing complex number sets. The graphs revealed intricate, repeating patterns that appeared at many different scales. Although this work received little attention either inside or outside the field of mathematics initially, the work was picked up many years later by Benoit Mandelbrot and others who recognized that these complex geometric patterns were much closer to the complex patterns that appeared in clouds, plant leaves, and other natural structures. While this work would become critical for applications like computer animation, the appearance of the patterns or fractals also revealed something recognizable about social organization as well. Fractals reveal patterns of self-similarity in natural phenomena that we also see in social phenomena. For example, the idea of self-similarity appears in organizational attributes such as hierarchy. The patterns of hierarchy and breadth of span of control are replicated at different scales and in different forms across multidivisional agencies and organizations. Although it was developed from an entirely different application, the Sierpinski triangle (see Figure 7.7) reveals
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Figure 7.7 The Sierpinski Triangle


a pattern that very closely resembles many organizational charts. Importantly, the idea of self-similarity reveals informal as well as informal repeating structures or patterns. Not only can we find examples of self-similarity in organization structure but also in informal behaviors such as the patterns of social interaction across scales from nation, to region, to community, to family, to the individual. To be clear, the idea of self-similarity is limited to similarity and not sameness. There is no claim that the patterns or behaviors are identical across observational scales but only that they share some attributes.

Quantum Mechanics

The last example of the new sciences making its way into organizational settings we want to highlight is quantum mechanics, the behaviors of subatomic particles. One of the most famous and vexing analogies of quantum mechanics is that of Schrödinger’s cat. Schrödinger’s thought experiment is as follows: We place a living cat into a steel, windowless chamber, along with a device containing a vial of poison. There is also in the chamber a radioactive substance connected to a sensing device. If even a single atom of the radioactive substance decays during the test period, the device will release the poison and kill the cat. The thought experiment reveals that the observer cannot know whether or not an atom of the substance has decayed, and as such, we cannot know whether the vial has been broken, releasing the poison and killing the cat. Since we cannot know, according to quantum law, the cat is therefore in the paradoxical condition of being both dead and alive—a so-called superposition of states. It is only when we open the box and empirically observe the condition of the cat that the superposition is lost, and the cat becomes either one or the other—dead or alive. This condition is described as quantum indeterminacy or the observer’s paradox. The paradox is the bizarre situation, at least from a positivist perspective, in which the observation or measurement itself affects an outcome in such a way that the outcome as such does not exist unless or until the measurement is made.

In social and administrative settings, this paradox takes the form of theoretical indeterminacy. We have limited and incomplete information about what people do and why they do it. As soon as we select a theoretical lens by which to conduct our analysis, we find behaviors and conditions that comply with that lens. Paradoxically, we could simultaneously conduct the analysis through another, incommensurable lens, and corroborate that
interpretation as well. This revelation is important not only in terms of interpretation of events but also in the communication and interaction related to the work of the organizations. If two or more members of the organization are operating from different theoretical or ideological perspectives without knowing it, the likelihood that the paradox will be made real is great.

**New Sciences in Organizational Practice**

Douglas Kiel and Euel Elliott's article “Budgets as Dynamic Systems” is among the most interesting and applied research efforts utilizing chaos theory and dynamic systems concepts. Kiel and Elliott come to their use of chaos and dynamic systems via V. O. Key’s call for a comprehensive theory of budgeting and suggest instead that given the nature of budget settings and conditions efforts and grand theory building are likely to be unproductive. Instead, they claim, scholars might be better served by developing more effective interpretive or heuristic tools useful in revealing and guiding work since theory building and testing is so problematic. Chaos theory and nonlinear dynamics, they suggest, is particularly well suited to this effort.

With that orientation in place, the authors dig further into the theory and its attributes consistent with our previously given descriptions and in Chapter 4. First, they recognize that budget systems are open and that they import resources from the wider environment. These resources are analogous to the energy that is imported and animates natural systems. These systems, according to Kiel and Elliott, oscillate between relative stability or equilibrium and unstable far-from-equilibrium conditions. In other words, the systems move between phase states. Moreover, their movement is characterized by nonlinear shifts in status. Linear changes in inputs do not result in linear output changes. The result of the characteristics appears to be random behavior but because their behavior is affected by prior conditions in the system are in fact chaotic.

Kiel and Elliott take this claim—that budget systems and their appearance are chaotic and not random—and examine in in the context of twenty-seven years of federal budget data. When percentage-change data for discretionary outlays and defense outlays are graphed with time, the change patterns do appear random. However, when those data are restructured in a way that reveals something about the history of the system, graphing time \(T\) by time minus one or change from the year prior \((T-1)\) or \([T \times (T-1)]\), an apparent pattern does emerge (see Figures 7.8 through 7.11).

This pattern, or attractor, according to the authors, reveals something about the influential dimensions of the system and gives a qualitative assessment of the dynamism of the system as well. In this instance, this new approach to mapping the behavior of the system, especially as expressed in Figure 7.11, shows how the claim that incrementalism or incremental changes explain budget outcomes over time is insufficient. Kiel and Elliott also claim that the patterns in these new graphs also reveal the improbability of developing a comprehensive budget theory. From their perspective, subcategories of budgets may reveal quite distinct structures or patterns over time relative to the major budget category—for example, personnel expenditures by comparison to overall expenditures of an agency. Stated differently, the sensitivity and nonlinear nature of these systems are dynamic enough as to defy unifying or categorizing theory that would explain the variability across budget and budget systems.
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Figure 7.8 Rates of Change in Total Domestic Discretionary Outlays, FY 1963–FY 1990


Figure 7.9 Rates of Change in Total Defense Outlays, FY 1963–FY 1990

Figure 7.10  Rates of Change in Total Domestic Discretionary Outlays, Excluding Defense, FY 1963–FY 1990


Figure 7.11  Rates of Change in Total Defense Outlays, FY 1963–FY 1990

The Challenge of the New Sciences

It’s clear from the theoretical work in OT and public administration drawing from the new sciences since the 1990s that there is a great deal of energy and excitement about the possibilities presented by the adaptation of new sciences for organizational analysis. In an effort to adhere to our stated approach to this book—that a key criteria for a theory’s inclusion is their applicability to addressing real administrative problems—we feel that there are some significant challenges to the use of the new sciences that we should explore. In part this exploration of the limitations is focused narrowly on this one theory. However, we also want to point out that we do think the central question—can these theories move beyond description to prescription?—is a worthwhile point of discussion.

With that caveat in place, there seem to be several central critiques that call the adaptation of the new sciences to organizational application into question. The first is the critique that the use of the new sciences here is essentially metaphorical. The application of these theories symbolically compares attributes of natural systems to those of organizational systems in ways that highlight what may be important characteristics of the organizational systems but that these social and physical or natural systems are in fact not the same. Metaphorical comparisons, such as Forrest Gump’s famous statement, “Life is like a box of chocolates,” focus attention on an important attribute but ignore the myriad ways in which the entities are different. In the case of social systems, it may be that consideration of the social system as complex, self-organizing, probabilistic, or otherwise similar to chaotic, complex, or quantum systems does illuminate some interesting phenomena but defies the more empirical or analytical techniques of the original concepts.

There is also a second prescriptive concern related to the application of the new sciences, especially chaos and complexity theories. Although the theories are admittedly probabilistic rather than deterministic, that does not, in and of itself, preclude activities like forecasting. It may be that we have to exercise caution and reflectiveness in using such forecasts, but their availability would help us look and move into the future. However, the combination of sensitivity to initial conditions and the movement of systems between phase states seems to suggest that efforts to use the theory in social settings will be retrospective rather than prospective. Because social systems, and organization systems particularly, can be significantly affected by small changes in initial conditions, and their behavior is probabilistic, our ability to recognize the conditions that proceed, let alone cause a system to shift phase states, seems likely to be retrospective rather than prospective or predictive. The result is extreme difficulty in trying to anticipate, let alone leverage or respond to state changes.

Finally, and from our perspective most problematically, none of the key variables in the systems studied in chaos theory, fractal geometry, or quantum theory exercise agency. A key feature, if not the key feature of social systems, is that people have the capacity to exercise agency or free will. While it is undoubtedly true that there are all sorts

Reflection Questions

How do chaos, complexity, fractal geometry, and quantum mechanics relate to change in public organizations?

What sorts of variables, indicators, and measures might be used in practice?
of system, social group, structure, psychological, and other influences on human behavior that are important for making sense of and improving organization performance, OT—and public administration more broadly—seem premised on the notion that we are capable of intentional action that can improve our share conditions. Working from a theory that has no mechanism for acknowledging human agency seems particularly problematic in applied, active fields such as ours.

**Foreshadows of Postmodernism**

While there are a variety of potential connections we could make between the theories in this chapter and postmodern and anti-essentialist ideas in Part III, we have chosen to focus on what we perceive to be particularly fruitful links that exist between the action research approach to OD we previously describe and attributes of postmodern theory (as much as they can be ascribed in generalizable ways).

The first link between OD and action research on the one hand and postmodernism on the other is a strong tendency toward anti-essentialism or antifoundationalism. Like other action research practitioners, Gardner pushes against the exclusive use of enlightenment reason and rationality. Instead, Gardner recognizes the possibility of contextual, intuitional, and other forms of knowledge. Others recognize diversity of knowledge and perspective as increasingly important to effective decision making in complex settings.

A second link can be found in the action research approach to OD in that it places a strong emphasis on equity and emancipatory participation. In other words, both action research and postmodernism tend to stress fairly radical expressions of openness and engagement. It should be recognized that this openness and engagement is closely linked to its anti-essentialist character. The logic here is that the denial of privilege to any one, specific form of knowledge, discipline, or corresponding course of action is very parallel to the emancipatory denial of privilege of any particular individual or locus of authority in the organization or broader social system.

**Summary and Conclusions**

There is a continuum of conceptions of change from the assumption that organizations and environments are relatively stable and need periodic but discrete and delineated change to more stark ontologies of change that suggest that organizations and the environments in which they operate are in constant, dramatic flux.

While the models of change are conceptually distinct, there are important links between them. These links include assumptions about the environment as being open and fluid as well as assumptions about internal and external connectivity and even mutual causality.

Not only are there links between and among the ideas here but also those presented in other chapters—for example, ideas of change presented here and those embedded in the systems and learning organization models presented in the last chapter (interconnectivity, mutual causality, learning-change).
Finally, we want to reiterate the questions we posed in assessing the new sciences. One, how applicable do theories need to be in order to be of practical use—descriptive and insight yielding or applied and action supporting? And two, what do current organizational conditions and climates mean for the idea of paradigmatic incommensurability? Part of our approach to the book thus far has been to illuminate the underlying assumptions of these theories in order to make more clear the consequences or opportunity costs (what’s given up when one option is chosen over another) of adopting one theory over another. Or framed differently, and following David Farmer’s admonition about epistemic pluralism, this awareness is not just an analytical tool but a very practical tool of both conceptual and strategic nimbleness.

**Discussion Questions**

1. What is the role of a leader in organizational change processes? How does that role vary across the theories in this chapter?

2. What are the potential reactions to organizational change? Think about a time when you observed organizational change and reactions to that change. How did the reactions impact the change or the management of change?

3. What are some factors considered when diagnosing the need for or approach to organizational changes? Compare and contrast those factors across the theories described in this chapter.

**Notes**


9. It’s worth noting that this element of culture is quite similar to what Edgar Schein would likely describe as artifacts.
10. Remember that this sort of information, according to BPR practices, should be available not just to supervisors but to managers and lower level workers as well—discretion to shift work processes should exist across the organization, not just in the hands of supervisors.


12. It’s worth noting that this sort of structural effort to ensure both control and efficiency is very consistent with the sort of structures and processes that Herbert Simon advocated and that we introduced in Chapter 4.


19. Ibid.


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38. This system, like chaotic systems, is probabilistic, so we cannot determine or predict with any level of certainty what the state of the atom, or the poison, or the cat is.


