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▲ The Foundations of Performance Improvement and Implications for Practice

Richard A. Swanson

The Problem and the Solution. A problem faced by almost all organizations, and by those who work in them, is in meeting the constant demand for high performance. The demand for high performance affects everything, from assuring sustainable financial growth of the organization to satisfying the next customer standing at the front counter. But without a holistic mental model of performance and the theoretical elements that drive it, practitioners are left with the task of dissecting and interpreting each situation they face. Or even worse, they simply charge ahead in a trial-and-error mode. Performance improvement theory results in powerful and practical principles and models to help practitioners identify and solve performance problems.

In simple language, performance refers to the way in which something or someone functions. It is accomplishment and fulfillment, not potential or capability. The concept of performance is highly generalizable. For example, opera singers perform, and when analyzing their performance even relatively uninformed listeners generally agree on which of any two voices is the better. Race cars perform, and if they adhere to the rules, the best performer can be readily determined. Stock markets perform on a daily basis and the *Wall Street Journal* provides a next-day scorecard based on simple mathematics. Furthermore, stock market performance data can be obtained electronically in real time to determine the relative market performance of companies.

We talk about societal performance, organizational performance, team performance, information system performance, hardware system performance, and individual performance with great ease. Nevertheless,

performance remains a mystery and even a threat to a large number of people when they are asked to think about it, explain it, substantiate it, or improve it.

Purpose of This Chapter

The purpose of this chapter is to present a broad yet well-defined perspective on performance within organizations. Specifically, this chapter presents, first, the *theoretical foundations* for performance improvement and, second, principles to advance the *practices* of performance improvement.

Several professions are committed to performance, including human resource development, management, and quality improvement. When they share the view of performance as the outcome, they necessarily rely to a large degree on the same theoretical foundations with variations in emphasis.

The Domain of Performance Improvement

Many performance improvement (PI) practitioners believe that organizational performance is mediated through human expertise and human effort—that is, through the human lens. However, the performance scorecards available to organizational decision makers generally ignore these elements. The most obvious example is the short-term view of companies' economic performance that is taken by daily stock market data.

To add some perspective to the views of performance and performance variables, an international rating agency (International Institute for Management, 1996) rates the United States number one in the world in economic competitiveness based on 230 criteria. At the same time, the agency rates the United States fifteenth in the world in the area of investment in employee education, training, and development. In comparison, Singapore, a small island-city-nation, is rated number two in economic competitiveness and number one in investment in employees. U.S. companies achieve the top rating while seemingly doing more talking about personnel education and training than actually investing in them, and little Singapore gains second place partially as a result of making large investments in them. What appears to be a relatively unimportant activi-

ty for U.S. companies is viewed as a mandatory strategy for success in Singapore. Thus, how investment in PI precisely contributes to actual performance is not widely agreed upon within an organization, let alone in a nation or throughout the world.

Journey to Understanding Performance

The journey to understand performance for those who share the idea of the human lens has not been easy. The range of perspectives on performance forces the PI profession to face the realities of how others strategically view it (Torraco & Swanson, 1995; Swanson, 1995). The massive Training Within Industry (TWI) project that culminated with the ending of World War II is seen as the origin of contemporary PI and human resource development (Dooley, 1945; Ruona & Swanson, 1998; Swanson & Torraco, 1994). Performance language was simpler then. “Is it a production problem?” one would ask. If yes, one would ply performance improvement tools that masqueraded under the name of training. Besides operating under the training title that it retained but quickly outgrew, the TWI project delivered organizational, process, and individual performance outputs using simple and powerful tools that were called *job instruction*, *job relations*, and *job methods*.

Following World War II, an absence of international competition led to decreased motivation to improve performance. And having already reaped the rewards of a century of abundant raw materials and an industrious immigrant population, U.S. business and industry began losing some of their performance *improvement* edge. The economic and systems perspectives that had fueled prior success were taken for granted, and the psychological view began to prevail in those professions interested in PI.

Limited Performance from Limited Theory

Another national development in the United States following World War II was the establishment of its first-ever standing military. The training system of this new enterprise had minimal interest in the economic performance agenda or the system performance agenda that were so essential to TWI. During this postwar period, the Instructional System Development model (ISD), primarily driven from the psychological domain, gained support from the military, its host organization. A false assumption was that the ISD view of the world was

directly and consciously connected to organizational performance in the private sector. It was not. And when the larger performance infrastructure of American business and industry weakened, the postwar ISD model became less viable as a way truly to identify and solve core performance problems.

The simple need confronting many PI professionals today is to think about performance, with or without the human lens. The willingness to let go *temporarily* of the human lens in favor of a performance lens is the key to elevating PI to its fullest potential. Without making this basic mental shift, PI professionals can find themselves awkwardly trying to get to system-level performance (organization) through subsystem performance (processes or individuals). The best PI theory and practice will in the end validate the need for and contribution of human expertise to PI. Thus, people who really understand performance do not mentally or functionally go from “accounting to performance” or from “training to performance.” But they easily go from “performance to the need for accounting” or from “performance to the need for training.”

The simple decision to move from a favored subsystem (or *performance driver*, such as accounting or training—see chapter 2 for more on this) and connect up to the host system as the primary avenue to performance improvement is a fundamental one. It alters the models, thinking, and tools of a PI effort. Without this shift beyond the individual or the work process, the performance lens remains clouded, the underlying theory remains unclear or unstated, and the principles for practice are automatically limited.

Even so, much has been learned, and key contributors to the individual and process improvement performance perspectives have guided the way. They and their work should be acknowledged and judged as critical stepping-stones. Was Gilbert’s work on human competence profound in 1978? Yes. Is it profound today? Certainly. Does Gilbert’s human competence work represent an adequate model for performance improvement? No. One reason why is that Gilbert never substantively addresses the core external economic, political, and cultural forces—the resulting open-system and chaotic environment—that drive the organization performance agenda and formula.

Brethower’s (1995) classic article on the principles of human performance technology is an excellent example of positioning principles and models of individuals and organizations as *parallel* or *equal* systems.

Doing this is very useful for the purpose of understanding human performance technology but not for a full understanding of the organization system in terms of its present and evolving mission, strategy, organizational structure, technology, and human capital. Even so, Brethower's effort represents an equally important advancement in performance improvement logic.

Rummler and Brache (1992) popularized the three performance *levels*: organization, process, and individual performance. Their conceptualization reached outside the individual performance perspective and the discipline of psychology to provide a more functional model of performance improvement. They were no longer bound by either psychology or the individual contributor and yet did not leave either behind. They cast the three performance domains as levels, not as equal or parallel performance domains. Although they make the clear case for paying attention to all three levels and their connections, organization performance is viewed at the highest level, process performance second, and individual performance last. Their journey in understanding performance is nicely documented in the 1995 revised edition of *Improving Performance*. The second edition contains important chapters on linking performance and strategy, sustained performance improvement, and redesigning processes, among others.

Real Performance Is Output

To perform is “to fulfill an obligation or requirement; accomplish something as promised or expected” (*American Heritage College Dictionary*, 1993, p. 1015). Thus, performance is not system design, capability, motivation, competence, or expertise. These and similar performance taxonomies can be best thought of as *performance variables*. In chapter 2, they and others are identified as performance drivers. Performance may be identified within missions, goals, and strategies—but not always. *Performance is the valued productive output of a system in the form of goods or services*. The actual fulfillment of the goods or services requirement is thought of in terms of *units of performance*. These goods or services units of performance are usually *measured* in terms of quantity, time, and quality feature measures.

Chasing after individual or organization change without first specifying a valid unit of performance is inane. This is because change can take place while real performance declines. One example is to pursue

employee satisfaction with the assumption that production will increase. Numerous studies demonstrate that employee satisfaction can increase while actual production decreases or remains the same. The recent reengineering fad is another vivid example of the pursuit of change with the majority of instances ending up in performance losses rather than the promised gains from the mere act of undertaking a particular type of change (Micklethwait & Wooldridge, 1996).

There are those in the profession who speak directly to the topic of performance in an attempt to clarify the relationships among performance drivers (Holton, 1996a, 1998) or performance variables (Swanson, 1994, 1996). General systems theory helps professionals from being drawn into espoused performance theories that have little substance. General systems theory provides a basic thinking model of inputs, processes, outputs, and a feedback loop. The three basic systems questions ask for the name and purpose of the system, the parts of the system, and the relationships between the parts. Logically, it would be futile to begin an intervention without being able to answer these basic questions.

Systems theory also informs us first that there are systems and subsystems and second that all systems are open systems. The realization that there are tiers of subsystems and larger host systems, and that systems are open entities that are constantly changing, is humbling to the PI scholars and practitioners. Such realizations help professionals from thinking and acting simply and mechanically. PI professionals should hold in their minds a mental picture of the constantly evolving state of being. As new information emerges, the testing of theory and reality becomes the basis for revision and added professional maturity. This is a role for both practitioners and scholars.

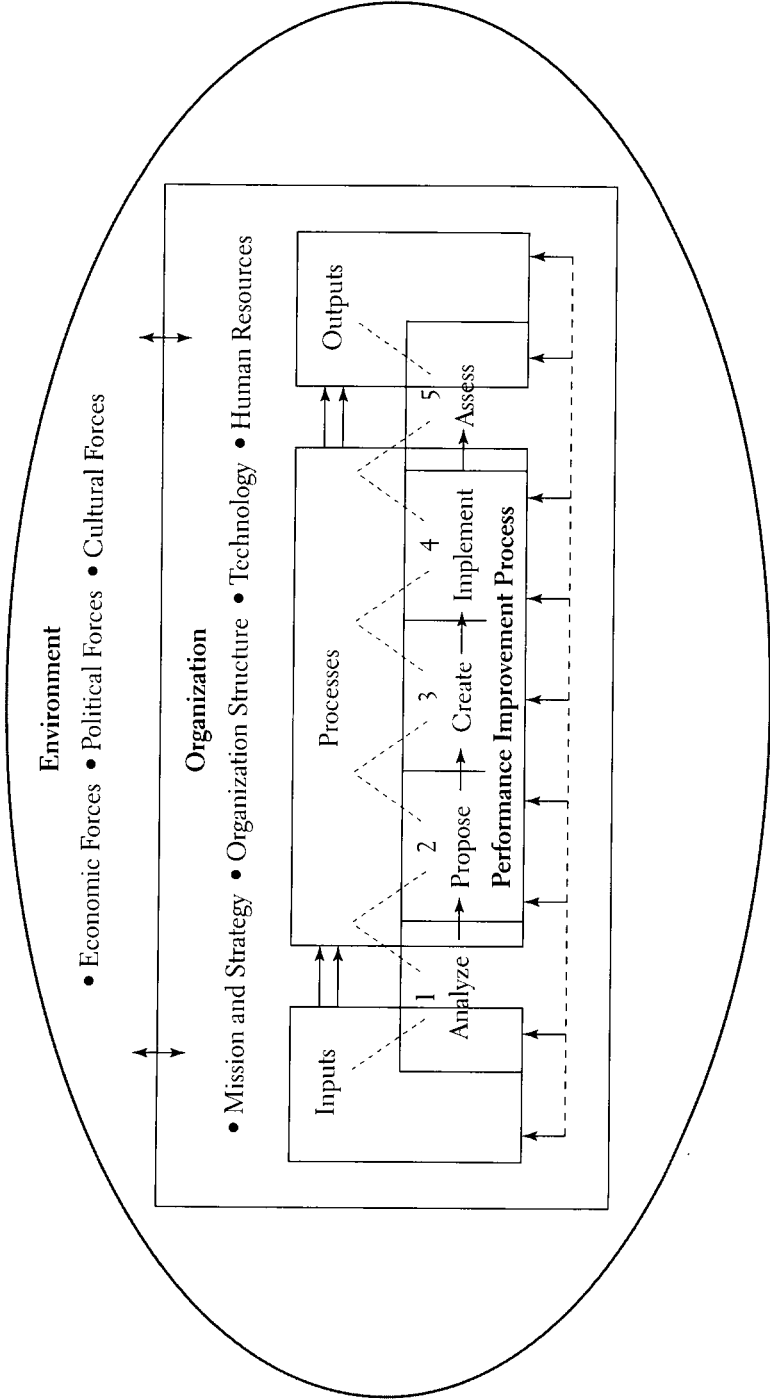
The larger frame in which PI functions includes organizations and the dynamic context in which they function. Organizations are the host systems for most PI activity. Some of these systems are profit-making organizations that produce goods and services for consumers; some are non-profit organizations that produce goods and services for consumers. Some are publicly owned, some are shareholder-owned and publicly traded, and some are owned by individuals or a group of individuals. All these organizations function in a dynamic political, cultural, and economic context. Each organization has its own mission and strategy, structure, technology, and human resource mix. And each has core processes related to producing its goods and services.

The expectation is that performance improvement efforts will logically culminate in important positive gains in performance for the host organization. In addition, performance improvement itself can be viewed and pursued as a process functioning within the host organization. All of this is graphically portrayed in Figure 1.1 as a systems model of performance improvement, a process working with other core processes within the organization that is functioning in the larger organizational context. Although the traditional development process terms are used for the five phases, what is done within each phase will vary greatly from one practitioner to another. For PI, the final phase is focused on the evaluation of performance results so as to heighten the intent of the performance improvement process.

The critical lesson for people wanting to improve system performance is to make an informed decision about the system or subsystem they wish to improve and focus the analysis for improving performance at the appropriate system frames (Gradous, 1989). Once done, the core outputs of that system should be determined and viewed as the focus of performance and performance improvement.

The concept of performance has defied a unitary definition that is satisfying to those from the many fields who seek to improve it. Although performance will likely always demand multiple interpretations, this chapter characterizes performance in a particular manner in order for it to serve as a conceptual anchor for the chapters that follow. Performance, and more importantly performance improvement, are not simply abstract notions about desirable ways to reach a better state. In every workplace the concrete determinants of performance are reflected through people, their ideas, and the material resources through which their ideas reach the marketplace. Performance cannot be described or improved without specifying its determinants, accounting for the sophisticated processes through which performance is expressed (for example, human behavior, work process innovation, stock market performance), and making some judgment about whether it has, in fact, improved. Performance improvement can only be manifest through outputs, and change in outputs can only be assessed through some form of measurement. Thus, performance is a concept that can be systematically operationalized in any organization when it sets out from the beginning to demonstrate whether or not performance has improved.

▲ **Figure 1.1 A Systems Model of Performance Improvement**



Performance Improvement Theoretical Foundations

PI is broader than any single set of theoretical practices. Reflecting the reality that most successful strategies for system and subsystem improvement require multidisciplinary interventions, the theory of improvement derives from multiple theories. This section of the chapter presents a theoretical foundation for PI that relies on contributions from three respected theoretical domains: *economic theory*, *psychological theory*, and *systems theory*.

“A theory simply explains what a phenomenon is and how it works” (Torraco, 1997, p. 115), whereas “a discipline is a body of knowledge with its own organizing concepts, codified knowledge, epistemological approach, undergirding theories, particular methodologies, and technical jargon” (Passmore, 1997, p. 201). The idea that PI is a discipline that draws on dozens of theories is widely held. This overly generous idea has served as fool’s gold to the profession. In the attempt to be inclusive of so many theories—that is, by staking its claim so broadly—it has come up with no theory.

Theory Versus Model

Models to improve performance have been developed and disseminated through books, seminars, and consulting projects. Several of these models are based on extensive practical experience with improving performance (Nadler, Gerstein, & Shaw, 1992; Rummier & Brache, 1995; Robinson & Robinson, 1995; Schwartz, 1991; Swanson, 1994; Weisbord, 1987). Some models for improving performance (Harless, 1970; Mager & Pipe, 1984) have been embraced as ways to solve performance problems by addressing them as multidimensional problems that demand multidimensional solutions. Other commercially available models for performance improvement are little more than diagrams based on the author’s most recent consulting experience.

Armed with a performance flowchart and a description of its components, PI professionals using simple diagram models march into the workplace to effect change. Although the model may be powerful enough to guide change primarily through the persistence of the project manager, it is most likely too superficial to explain the complex dynamics of organizational performance. In short, a model derived from logic is

no substitute for sound theory. Full and theory-based models can guide improvement efforts through validated relationships and the ability to test those relationships.

Logic Is No Substitute for Sound Theory

A common area in which to attempt organization improvement is sales. It is also common for sales improvement consultants to possess a defined model of the sales process. They gain management approval of the model, train sales personnel on that model, and then measure the implementation of the model. As a result, sales almost always increase simply because of the increased attention and effort being made. And almost always the sales model—as presented and implemented—is atheoretical and wrapped in the cloak of the consultant's strong personality. A logical sales system, with or without sound theory, will likely yield results in the short term. It could be that a different sales system had been installed four years before in the same organization by another strong consultant, and it too was successful for some time. Systems theory and its rigorous application has the potential to explain both the short-term success and the longer-term decline of sales during the time period.

In conclusion, you can have a model and no theory, you can have a theory and no model, and you can have a theory accompanied by a supporting model. A model is not theory.

Theory of Performance Improvement

Presently there is no universal view or agreement on the theory or multiple theories that support PI as a discipline. Furthermore, there are no theory alternatives being visibly proposed in the literature and debated within the profession. On the one hand, some have called for systems theory to serve as a unifying theory for PI to access all useful theories as required (Gradous, 1989; Jacobs, 1987, 1989), and on the other hand, many have proposed sets of principles in the forms of comparative lists of added value, products, processes, and expertise (Brethower, 1995) or targeted principles such as, "Human performance technology depends on a comprehensive analytical process" (Rosenberg, Coscarelli, & Hutchinson, 1992, p. 29). Although both suggestions are extremely useful, neither establishes the theoretical or disciplinary boundaries of PI.

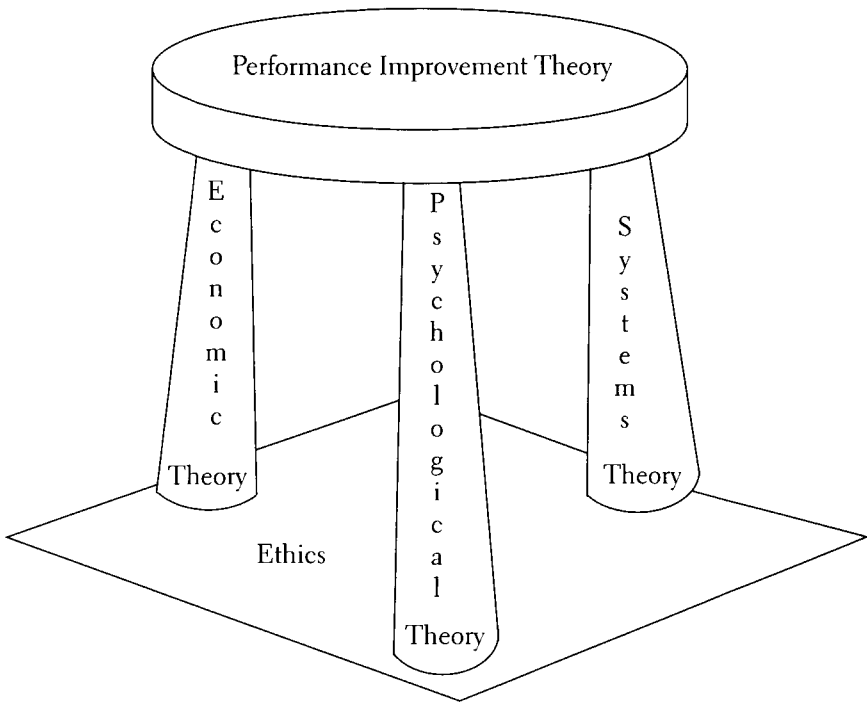
The alternative to having a sound theoretical and disciplinary base for the PI profession is the present state of rudderless random activity aggressively sponsored by atheoretical professional associations and greedy consultants (Micklethwait & Wooldridge, 1996; Swanson, 1997). This present state celebrates short-term results without having deep understanding or ability to replicate results.

For this reason, a discrete and logical set of theories is proposed as the foundation of PI. As noted earlier, the set comprises economic theory, systems theory, and psychological theory (Passmore, 1997; Swanson, 1995). Economic theory is recognized as a primary to survive along with its financial metrics at the organizational level; systems theory recognizes purpose, pieces, and relationships that can enhance or strangle systems and subsystems; and psychological theory acknowledges human beings as brokers of productivity along with their cultural and behavioral nuances. It is believed that these three theories more than any others make up the theory of PI and respond to the realities of PI practice, and that each is unique, robust, and complementary to the others. Figure 1.2 depicts the theories as a three-legged stool, with the three legs providing great stability for PI as a field of practice that functions in the midst of uneven and changing conditions. In recent years, particularly with a disconnect of organizations from regional and national values through the advance of the global economy and an unbridled free-market condition, the stool has been positioned on an ethical rug. The rug represents a filter between the three theories and the context in which PI functions. Thus, the integration of the three theories into a unique theory of performance improvement is being proposed. Ethics plays an important moderating role for the theory in action.

Economic Theory Foundation

The minimization of economic theory in PI is untenable. For example, the widely used book on organization development, *Organization Development and Change* (Cummings & Worley, 1993) does not even show the words *economic*, *financial*, or *cost-benefit analysis* in the index. The organization development literature addresses the psychological theory leg of the stool and a portion of the systems theory leg, but regularly ignores the economic leg. As a result, what is called *organization development* is reduced to individual development, team development, or the pursuit of change in the

▲ **Figure 1.2 The Theoretical Foundations of Performance Improvement Theory**



hopes of achieving improved organizational performance. Although much remains to be learned about the economics of performance improvement, a substantial amount of information about the economics of short-term interventions (Swanson, 1998; Swanson & Gradous, 1988) and broader-based investments (Lyau & Pucel, 1995) is available.

How could responsible PI not include direct analysis, action, and measurement of economic outcomes? Over time, organizations must generate more income than they spend in order to exist. Unless expenditures on PI contribute to the viability and profitability of an organization, those expenditures will almost certainly be reduced or eliminated.

Three specific economic theory perspectives are believed to be most appropriate to the discipline of PI: *scarce resource theory*, *sustainable resource theory*, and *human capital theory*.

Scarce resource theory. Scarce resource theory informs us that there are limitations to everything. Limited money, raw materials, time, and so

on, require us to make choices about how capital will be used in order to gain the greatest return. Decision makers choose between options based on their forecasted return on investment. This is a simple and powerful notion that forces decision makers to separate the most valuable initiatives from the many things that they would like to do if there were no resource limitations (Swanson & Gradous, 1988).

Sustainable resource theory. Sustainable resource theory is much like scarce resource theory except in one significant way: a concern for the long-term versus the short-term agenda. Thurow (1993) informs us that “in the future, sustainable advantage will depend on new process technologies and less on new product technology. New industries of the future . . . depend on brain power. Man-made competitive advantages replace the comparative advantage of Mother Nature (natural-resources endowment) or history (capital endowments)” (p. 16).

Human capital theory. Becker’s classic book *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (1993) illustrates this domain. Becker implores the reader: “I am going to talk about a different kind of capital. Schooling, a computer training course, expenditures on medical care, and lectures on the virtues of punctuality and honesty are capital too, in the true sense that they improve health, raise earnings, or add to a person’s appreciation of literature over a lifetime. Consequently, it is fully in keeping with the capital concept as traditionally defined to say that expenditures on education, training, and medical care, etc., are investments in capital” (pp. 15–16). These are not simply costs but rather investments with valuable returns that can be calculated.

Conclusion. Because PI takes place in organizations that are economic entities, PI must call upon economic theory at its core. In addition, management theories and methods should be properly viewed as useful derivatives of economic theory (see Drucker, 1964). Economist Alfred Marshall argues, “The most valuable of all capital is that invested in human beings” (1949).

Psychological Theory Foundation

The psychological theory that PI can draw upon is immense. It includes theories of learning, human motivation, information processing, group dynamics, and psychology-based theories of how people make decisions

and behave in organizations. Yet the profession has poorly interpreted psychological theory. Most practitioners grab onto a small and relatively irrelevant slice of psychological theory and act on it in exaggerated ways. Examples include fascination with whole-brain theory and personality types. Passmore (1997) informs us that “psychology is the science of behavior and mental processes of humans and other animals. Beyond that, we have something that resembles a teenager’s closet” (p. 210).

Although psychological theory may have something for everyone, PI has yet to capitalize fully on its leverage to improve performance. At best, the PI literature addresses the psychological theory leg of the stool in an unpredictable manner. Interestingly, the widely used book on training, *Training in Organizations: Needs Assessment, Development, and Evaluation* (Goldstein, 1993), is almost exclusively focused on the behaviorist school of psychology and does not deal in any meaningful way with Gestalt psychology or cognitive psychology (purposive behaviorism). Add to this that PI interventions are rarely connected to the economic agenda through a systematic analysis of the organization and its goals (Swanson, 1994, 1996), and it is no wonder that PI interventions based only on psychological theory are often dismissed as irrelevant by organization leaders.

Fascination appears to be the watchword of those on the psychological leg of the stool, as questions from psychology are usually narrow or disconnected from the core purpose of the organization, the work process, and often even the individual. For example, the continued fascination with such topics as transfer of training mostly focuses on the individual and individual perceptions. The best correction to PI’s unidimensional reliance on psychology appears to be through the addition of systems and economic theory, not by investing in psychological theory alone (Holton, 1996).

How could responsible PI not integrate and use the vast body of knowledge from psychological theory? With such vast and divergent psychological theory available, it is most appropriate to focus on core understandings related to behavior and learning rather than the fringe psychology theories and techniques. Three specific psychological theory perspectives are proposed here to be most appropriate to PI: *Gestalt psychology*, *behavioral psychology*, and *cognitive psychology* (purposive behaviorism).

Gestalt psychology. *Gestalt* is the German term for configuration or organization. Gestalt psychologists inform us that we do not see isolated stimuli but rather stimuli gathered together in meaningful configurations.

We see people, chairs, cars, trees, and flowers—not lines and patches of color. Gestaltists believe that people add something to experience that is not contained in the sensory data and that we experience the world in meaningful wholes (Hergenhahn & Olson, 1993). Thus, learning involves moving from one whole to another. Words associated with Gestalt psychology include *introspection, meaning, closure, insight, life space, field theory, humanism, phenomenology, and relational theory*. The holistic view of individuals and their own need for holistic understanding is in sharp contrast to a mechanistic and elemental view of human beings.

Behavioral psychology. Behavioral psychology is concerned with what can be seen, and therefore actual human behavior is what is studied. Behavioral psychologists inform us that individuals respond the only way they can given their capacity, experience, and the present forces working on them. For behaviorists, no more introspection, no more talk of instinctive behavior, and no more attempts to study the vague notions of human conscious or unconscious mind. Words associated with behaviorism include *readiness, law effect, exercise, recency, frequency, stimulus, response, reinforcement, punishment, programmed learning, and drives*.

Cognitive psychology. Tolman's (1932) term *purposive behaviorism* has been selected as the exemplar of this third important psychological perspective. Purposive behaviorism attempts to explain goal-directed behavior and the idea that human beings organize their lives around purposes. Purposive behaviorism and other cognitive psychologies attempt to integrate theory from Gestalt psychology and behavioral psychology.

"For purposive behaviorism, behavior, as we have seen, is purposeful, cognitive, and molar, i.e., 'Gestalted.' Purposive behaviorism is molar, not a molecular" (Tolman, 1932, p. 419). Words associated with cognitive psychology, including purposive behaviorism, include *drive discriminations, field-cognition modes, cognitive map, learning by analogy, learned helplessness, structuring, information processing, short-term and long-term memory, and artificial intelligence*.

Conclusion. Because PI takes place in organizations that are psychologically framed by those who invented them, operate in them, and renew them, PI must call upon psychology as core (see Bereiter & Scardamalia, 1993; Dubin, 1976). In addition, learning theories such as constructivism (Verner & Davidson, 1971) and situated cognition (Lave, 1988; Scribner, 1984) should be properly viewed as useful derivatives of psychological theory (see Argyris, 1993; Gagne, Briggs, & Wager, 1988). Performance can-

not be improved if people choose not to perform, make little effort, or do not persist in their efforts (Bereiter & Scardamalia, 1993; Ilgen & Klein, 1990). Moreover, workplace systems and systematically designed learning experiences provide a durable foundation for PI. Thus, theories of learning, human motivation, information processing, and other psychological theories provide a core theoretical foundation for PI.

Systems Theory Foundation

Systems theory, a relatively small body of knowledge compared with economics and psychology, contains a harvest of low-hanging fruit for PI. From a systems theory perspective, a wide range of systemic disconnects adversely affect performance. Two of the disconnects include not being able to specify clearly the required outcomes of the host organization and not having a systematically defined PI process (see Rummler & Brache, 1995).

Systems theory is a relatively young discipline made up of “a collection of general concepts, principles, tools, problems, and methods associated with systems of any kind” (Passmore, 1997, pp. 206–207). Jacobs’s (1989) manuscript, “Systems Theory Applied to Human Resource Development,” called for the profession to adopt systems theory as the unifying theory. McLagan’s (1989) thoughtful reaction, “Systems Model 2000: Matching Systems Theory to Future HRD Issues,” fully supported Jacobs’s thesis of the importance of systems theory for HRD but challenged him and the profession to think about and work within a more expansive and tiered world of systems.

Three specific systems theory perspectives are proposed here as appropriate to PI: *general systems theory*, *chaos theory*, and *futures theory*.

General systems theory. At the core, general systems theory (GST) forces us to talk intelligently about inputs, processes, outputs, and feedback. Furthermore, GST informs us of the reality of open systems (as opposed to closed systems), tells us that systems engineering focuses on the less dynamic aspects of the organization, and explains the limitations of a single personality theory in predicting human behavior (von Bertalanffy, 1962).

Boulding’s (1956) classic article on general systems theory informs us of the paradox of a theory so general as to mean nothing and the seeming inability of a single theory from a single field of study ever to reach a sat-

isfactory level of theory generality. He goes on to talk about the power of a “spectrum of theories,” a “system of systems,” which would perform the function of a gestalt in theory building (Boulding, 1956). “General systems theory may at times be an embarrassment in pointing out how far we still have to go” (p. 10).

Chaos theory. “Where chaos begins, classical science stops. . . . Chaos is a science of process rather than a state, of becoming rather than of being” (Gleick, 1987, pp. 3–5). Chaos theory confronts Newtonian logic head-on by offering a revised motto away from determinism to something much softer: “Given an approximate knowledge of a system’s initial conditions and an understanding of natural law, one can calculate the approximate behavior of the system” (Gleick, 1987, p. 15). Chaos theory purposefully acknowledges and studies phenomena that are unsystematic—that do not appear to follow the rules.

Futures theory. Futures theory is “not necessarily interested in predicting the future, it is about the liberation of people’s insights” (Schwartz, 1991, p. 9). Thus, futures theory, in the context of planning for the future in uncertain conditions, in no way resembles the reductionist view of most strategic planning efforts that end up with a single strategy. The language and tools of *alternative futures* and *scenario building* are intended to create a true picture of the facts, the potential flux in those facts, and the decision-making agility required of the future. Futures theory is critical for sustainable performance because it prepares one to recognize and cope with an evolving future state.

Conclusion. Because PI takes place in organizations that are themselves systems and subsystems functioning within an environmental system that is ever-changing, systems theory is at its core (see Buckley, 1968; Gradous, 1989; Senge, 1990). In addition, engineering and technology theories and methods should be properly viewed as useful derivatives of systems theory (see FitzGerald & FitzGerald, 1973; Davenport, 1993), even though they have a longer scholarly history.

Ethics

As noted earlier, ethics is viewed as the critical supporting body of knowledge for PI. It serves as the filter between the three core economic, psychological, and systems theories and the context within which performance improvement efforts take place.

The ethics angst within the profession, under the name of integrity, was the theme of the 1996 Academy of Human Resource Development conference (Holton, 1996b). Two primary perspectives on integrity are proposed: integrity in ethical *beliefs* and integrity in using high-quality *processes* (Jacobs, 1996).

From the ethical beliefs perspective, some argue about the exploitive nature of organizations and would criticize PI as an unthinking arm of management (Korten, 1995), challenging the profession to act as the agent of democracy and equity (Dirkx, 1996). Others argue that exploitation is a much more expansive concept (for example, employees can exploit their employers) and that it must be dealt with as such (Swanson, Horton, & Kelly, 1986). It is the distribution of the spoils of performance and the relative costs paid to obtain performance that is the bogeyman in most performance discussions, and one that needs to be dealt with.

There have been long-standing calls for professional standards for ensuring the presence of defined PI processes and individuals competent in carrying them out. A theoretically sound field of practice sees that it is critical to have defined processes and competent and certified professionals. A profession that understands its theory would find the present condition in PI appalling. For profit providers of conferences and trade publications, publishers of books and media, circuit-speaker “celebrities,” and fad consultants, maintaining substandard conditions is lucrative. These elements will likely be the forces resisting the implementation of core PI theory because they have much to gain (Swanson, 1997).

Performance Improvement Practices

Is it possible to bring about lasting performance improvement without theory to support the intervention? That is, can effective practice proceed without theory? Yes, there are instances of improved performance all the time with those involved unable to explain, and often unconcerned about, the conceptual reasons for their occurrence. However, such cases do little to advance our individual or collective knowledge of PI and how it occurs. They are isolated experiences from which little collective benefit accrues. Theory that is of value to PI is transferable across workplaces and robust to contextual variations. This section addresses the core principles derived from the proposed PI theory.

The practice principles for PI are derived through the lenses of the three component theories, as well as their integration. Each principle is linked to the core theories, the subtheories, and ultimately the unique integration of the theories for PI.

The implications for practice presented here serve to answer the most basic questions of what we know and how we know it. These are the most respected questions a worthy field of practice must ask and yet are often found missing. The implications are simple and blunt—the best kind of implications.

Overarching Implication for Practice

Gestalt psychology and systems theory inform us of the power of understanding the whole and the power of a fully functioning whole. The *whole* theory of PI is proposed to be the integration of psychological, economic, and systems theories within an ethical frame. This integrative state is central to securing PI as a reliable field of practice, not in just knowing the elements. The journey to this integrative state results in the organizing concepts, codified knowledge, underlying theories, particular methodologies, and unique technical jargon of PI.

The *whole* of any integrated performance improvement theory will be larger than the sum of the parts and unique to PI. Taken alone, psychological theory, economic theory, or systems theory are all inadequate and produce unsustainable results. Thus, the overarching PI practice principle is as follows: *PI must integrate psychological, economic, and systems theories into unified thinking and action.*

For example, reengineering according to Hammer and Champy (1993) focused on cost reductions through low-level system analysis. Had they considered the larger frame system and sustainable economic performance, and not ignored the psychological, then the intervention and its total effects would have been very different. The premise of this chapter is that these three theory domains constitute the theory of PI. As such, they must be understood individually and more importantly in their wholeness and integration.

Implications for practice tied directly to economic, system, and psychological theories also have value, are worthy of pursuit, and add value in pursuing the overarching approach to PI practice. These implications follow.

Economic Principles for Practice

The economic principles for practice revolve around managing scarce resources and the production of wealth. Most people who talk about performance can mentally convert units of performance into monetary units. PI itself has costs and benefits that need to be understood and are not always favorable. As they are better understood in terms of theory and practice, the PI discipline and profession will mature. The principles for practice sound elementary, yet they beg to be applied.

- *Scarce resources theory*: PI must economically justify its own use of scarce resources.
- *Sustainable resource theory*: PI must add value to creating sustainable long-term economic performance.
- *Human capital theory*: PI must add short-term and long-term value from investments in the development of knowledge and expertise in individuals or groups.

Psychological Principles for Practice

The psychology principles for practice revolve around the mental processes of humans and the determinants of human behavior. Among scholars and practitioners of psychology, the schisms and gimmicks reported under the psychology banner abound with little integration. As the three psychological subtheories are interpreted in terms of theory and practice relevant to PI, the discipline and profession will mature. Again, the psychological principles appear to be elementary, but they are regularly ignored in practice.

- *Gestalt psychology*: PI must clarify the goals of individual contributors, work process owners, and organization leaders.
- *Behavioral psychology*: PI must develop the behaviors of individual contributors, work process owners, and organization leaders.
- *Cognitive psychology* (purposive behaviorism): PI must harmonize the goals and behaviors among individual contributors, work process owners, and organization leaders.

Systems Principles for Practice

The systems principles for practice are organic. The system elements, their arrangements, the interdependencies—the complex nature of the

phenomenon under study—must be faced. The systems theory principles for practice require serious thinking, sound theory-building research, and the use of new tools for sound practice. A full pursuit of the following simple principles for practice would reshape the PI purpose and toolbox:

- *General systems theory*: PI must understand how it and other subsystems connect and disconnect from the host organization.
- *Chaos theory*: PI must help the host organization retain its purpose and effectiveness within the chaos it faces.
- *Futures theory*: PI must help the host organization shape alternative futures.

Conclusion

This chapter attempted to present a broad but well-defined perspective on the foundations of performance improvement. Specifically, it framed the theoretical foundations of PI and provided principles for PI practice. The following chapters dive deeper into specific principles and practices.

At first glance, the idea that we need a theory of performance improvement most likely evokes questions about relevance and practice. It has been recognized that theory can originate from *practice*, from stressful or large-scale change *development* efforts, or from research itself, but that theory advancement must in all instances be a conscious effort (Swanson, 1997). Research in the realm of theory requires that theories be developed through rigorous theory-building research methods (Dubin, 1978; Hearn, 1958; Torraco, 1997) or that espoused theories be evaluated against criteria for sound theory (Patterson, 1983). PI is presently full of atheoretical models (not theories) and thin, espoused theories that are unsubstantiated.

If theory just happened as a result of practice, the performance improvement theory bucket would be overflowing. Instead, human resource development, management, quality improvement, and other professions committed to performance improvement are experiencing a “theory application deficit disorder” (Swanson, 1997). Performance improvement practice does not come close to what we know. Systematically filling the performance improvement theory-practice void is fundamental if our profession is to mature. Furthermore, it is the work of both practitioners and scholars. Let the work begin.

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