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From Human Resource Strategy to Organizational Effectiveness: Lessons from Research on Organizational Agility

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From Human Resource Strategy to Organizational Effectiveness: Lessons from Research on Organizational Agility

Abstract

As a field of study and practice, strategic human resource management (SHRM) has come a long way in recent years. Still, at this point, the domain incorporating and connecting human resource strategy (HRS) and organizational effectiveness (OE) is essentially a theoretical and empirical "black box". Here we use our ongoing research on people in agile organizations to peer into this "black box" and draw implications for future theorizing and research. Suggestions are made for reconceptualizing OE, incorporating organizational capability as a key concept, taking a broader than usual view of HRS, and systematically assessing vertical and horizontal alignment of HR activities.

Keywords

human resource, SHRM, research, organization, work, system, effectiveness

Disciplines

Human Resources Management

Comments

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From Human Resource Strategy to Organizational Effectiveness: Lessons from Research on Organizational Agility

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Working Paper 98-12



**FROM HUMAN RESOURCE STRATEGY
TO ORGANIZATIONAL EFFECTIVENESS: LESSONS FROM
RESEARCH ON ORGANIZATIONAL AGILITY**

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This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research available to others interested in preliminary form to encourage discussion and suggestions.

ABSTRACT

As a field of study and practice, strategic human resource management (SHRM) has come a long way in recent years. Still, at this point, the domain incorporating and connecting human resource strategy (HRS) and organizational effectiveness (OE) is essentially a theoretical and empirical "black box". Here we use our ongoing research on people in agile organizations to peer into this "black box" and draw implications for future theorizing and research. Suggestions are made for reconceptualizing OE, incorporating organizational capability as a key concept, taking a broader than usual view of HRS, and systematically assessing vertical and horizontal alignment of HR activities.

Strategic human resource management (SHRM) is fundamentally concerned with the contributions that human resource strategies (HRSs) can and do make to organizational effectiveness (OE). A mounting body of evidence suggests that these contributions can be positive and sometimes quite substantial (Becker & Gerhart, 1996; Becker & Huselid, in press; Dyer & Reeves, 1995). But, how this happens remains pretty much a mystery. Put simply, at this point, the domain incorporating and connecting HRS and OE is essentially a theoretical and empirical "black box" (Becker & Gerhart, 1996).

We have recently peered into this "black box" through the lens of a research project focusing on people in agile organizations (AOs), and this is a preliminary report on the results. It begins with a selective review of the SHRM literature and a brief description of AOs and our research process. From there, the focus shifts to a systematic presentation of key findings organized around an emergent model of organizational agility (OA). Because the territory is new and the research is, thus, exploratory, the findings and their implications are offered not as firm conclusions, but as suggestions to guide future research of this type.

In brief, at this point, we believe that "black box" theory and research would benefit from the following: using OE (the principle outcomes of interest) rather than HRS as the starting point; conceptualizing and measuring OE in terms of competitive advantage rather than in terms of market returns, financial results, or generic business strategies; focusing on organizational capability as the key determinant of OE; viewing HRS as a component of organizational capability rather than a stand-alone concept; conceptualizing and measuring HRS in terms of both workforce characteristics and HR activities; and systematically assessing synergy among HR activities by judging the extent to which they interactively foster desired workforce characteristics, enhance organizational capability, and, ultimately, improve OE.

SELECTIVE REVIEW OF THE SHRM LITERATURE

In less than two decades, the study and practice of SHRM have spread apace. Recent reviews of the theoretical and empirical literatures invariably conclude that the SHRM bottle is, at once, half full and half empty (Becker & Gerhart, 1996; Becker & Huselid, in press; Dyer & Reeves, 1995; Gerhart, in the companion volume; McMahan, Virick & Wright, in the companion volume; Wright & Sherman, in the companion volume).

On the positive side, it is easy to marvel at how far the field has progressed in such a short time. Both the quantity and quality of thinking and research have improved to the point where it is now possible to dedicate entire issues of major journals to the topic (e.g., *The Academy of Management Journal*, August 1996). As a result, we now know for certain what could formerly be only asserted: Properly designed and implemented, HR systems can have a

significant positive effect on outcomes of interest to both scholars and practitioners (Becker & Gerhart, 1996; Becker & Huselid, in press; Dyer & Reeves, 1995). Certainly, this is an enticing prospect for a field struggling to demonstrate added value in an increasingly competitive world.

But, as always, there is much to be learned. The meaning of "properly designed and implemented", for example, is less than clear. Logic supports the efficacy of horizontal and vertical alignment or fit -- that is, the virtue of bundling HR practices into synergistic systems that, in turn, interact with extant organizational contexts to produce desired results (Becker & Gerhart, 1996; Becker & Huselid, in press; Dyer & Kochan, 1995; McMahan et al, in the companion volume; Wright & Snell, in press). But, we are a long way from being able to provide conceptually or empirically justified descriptions (let alone prescriptions) of appropriate bundles of HR activities for particular organizational contexts and sets of desired outcomes.

And even if such precision were possible, the magnitude of the expected effects is very much in question. Several recent studies (e.g., Arthur, 1994; Delery & Dory, 1996; Huselid, 1995; Huselid & Becker, 1996; Huselid, Jackson & Schuler, 1997) have reported rather large effects on such outcomes as employee turnover, productivity, quality, profits, and even stock prices. Trouble is, for a variety of methodological reasons -- including unreliable measures of HRS and OE, common method variance, poorly specified models, and cross-sectional rather than longitudinal research designs -- these estimates strain credibility to the point of incredulity (Becker & Gerhart, 1996; Gerhart, in the companion volume).

Lack of good theory exacerbates these empirical shortcomings. SHRM researchers tend to make liberal (some would say promiscuous) use of models and theories from a variety of disciplines. But, by and large, these adaptations are piecemeal and made more as a matter of empirical convenience than conceptual veracity (McMahan et al, in the companion volume). Currently, there is no solid theory of HRS (Dyer & Reeves, 1995), no solid theory of OE (in this context), and -- most seriously -- only very tentative propositions about how the two are linked (Dyer & Kochan, 1995; Guest, 1997; Boxall, in this volume). Little wonder that commentators have taken to referring to the domain between HRS and OE as a "black box" (Becker & Gerhart, 1996; Becker & Huselid, in press).

Here, as mentioned, we probe into this "black box" from the perspective of OA. Helpful, therefore, is a brief sojourn into the realm of OA, as well as into our research methods.

ORGANIZATIONAL AGILITY: DEFINITION AND BACKGROUND OF RESEARCH

First, organizational agility.

Organizational Agility

In a business climate characterized by unprecedented, unparalleled, unrelenting, and largely unpredictable change, competitiveness is a moving target. Under such circumstances, organizations stumble, and sometimes fall, because the rate of change in their external environments simply outpaces their organizational capacity to keep pace (Ashkenas, Ulrich, Jick & Kerr, 1995). Recognizing the challenge, many organizations make fundamental changes in their basic bureaucracies in attempts to enhance speed and flexibility; common concepts include skunk works, process reengineering, cross-functional product development teams, and employee involvement (or empowerment). Anecdotal evidence suggests that these efforts are only partially successful (even ardent proponents of process reengineering, for example, admit to failure some 70 percent of the time [Hammer, 1996]).

Thus, there is growing interest in an entirely new organizational paradigm -- one that views organizational adaptation not as a one-time or even periodic event, but as a continuous process. That paradigm is OA; the product is AOs (Goldman, Nagel & Preiss, 1995). (Similar, although not identical, conceptualizations include learning organizations [Senge, 1990], boundaryless organizations [Ashkenas et al, 1995], accelerating organizations [Maira & Scott-Morgan, 1996], dynamic organizations [Sifonis & Goldberg, 1996], quantum organizations [Youngblood, 1997], and kinetic organizations (Fradette & Michaud, in press)).

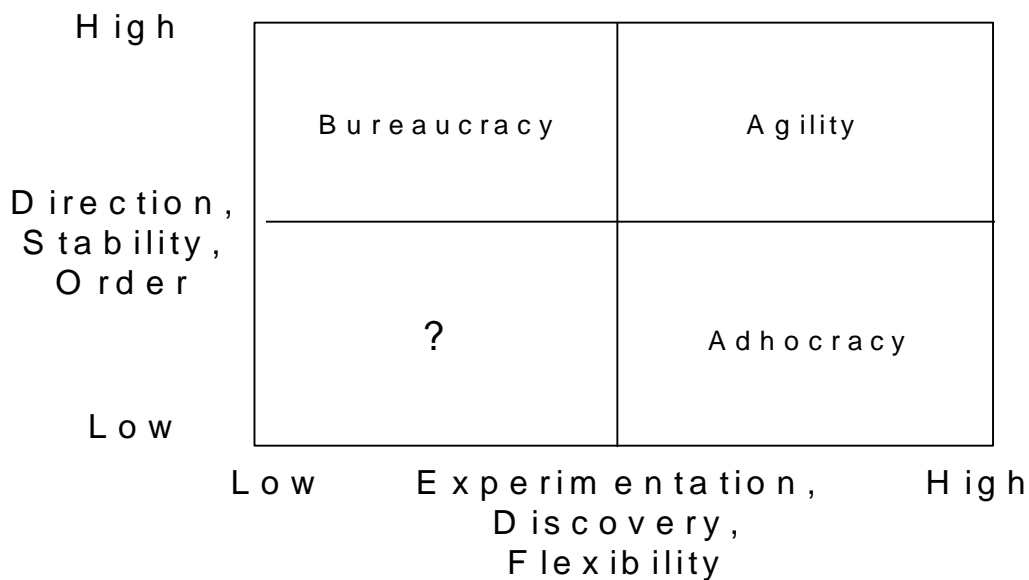
OA is the capacity to be infinitely adaptable without having to change. It is viewed as a necessary core competence for organizations operating in dynamic external environments. AOs strive to develop a built-in capacity to shift, flex, and adjust, either alone or with alliance partners, as circumstances change, and to do so as a matter of course. The goal is to keep internal operations at a level of fluidity and flexibility that matches the degree of turmoil in external environments, a principle known as requisite variety (Morgan, 1997). OA is the conceptual antithesis of quantum or transformational models of change, developed in simpler times, which envision organizations enjoying long periods of relative stability interrupted only occasionally by brief bouts of revolutionary turmoil (Mintzberg, 1989; Tushman & Romanelli, 1985).

As Figure 1 shows, AOs attempt to optimize adaptability and efficiency simultaneously (Meilich, 1997). While they are all about experimentation, discovery, and flexibility, they are ever

mindful of a simultaneous need for direction, stability, and order. Dee Hock, past president of Visa International, refers to AOs as chaordic (from chaos and order); the idea, he suggests, is to unleash as much initiative and innovation as possible throughout the organization (chaos), while simultaneously building in mechanisms for overall coordination and cooperation (order) (Youngblood, 1997).

Figure 1 Agility as Chaos and Order

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While advocates of OA are able to cite numerous examples of seemingly agile organizational behavior -- commonly cited companies include ABB, Hewlett Packard, Motorola, Texas Instruments, Nike, 3M, Visa, various professional service firms, and some of the new (and typically smaller) computer companies -- to date no quintessential example has emerged. In our research, we have found a few organizations that are consciously pursuing, and in a couple of cases even approaching a fair degree of, agility. But, none would claim to be all the way there (if indeed there is a there; OA may be more a matter of becoming than being).

The Research

The OA literature is growing, but limited. Much of the emphasis is on process and technology in the context of agile manufacturing (Goldman et al, 1995) or on broad organizational issues (Ashkenas et al, 1995; Maira & Scott-Morgan, 1996; Sifonis & Goldberg, 1996; Youngblood, 1997). While many authors take passing shots at people issues, with few exceptions (e.g., Fradette & Michaud, in press) these treatments are sporadic, skimpy, and superficial. This is the void that our research is designed to fill.

The research began with a small number of case studies of varying degrees of complexity, as well as an interactive research conference of first-movers and other knowledgeable observers. The model that emerged from that research (Shafer, 1997) was used to guide the conduct of six additional case studies under the auspices of a 12 company research consortium assembled in cooperation with the Agility Forum at Lehigh University. The material thus far accumulated is far too comprehensive (and often too peripheral) to be reported in depth here. Rather, our purpose is to tease from the findings the results that are potentially most suggestive for theorists and researchers interested in probing into HRS, OE and the "black box" between the two.

RECONCEPTUALIZING ORGANIZATIONAL EFFECTIVENESS

Choosing appropriate measures of OE for SHRM research is no easy matter (Becker & Gerhart, 1996; Becker & Huselid, in press; Dyer, 1984). Favorites include profitability (e.g., ROI and ROA) and stock market value (e.g., Tobin's q). Organizational outcomes, such as productivity, quality, and cycle time, appear from time to time, as do human resource outcomes such as employee morale and turnover. But, researchers rarely justify their choice of measures, and, indeed, a degree of eclecticism may not matter much so long as the primary goal is to demonstrate plausible potential effects from investing in HR activities and/or strategies. But, it is less useful as the field progresses beyond the "show what" to focus attention on the "show how".

In this context, it is necessary to work back from distant outcomes such as profitability and stock market value to identify "... intermediate and process-related [outcomes] that indicate how financial results are achieved..." (Becker & Gerhart, 1996: 793). The obvious criterion to drive this search process derives from the resource based view of the firm (RBVF) (Barney 1991, 1997) with an SHRM touch; specifically, it seems desirable to focus on key source(s) of competitive advantage that can be developed or enhanced, at least in part, by HRS. Our OA research provides one example of how this type of analysis can be carried out.

Broadly, AOs establish competitive advantage by being among the first to spot threats and opportunities in continuously changing marketplaces and by being more adept than current

and potential competitors in heading off the threats and/or exploiting the opportunities -- not just once or a few times, but repeatedly over time. In brief, AOs strive to develop and refine three specific organizational competencies (or critical success factors): reading the market, mobilizing rapid response, and embedding organizational learning.

Reading the market refers to the ability to scan the external environment, locate and analyze emerging developments, and quickly turn the resulting information into actionable decisions (Maira & Scott-Morgan, 1996; Teece, Pisano & Shuen, 1997). Market in this context refers not only to actual and potential customers, but also to actual and would-be competitors, key suppliers, and even broader developments and trends in demographics, lifestyles, technology, and public policy. In AOs, reading the market is everyone's business; employees at all levels, not just so-called boundary-spanners, are expected to keep their eyes and ears open for potentially useful tidbits of market intelligence and to bring such information in-house for dissemination, processing, and decision-making by those most directly involved.

Mobilizing rapid response is the capacity to quickly and easily make decisions and translate these decisions into action. In some cases, this involves little more than making a series of relatively small-scale accommodations to evolving customer needs or competitors' initiatives. In others, it involves making major adjustments in product or service offerings or critical business processes. In either case, the key to success seems to lie in two factors: mindset and resource mobility. Mindset refers to a culture characterized by a willingness, even eagerness, to change. Resource mobility refers to the ease and speed with which financial, physical, intangible, and human resources can be moved from less to more promising opportunities.

Organizational learning involves the creation, adaptation, and replication of knowledge to improve organizational performance. It is of two basic types (Morgan, 1997; Senge, 1990). The first is so-called adaptive or single-loop learning which is aimed at making continuous improvements in current operations. The second, referred to as generative or double-loop learning, requires employees at all levels to question and challenge all aspects of the business, up to and including general direction, core values, and fundamental operating principles. AOs use ongoing education, dialogue, debate, and experimentation to encourage employees to form new mental models which, in turn, can lead to totally new perspectives on markets and, as necessary, fundamental organizational change. The goal is to eliminate such defensive routines as obfuscating problems and diluting bad news which can lead to organizational ossification (Argyris, 1985; Morgan, 1997).

Organizations facing different types of environmental circumstances and, thus, competing in different ways are unlikely to require these particular organizational competencies. Rather, the

main message is to encourage SHRM theorists and researchers to think about OE less in terms of financial and market outcomes and more in terms of the critical success factors that, first, contribute to the attainment of sustainable competitive advantage and, second, are (or reasonably can be expected to be) shaped in major ways by HR strategies. For the time being (as noted below), this will probably involve probing for relevant factors case by case, although guiding taxonomies may emerge over time.

For AOs, these organizational competencies -- reading the market, mobilizing rapid response, and embedding organizational learning -- collectively appear to meet Barney's (1997) three criteria for sources of competitive advantage. They are specifically aimed at enabling firms to respond to environmental threats and opportunities (valuable). A paucity of plausible sites for our research suggests that few firms have yet to hone them to a sharp edge (rare). And, there is every reason to believe that all three are difficult and costly to create and, thus, replicate (inimitable).

This brings us to the issue of how AOs go about developing and refining these organizational competencies; that is, to Barney's (1997) fourth criterion, which is critical to the issue of sustainability: organization. As Barney and others (e.g., Wright, McMahan & McWilliams, 1994) have suggested, organizational competencies that are valuable, rare, and inimitable provide at best only a temporary source of competitive advantage. For a sustainable competitive advantage, it is necessary to build an organization capable of developing, exploiting, and continuously renewing these competencies, and of doing so better, faster, and cheaper than current or potential competitors.

ORGANIZATIONAL CAPABILITY: INSIDE THE "BLACK BOX"

Organizational capability is a time-tested concept (Ulrich & Lake, 1990). Perspectives differ, but proponents tend to agree that organizational capability derives from the systemic interaction of several key components of which people (or human resources) is but one. Other commonly discussed features include: shared vision, shared mindset, leadership, structure, processes, technology, and capacity for change (see, for example, Barney, 1997; Lawler, 1996; Ulrich 1997a; Ulrich & Lake, 1990; and Youngblood, 1997).

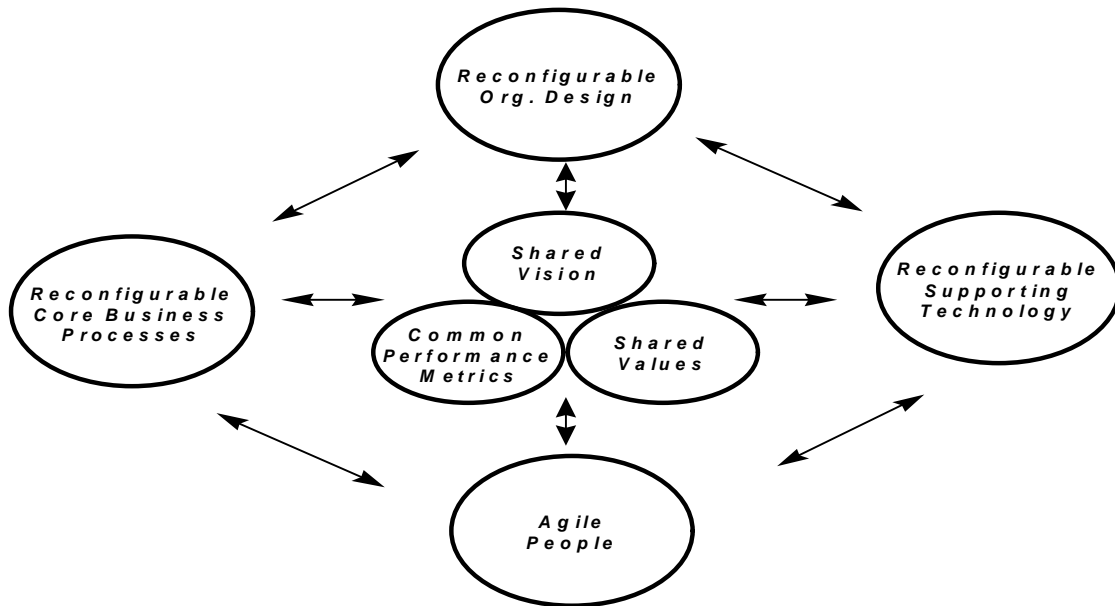
A model of organizational capability, derived from our research, is shown in Figure 2. Overall, the system works like a gyroscope (a metaphor borrowed from Hewlett Packard). At the center is a relatively stable inner core consisting of shared vision, shared values, and common performance metrics. Around the core is a constantly moving or pivoting frame consisting of four reconfigurable components, three of which -- organizational design, core business processes, and supporting technology -- comprise the organizational infrastructure and the fourth of which --

agile people -- is the focus of our work.

In practice, the inner core plays a dual role. First, because of its relative stability it helps to keep AOs from devolving into total chaos. Second, and somewhat paradoxically, it provides energy for constant change by incorporating an expansive vision, embracing change as a core value, and including adaptability as a key performance metric. The reconfigurable outer ring, then, serves as the mechanism through which the capacity to evolve, experiment, discover, and adapt is operationalized.

Figure 2 **Agile** **Organizational Capability**

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The Inner Core

Our initial model of organizational capability had no inner core. But, the criticality of one or more (although rarely all three) of its key components has been cited in virtually every organization studied. Many, of course, are the putative virtues of vision and values (see, for example, Collins & Porras, 1994; Maira & Scott-Morgan, 1997; Senge, 1990). In AOs, an expansive vision (i.e., a purpose, a reason for the journey) helps to generate and nourish a sense of direction and the energy, cohesion, and identity necessary to support and sustain constant experimentation and regeneration. Similarly, values, those enduring tenets of organizational life

that provide guidelines for behavior, are particularly important in AOs given the extreme ambiguities that characterize such enterprises. Shared values make it possible for diverse individuals to assemble, deal with issues at hand, and disengage with a minimum of friction and wasted energy. Frequently mentioned values among our respondents are embracing change, trust, prudent risk-taking, teamwork and cooperation, open information exchange, personal accountability, continuous learning, mutual commitment, and diversity. But, none of these values is universally embraced by, or unique to, AOs, and others are certainly mentioned. So, while we are persuaded that shared values are essential to OA, the extent to which a particular set of values is necessary and/or sufficient is an important, but unanswered, question.

The emergence of performance metrics as a key component of the inner core is a surprising, and less than fully understood, finding. A couple of the organizations we have studied emphasize the importance of having no more than three to five relatively stable performance measures around which all employees can rally. Specific to agility are, first, focus ("keeping all eyes on a few important balls") and, second, fluidity (so long as one measure specifically addresses the organization's capacity to change). Still, given the relative rarity of references to common performance metrics in our research, the possibility of using them (perhaps in conjunction with a so-called balanced scorecard [Kaplan & Norton, 1996]) to promote agility, while intuitively appealing, has to be regarded as speculative at this point (Becker & Huselid, in press).

Clearly, vision, values, and (perhaps) performance metrics can foster OA within a workforce only to the extent they are widely shared and thoroughly internalized. Thus, as we shall see, key elements of HRSs in AOs are devoted to promulgating and reinforcing the behavioral manifestations of the core components of organizational capability.

The Reconfigurable Outer Ring

For emphasis, we divide the components of the reconfigurable outer ring into organizational infrastructure and people. The latter is dealt with in depth later; the former is considered briefly here.

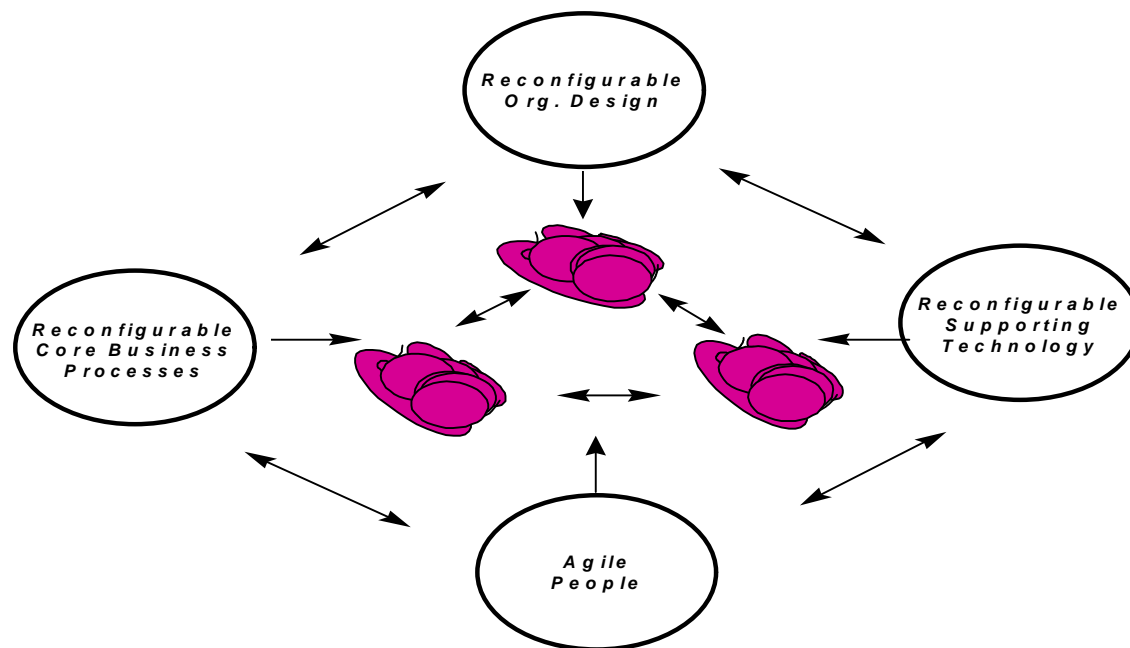
Organizational Infrastructure

Our findings with respect to organizational infrastructure can be summarized as follows. First, three components stand out: organizational design, core business processes, and supporting technologies. Second, there is (are) no dominant pattern(s) of organizational infrastructure across AOs, although each component appears to have certain common design principles. Third, while it is important that the components of organizational infrastructure be aligned, in this context alignment is defined primarily in terms of degree of reconfigurability. And

fourth, degree of reconfigurability refers to the ease and speed with which employees can create mini-organizational infrastructures on the fly in response to changing markets and unique customer demands (Miles & Snow, 1995). The ideal, which we have yet to see in practice, is for AOs to operate essentially as self-organizing systems (see Figure 3).

Figure 3 **Agile Organizations As** **Self-Organizing Systems**

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Organizational Design. AOs are often characterized as the lunatic fringe of organizational design. Frequently used metaphors include adhocracy, networks, clusters, starbursts, and holographs. In some cases, these labels may fit -- for a time -- but on the whole our research suggests a rather different perspective. We have found that AOs tend to view organizational design as a verb, not a noun. Rather than being locked into fixed structures, the tendency is to create designs that encourage rapid reconfigurability within (e.g., the formation and reformation of temporary teams) and across organizations (e.g., moving in and out of temporary alliances, including virtual relationships, with other, similarly agile, organizations). But, structural reconfigurability is not synonymous with the absence of organizing principles. In

general, as much of the literature suggests, AOs tend to be flat, boundaryless, semistructured, customer-focused, process-oriented, and team based (Ashkenas et al, 1995; Maira & Scott-Morgan, 1996; Morgan, 1997; Sifonis & Goldberg, 1996; Youngblood, 1997).

Core Business Processes. AOs do a lot of experimentation with process-centered organizational designs (Hammer, 1996). The idea, borrowed from the reengineering movement, is to achieve major improvements in customer responsiveness and speed through the elimination of the redundancies, hand-offs, miscommunications, and excessive reviews associated with functional or task-oriented organizational structures. But, contrary to the tenets of reengineering, core business processes in AOs tend to be (although they are not always) soft- rather than hard-wired. Rather than firm standard operating procedures, they are more likely to take the form of templates that capture lessons learned from experience, but that also encourage all employees to make (and capture) adjustments as circumstances dictate. (In the words of one of our respondents, "employees must learn to work the process even as they process the work".)

Supporting Technologies. AOs run on real-time, easily accessible information. The need is for a "broadcast" or consumer model of information management; that is, for a mindset, along with the supporting technology, that facilitates the full and timely flow of virtually all information throughout the organization in readily usable and flexible formats. Employees, then, establish their own information needs and, concomitantly, access only that information which is needed at a particular point in time. The idea is to shift from so-called intelligent networks, where the brains are lodged in the system, to so-called stupid -- or open -- networks characterized by intelligent end-user devices and, even more important, intelligent end-users.

Reconfigurability and Alignment

For maximum agility, the key dimensions of organizational infrastructure need to be aligned or, more correctly, continually realigned. But, the aim is not tight fit in the usual sense of this term. Rather, the challenge seems to be to assure that all dimensions of organizational infrastructure are equally reconfigurable. This seems to be more of a problem with respect to supporting technology than organizational designs and core business processes, since the latter two tend to be redesigned together. Logically, AOs should be among the early adopters of the latest wrinkles in network technologies, such as corporate intranets, that provide multiple data entry points, ad hoc query capabilities, and multiple and flexible transaction processing. Our research (although somewhat limited on this point), however, suggests otherwise. In many of the AOs we have studied the march to agility has been perceptively slowed by the lack of appropriately reconfigurable information technologies.

Initially, our research focused on a search for prevailing patterns of organizational infrastructure. The intent was to derive a typology, and, eventually, to identify those types that

enhance and impede OA. For now, this hope has succumbed to the realities of reconfigurability (and perhaps equifinality). We currently believe that it is important not only to study the content of organizational infrastructures, but also to focus specifically on the process(es) by which organizational infrastructures are reconfigured.

It appears, for example, that at a minimum the process has to be pretty much spontaneous (Ulrich & Lake, 1990; Adler & Borys, 1996). Employees at all levels must view organizational infrastructure as a dynamic tool rather than a necessary evil to be surreptitiously circumscribed or (worse) passively accepted. As Figure 3 suggests, in AOs everyone is expected to learn how to choose and adapt designs, core business processes, and information and to use these mini-organizational infrastructures to move resources when and to where they are needed quickly and easily. A key challenge, then, is to better understand (and, ultimately, understand how to effectuate) the capacity to self-organize.

UNCOVERING AGILE ATTRIBUTES

So far, the study of HRS has focused heavily on HR activities (i.e., some combination of principles, policies, and practices) and only tangentially on the workforce characteristics that these activities are designed to deliver (Ulrich 1997a, b). But, workforce characteristics -- which in this context we refer to as agile attributes -- are critical (and arguably the most critical) components of the "black box". Clearly, agile attributes are key components of HRS that cannot be ignored in the search for vertical and horizontal alignment. We need to understand the agile attributes -- behaviors and personal competencies -- that are required to design and operate within self-organizing systems and, in turn, to develop and nurture essential organizational competencies (e.g., reading the market, mobilizing rapid response, and embedding organizational learning). With this knowledge, theorists can begin to delineate how and why various combinations of HR activities are likely to foster OA and researchers can move beyond exploratory studies to do more definitive work (Becker & Gerhart, 1996; Becker & Huselid, in press; Chadwick and Cappelli, in the companion volume; Dyer & Kochan, 1995; Schuler & Jackson, 1987; Wright & Snell, in press).

There is, unfortunately, no generally accepted way to categorize agile attributes (see the chapter by Boxall in this volume). As part of our research, we have spent considerable time encouraging respondents to identify and clarify the workforce characteristics that they believe are essential to agility and/or that they are trying to foster with their HRSs. This has been a frustrating process (like HR theorists and researchers, our respondents have been slow to push this envelope) that has thus far provided only a few insights. The research continues, but here, for expository purposes, we cut into it to judgmentally establish a very tentative list of requisite

agile attributes.

Behaviors

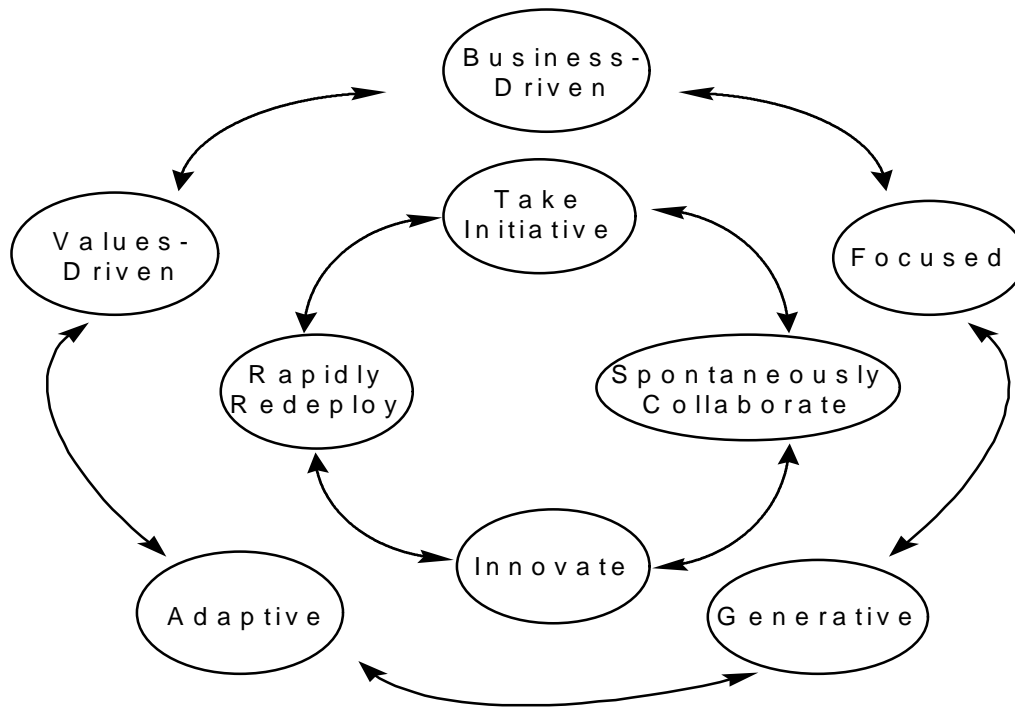
In AOs (as the foregoing suggests) key challenges include: scanning the environment, processing the resulting information, making rapid decisions, creating temporary mini-organizational infrastructures, mobilizing required resources, making effective use of these resources, and sharing and learning insights. Top-level leaders act as the primary (but not the only) custodians of vision (including strategic direction and domain) and core values and, otherwise, keep things in motion through a judicious combination of communicating, coaching, and cajoling. The remaining leaders -- everyone is a leader, as well as a peer and a follower, at one time or another in AOs -- engage in mutual collaboration to do whatever is necessary for the organization to succeed.

Employees -- individually and collectively -- expect, and are expected, to engage these challenges proactively and creatively (Wright & Snell, in press). More specifically, AOs need employees at all organizational levels and locations who: (1) take initiative to spot threats and opportunities in the marketplace, reconfigure the organizational infrastructure to focus resources when and to where they are needed to deal with serious threats and opportunities, and learn (no waiting for permission or instructions to act); (2) rapidly redeploy whenever and to wherever there is priority work that needs doing (eschewing TIM-J, "that isn't my job" [Bridges, 1994]); (3) spontaneously collaborate (even in virtual teams or organizations) to pool resources for quick results; (4) innovate (moving beyond old solutions unless they truly fit); and learn (rapidly and continuously) (see Figure 4).

Figure 4

Agile Attributes: Personal Competencies and Behaviors

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Personal Competencies

These behaviors, in turn, appear to be facilitated by (and, indeed, to facilitate) a set of broad personal competencies (Wright & Snell, in press). To date we have identified 20 such competencies (knowledge, skills, and attitudes) that, for convenience, are grouped into five categories (as shown in Figure 4). Specifically, at this juncture, we believe that initiative, rapid redeployment, spontaneous collaboration, innovation, and learning are enhanced by the extent to which people throughout an organization are:

Business-driven -- visionary, future-oriented, big picture oriented, customer-focused, knowledgeable about the marketplace and the way the business operates, and results-oriented.

Focused -- able to set priorities, solutions-oriented, and (im)patient (i.e.,

simultaneously exhibit a strong sense of urgency and a willingness to let things take their course).

Generative -- organizationally adept, open to experimentation, fast learners and appliers of new knowledge, and team players.

Adaptive -- comfortable with themselves, empathetic, comfortable with ambiguity, comfortable with paradox, and resilient.

Values-driven -- instinctively behave in accordance with the organization's core values.

THE SEARCH FOR VERTICAL AND HORIZONTAL ALIGNMENT

On what, and what forms, of HR activities do AOs rely to foster these agile attributes (and eventually the capacity to self-organize and develop critical organizational competencies)? How are these bundled for best results? Unfortunately, vertical and horizontal alignment are complex and elusive issues that cannot be definitively determined with partial and qualitative data. Useful insights can be gained, however, through a systematic examination of the available information in search of complementarities.

Figure 5 shows the HR activities of interest. In the analysis, the emphasis is on principles and policies since conventional dictum suggests that these should be generalizable across AOs, whereas practices are more directly tailored to particular organizational circumstances (Becker & Gerhart, 1996; Becker & Huselid, in press). No attempt is made to codify the full range of HR principles and policies (or illustrative practices) adopted by AOs; rather the focus is on those that appear to be implemented for the primary purpose of enhancing OA. Activity specific descriptions of these HR principles and practices is provided in the appendix to this chapter. Here the emphasis is on assessing vertical and horizontal alignment; that is, on complementarities.

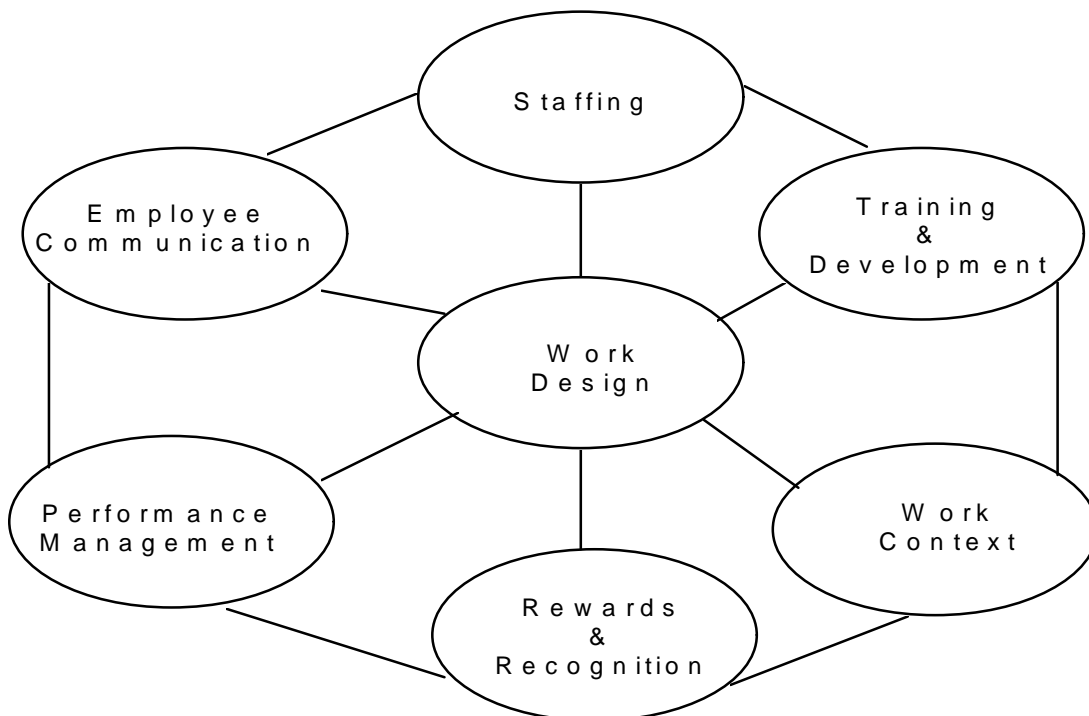
In this context, HR activities are considered complementary to the extent that doing more of any one of them appears to increase the returns to doing more of the others (Milgrom & Roberts, 1995). The task is to determine the extent to which the nature of a particular HR activity seems to enhance agile attributes in the context created by the remaining HR activities. The recommended analytical procedure is to focus on the complementarities between the focal HR activity -- here work design (see Figure 5) -- and each of the other HR activities, picking up the complementarities between pairs of the other HR activities in passing (Milgrom & Roberts,

1995).

Briefly (more detail is provided in the appendix), work design refers to the way in which assignments are defined. In principle (if not always in practice), AOs strive to reach the point where employees at all levels see themselves and their colleagues as owners of fluid assignments with responsibility for results (rather than as occupants of fixed positions with responsibility for performing tasks). Work design is considered the focal HR activity in AOs for two reasons. First, there is an obvious symbiosis between reconfigurable organizational infrastructures and the concept of fluid assignments (or, conversely, an obvious disconnect between the former and the notion of jobs as traditionally defined). Second, work design exerts a powerful influence on the design and administration of the remaining HR activities (e.g., selection criteria, training content and processes, performance appraisals, pay, and so forth).

Figure 5 Human Resource Activities

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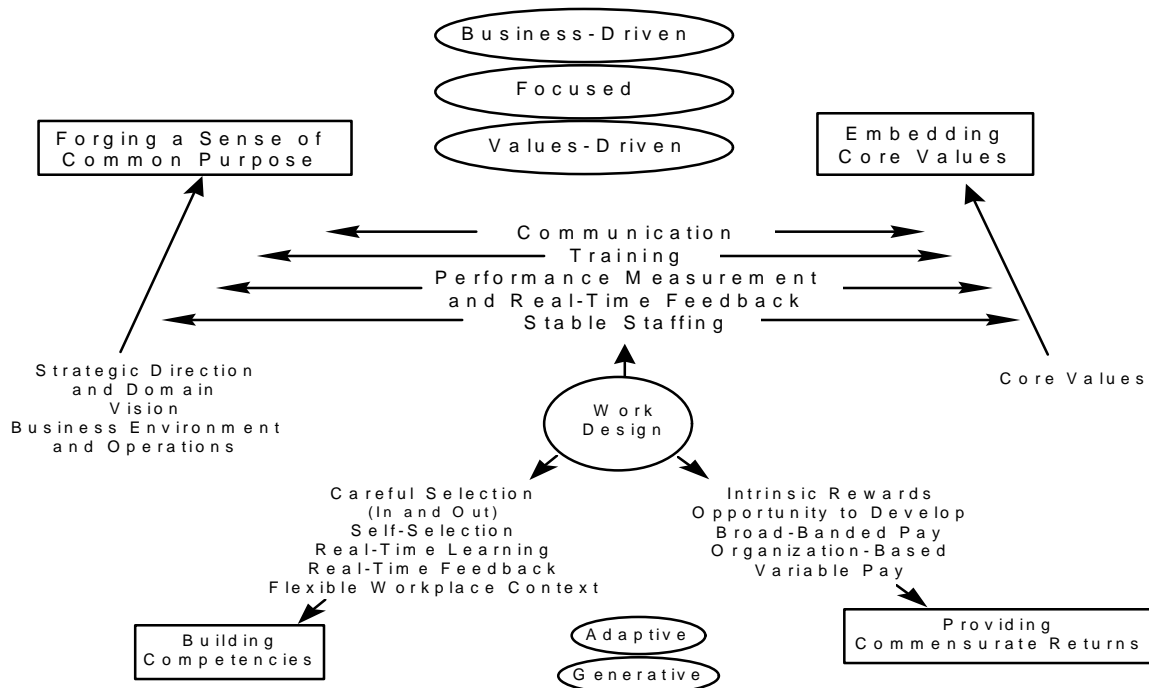


Employees who view themselves and others as owners of fluid assignments and who take individual and collective responsibility for organizational results are potentially well-

positioned to exercise initiative, rapidly redeploy, spontaneously collaborate, innovate, and learn. But, such a situation also has the potential to spin out of control and intimidate and even paralyze employees. Thus, as shown in Figure 6, our research suggests that OA is enhanced to the extent that fluid assignments are supported by a set of HR activities that forge a sense of common purpose, embed core values, develop competencies, and provide commensurate returns to employees.

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Figure 6
Complementarities Among
Human Resource Activities



Forging a Sense of Common Purpose

With fluid assignments, employees are, in the end, responsible for keeping themselves focused and their individual and collective actions more or less on track; there are few directives and supervisors and no job descriptions to fall back on. So, it is necessary to create an environment that encourages employees to be business-driven and, more broadly, to identify with, and even internalize, the purpose and goals of the organization. To this end, AOs strive to assure that employees at all levels share a common vision, have a clear understanding of the business context and dynamics (including the key organizational competencies of reading the

market, mobilizing rapid response, and embedding organizational learning), and know how and why their contributions make a difference.

The key HR activities here are employee communication, training and development, performance management, and staffing. It helps if an organization's vision is developed participatively, but once it is in place extensive and intensive, multi-directional employee communication is used to interpret and embed its true meaning and implications. But, even the most compelling vision can be a bit ephemeral. So, a steady stream of employee communication (in the spirit of "open book management" [Stack, 1992]), is also used to disseminate real-time information about the realities of the organization's external environment, as well as its internal operations and the results being achieved. Simultaneously, action learning activities help employees develop the skills required to use the received information to calibrate and recalibrate their sense of purpose and direction. Concomitantly, employees at all levels are involved in establishing performance goals on the common performance metrics (and their derivatives) and using available information to track progress against goals and take corrective action as necessary. Sense of common purpose is diminished to the extent an organization has a revolving door approach to staffing; thus, efforts to retain a stable core of relatively long-service employees are important as well (see below).

In sum, OA is fostered to the extent that the expanded use of fluid assignments is accompanied by increasingly extensive and intensive efforts to enhance employee understanding of organizational vision, marketplace and business realities, internal operations, and results; develop employees' capacities to put this information to use in their day-to-day activities; involve all employees in ongoing goal setting, performance tracking, and feedback; and retain employees once they are indoctrinated. Although seldom clearly articulated, these relationships seem to be generally recognized by the AOs we have studied. Some have been more successful than others with respect to implementation. Among the best, we have found that more or less randomly selected employees at various organizational levels generally know and embrace the organization's broad purpose and direction and are usually able to articulate how their activities contribute to overall organizational results.

Embedding Core Values

Fluid assignments require diverse groups of employees to interact instinctively on the fly. The capacity to do this is strengthened to the extent that employee behaviors are fundamentally values-driven; that is, to the extent that diversity is tempered by a set of commonly shared core values. In the context of OA, as noted previously, key core values include embracing change, trust, prudent risk-taking, teamwork and cooperation, open information exchange, personal accountability, continuous learning, mutual commitment, as well as diversity. Irrespective of the

particulars, though, what seems to be essential is that the core values be thoroughly understood, widely shared, and unfailingly adhered to.

This is where HR activities come in. Virtually every HR activity plays a part. Ongoing employee communication, is essential. Much of this focuses on the core values per se, but care is also taken not to miss any opportunity to reinforce the core values in communication undertaken primarily for other purposes. As essential as employee communication is, however, it is only a start. Task forces are formed to examine existing policies and practices for conformance with the core values. Selection of new employees is based in part on the extent to which they seem to embrace the core values. Training is provided; as with employee communication, some of it is specific to the core values, but more occurs as the core values are incorporated into other forms of training. Performance expectations and criteria are expressed, in part, in terms of behaviors that are consistent with the core values. Few opportunities are missed to recognize and reward individuals and teams that demonstrate these behaviors. (In one organization we have studied, so-called breakthrough objectives are established around perceived gaps between core values and behaviors. Shrinking gaps are celebrated with great fanfare.) Once again, for continuity, every effort is made to make it possible and desirable for core employees to stay with the organization. But, there is little hesitancy to terminate those who, after training and counseling, repeatedly fail to live up to the core values, even if they are otherwise solid, or even exceptional, performers.

Again, OA is fostered to the extent that the expanded use of fluid assignments is supported by employee communication, staffing policies and practices, training and development programs, performance criteria, and approaches to reward and recognition that are successful in embedding a set of core values deeply into the fabric of the organization. Often, these same HR activities are designed in a way that helps to forge a sense of common purpose as well. In our research so far, we have encountered a full range of organizational perspectives with respect to core values. At one extreme, is an organization that places core values at the very center of its drive to agility. At the other, is an organization that emphasizes its rather unique business model, and chooses to be rather circumspect about its core values and, even more so, about its efforts to foster such values.

Building Competencies

Fluid assignments require high levels of technical and personal competencies. Requisite technical competencies vary from situation to situation, of course, although in general fluid assignments require generalists with deep skills and specialists with broad exposure. Further, it is too early in the game to be specific about requisite personal competencies (aside from the first-cut list proposed earlier). Nonetheless, it is possible to speculate about HR activities aimed

at building key competencies.

These include the usual suspects: staffing, training and development, performance feedback, and competency-based pay. The add-on is workplace context. Selection on the basis of technical competence is obvious, although equally important are such personal competencies as interpersonal and problem-solving skills, openness to experimentation, and capacity to learn and apply learning on the fly. Given the relative uniqueness of fluid assignments, the principle of self-selection (e.g., through realistic job previews) is important. Since continuous learning is essential, considerable effort goes into competency-oriented training and development. Much of this occurs real-time in the context of specific assignments, and specifically as people move to new assignments. That which is more formal tends to occur real-time as well, or on demand (e.g., in the form of video- and computer-based courses for self-study or tailored workshops). Training assessment focuses on the speed with which learning takes place and is actually applied in the workplace. Also, there is considerable reliance on real-time, informal behavioral and performance based feedback, which employees are trained to provide developmentally. Competency-based pay is occasionally relied on to induce specific developmental activities, but in general, greater reliance is placed on the norm of continuous learning for this purpose (especially since situations tend to change faster than competency-based pay plans can be redesigned). More subtly, flexible workplace policies are used to reinforce the notion of individual responsibility and to provide further experience in priority setting and decision-making.

Returning to the basic theme, the more AOs move toward fluid assignments the more they have to gain from substantial investments in selecting and retaining employees who have a broad range of technical and personal competencies and the motivation and aptitude to engage in continuous learning. The same is true with respect to substantial investments in real-time and on-demand training and development and, perhaps, competency-based pay and flexible workplace practices. And, of course, to the extent these investments are made, organizations enhance the degree of agility that is realized from additional efforts to increase the breadth and depth of fluid assignments. These relationships are obviously apparent to the organizations we have studied, and they are the ones that universally receive considerable attention.

Providing Commensurate Returns

Fluid assignments require considerably greater inputs from employees than traditional jobs. They also provide (perhaps substantial) returns for many employees in the form of so-called intrinsic rewards (e.g., a sense of accomplishment and achievement). But, of course, AOs strive to provide commensurate tangible returns as well, partly in an effort to motivate desired behaviors and outcomes and partly to create perceptions of equity to enhance retention of valuable core employees.

Compensation is the key HR activity here, although in this context opportunities for training and development that enhance personal growth and employability, recognition (and small awards) from colleagues, and even flexible workplace policies and benefits can be viewed as returns as well (see the chapter by Bloom & Milkovich in this volume). With respect to compensation, base pay is relatively high since fluid assignments require many and advanced competencies and base rates are primarily market based (within broad bands). A fair amount of pay is at risk (more so as one moves up what is left of the organizational hierarchy). The pool for the contingent portion of pay is based on some combination of project, unit, or organizational performance (as assessed on the common performance metrics goals), largely to keep the emphasis on mutual collaboration for the greater good. Profit-sharing and/or stock option plans are popular. Individual allocations of at-risk pay are based on individual contribution (notwithstanding the measurement difficulties) and, perhaps, compliance with core values.

As noted, the AOs we have studied make no claim to have developed ideal reward systems. But, the more they move toward fluid assignments, the more they are likely to enhance agility by, first, adopting a total returns approach to rewards (i.e., encouraging employees to focus on non-cash, as well as cash, returns) and, second, focusing upside earnings potential on broad unit or total organizational results.

Summary

Overall, the reasoning here is that OA is enhanced through agile attributes to the extent that organizations focus work design on fluid assignments and invest in complementary HR activities that increase employees' sense of common purpose with the organization, internalization of selected core values, desire and ability to develop both technical and personal competencies, and sense of receiving intangible and tangible returns commensurate with their inputs and contributions. Although the analysis is only suggestive, based as it is on an incomplete composite of information gathered from several AOs, it does provide a framework and baseline from which to dig more deeply into the vertical and horizontal alignment of HR activities in particular organizations, agile and otherwise.

WHERE TO FROM HERE?

Obviously, our research has thus far only scratched the surface of the "black box" between HRS and OA. But, it does suggest some potential methodological implications for consideration not only by students of OA, but also by those interested in SHRM more broadly.

Process

At least for a while, research into the "black box" is likely to take the form of truly exploratory, intensive, qualitative case studies designed to identify key variables, explore critical

relationships, and (over time) derive grounded theory (Becker & Gerhart, 1996; Chadwick & Cappelli, in the companion volume; Shafer, 1997). Our experience suggests that such studies might more fruitfully begin with OE, rather than HRS. Current fashion dictates that the focal point be financial results or market value and business strategy. But, particularly for firms operating in dynamic markets characterized by rapid change and unpredictability, more fertile ground is to be found in less distant and ephemeral outcomes. In line with the RBVF (Barney, 1991, 1997), these are specific sources of competitive advantage (organizational competencies, critical success factors) as defined by the organization(s) involved. Such factors may turn out to be firm-specific, although our research suggests that selected samples (see below) may produce conceptual commonalities (e.g., critical organizational competencies across AOs appear to be reading the market, mobilizing rapid response, and embedding organizational learning). Generally, the emphasis would be on identifying factors that both contribute to competitive advantage -- i.e., those that meet the three criteria of valuable, rare, and inimitable -- and are potentially affected, at least in part, by HRSs.

With organizational competencies identified, attention turns to organizational capability. While models of organizational capability abound, the research task is to search for components that appear to be critical in the context(s) at hand. It is useful at this point to separate the people component from all others (collectively, the organizational infrastructure). With respect to the non-people components, important questions include: What are they? What are their key features? What are the key interrelationships among them?

The people component is isolated to turn the spotlight on HRS, defined in terms of both important workforce characteristics (e.g., behaviors and personal competencies) and the HR principles, policies, and practices that shape these characteristics (Wright & Sherman, in the companion volume; Wright & Snell, in press). Rich descriptions are important here, but ultimately the task is to identify vertical and horizontal alignments. At this juncture, this involves a judgmental search for complementarities, although as conceptual clarity emerges and measures improve, statistical analyses may become feasible (Milgrom & Roberts, 1995).

Sample Selection

Given the current state of knowledge, we agree with Daft and Lewin that a prudent course for students of the "black box" is to "... apply midrange methods by studying a limited number of case examples or *innovative outliers* to understand and develop labels, variables, and models to explain and define [phenomena]" (italics ours) (1993: ii). Everyone may not share our fascination with AOs. But, the greatest potential for learning at this point does seem to lie in purposive, rather than random or convenience, sampling.

Ideal are organizations that appear to have achieved sustainable competitive advantage on the basis of building a unique organizational capability (rather than on the basis of such resources as monopoly power, sole access to valuable supplies or technology, or particularly creative financing). Assuredly, this means dipping below the corporate level (except in single-business firms) to focus on one or more business units or even production systems or locations (Becker & Gerhart, 1996; Chadwick & Cappelli, in the companion volume). It probably also means leaning towards organizations that are relatively labor -- rather than capital --intensive, and towards medium-sized to smaller units that provide some reasonable line of sight from OE at one end to HRS at the other. Success would be another criterion, with the nod going to organizations that are highly successful and, where feasible, quite unsuccessful (much can be learned from well-intentioned failures).

When it comes to HRSs, the issue is not generalizability, except in a very limited sense (i.e., across firms with similar sources of competitive advantage achieved through virtually identical organizational infrastructures). Rather, the challenge is to achieve contextual validity and, in the process, establish (rather than simply assert) the extent to which workable patterns of vertical and horizontal alignments in SHRM are infinite, numerous, limited, or unitary.

APPENDIX

DESCRIPTIONS OF KEY HR ACTIVITIES

Key HR activities are delineated in Figure 5. Complementarities among these activities are analyzed in the text. Richer descriptions of the various activities follow.

Work Design

Work design refers to the way in which assignments are defined. In principle, AOs strive to reach the point where employees at all levels see themselves and their colleagues as owners of fluid assignments with responsibility for results (rather than as occupants of fixed positions who are simply responsible for carrying out tasks). The thinking is consistent with that of Bridges (1994, p. 150) who contrasted the ossifying effects of jobs with the adaptability associated with "dejobbing". In his words:

In a fast-moving organization ... a person is likely to be hired and assigned to a project. The project changes over time and the person's responsibilities ... change with it. Then the person is assigned to another project (well before the first project is finished), and then maybe to still another. These additional projects (which also keep evolving) require working under several team leaders, keeping different schedules, being in various places, and performing a number of different

tasks.... In such a situation, people no longer take their cues from a job description or from a supervisor's instructions. The signals come from the changing demands of the work project itself. People learn to focus their individual efforts and their collective resources on 'the work that needs doing'.....

We know of no organization that has fully operationalized the principle of fluid assignments. But, every AO we have studied is actively experimenting with variations on the theme, including flexible job profiles (which emphasize results), blended work assignments (e.g., generalists who do the full range of work formerly assigned to several specialists), flexible work assignments (e.g., specialists who rotate from project to project as work loads dictate), and, of course, cross-trained teams. This experimentation is primarily carried out by internal (usually cross-functional) teams, often with little or no help from external consultants, as part of a general effort to model and develop agile attributes.

We believe, as noted in the text, that AOs should consider work design the focal HR activity. There is an obvious symbiosis between reconfigurable organizational infrastructures (and the resulting temporary mini-organizational infrastructures) and the concept of fluid assignments (or, conversely, an obvious disconnect between the former and the notion of jobs as traditionally defined). And, of course, work design exerts a powerful influence on the design and administration of the remaining HR activities (e.g., selection criteria, training content and processes, performance appraisals, pay, and so forth). But, the AOs we have studied have generally approached work design rather tentatively and often even haphazardly; as the pace of change accelerates, however, this is likely to change. As AOs increasingly move in the direction of fluid assignments, the effect will be to enhance the pace of experimentation with other HR activities as well (Bridges, 1994).

Staffing

With respect to staffing patterns (core vs. contingent employees), AOs face a dilemma. On the one hand, they need to be able to flex the numbers and types of employees they have to adapt to changing business conditions. On the other hand, contingent employees, especially temps and contractors, are difficult to incorporate into the agile way of operating. On balance, the organizations we have studied tend to shy away from the extensive use of contingent employees. Although, there are exceptions. One organization we have studied, which has fluctuating work loads, is targeting to have about a 30 percent contingent workforce; it attempts to circumvent the acculturation issue by contracting with a temp agency that is on-site and maintains a cadre of available employees who have a long-standing relationship with the host company, but who prefer to work part-time and/or occasionally or who hope eventually to move

into the organization's core workforce.

AOs put a great deal of emphasis on selection, both initially and for internal assignments, and on outplacement when things are not working out. When recruiting and selecting, AOs focus at least as much on adherence to shared values and, less consistently, agile attributes as they do on technical knowledge and skills. Typical is one organization's "hiring the best" program that consists of an interviewing protocol organized around its shared values, work samples to test for (some) agile attributes, team-based selection of most new hires, and in-depth self-study training programs on selection requirements and techniques for those involved in making hiring decisions.

Most AOs, contrary to what might be expected, lean toward a so-called closed internal staffing system (i.e., while they realize the futility of lifetime employment and careers in this day and age, most have yet to subscribe to the currently fashionable free-market notion of the employment contract). They hire primarily into entry-level assignments, using upper-level hires selectively to seed hard-to-fill positions and prevent excessive in-breeding. They go to great lengths to retain core employees who continue to contribute; most have relatively low voluntary turnover rates and, despite having little reluctance to part company with non-performers, most make every effort to avoid layoffs (because, as we shall see, they have rather extensive investments in their core employees). Flat organizational designs limit upward career moves. Fluid assignments help to minimize layoffs (to the extent employees can quickly and easily move to where there is work that needs doing) and, to some extent, to compensate for the limited upward mobility (since they provide opportunities for competency enhancement). Still, the desire to minimize voluntary turnover on the one hand while offering only limited opportunities for upward mobility on the other poses a real dilemma to which there is appears to be no truly satisfactory solution (in the absence of rapid growth).

Accordingly, AOs expect employees at all levels to take ultimate responsibility for their own careers -- defined in terms of being multi-skilled, leading-edge, adaptable, and actively exploring and pursuing opportunities, inside or outside the organization, on an ongoing basis. Concurrently, AOs do their best to provide information about likely future needs and opportunities, more so (it seems) inside than outside the organization, and to assure that all employees (not just those being outplaced) have on-line access to resources for career counseling.

Fluid assignments, coupled with mostly lateral career moves, require supporting infrastructure, especially some, preferably on-line, means of making current and emerging opportunities known to currently or potentially available talent and of mediating inevitable differences over "who goes where, when". We are still looking for an organization claiming to

have a workable, let alone ideal, system for dealing with these issues.

Training and Development

AOs put a lot of effort, time, and money into training and development (reinforcing continuous learning as a shared value). In contrast to the usual practice, training and development opportunities tend to be evenly distributed across organizational levels rather than concentrated at the top. Much of the activity is assignment specific and takes place "on the fly". Over and above this, AOs share four common characteristics with respect to the content of training and development programs. One is a heavy emphasis on business imperatives; employees at all levels learn about the marketplace, how the organization competes, financial realities, critical success factors, how employees contribute to critical success factors, and so forth. A second commonality is a constant drumming on the tenets of one or more components of the stable inner core: vision, values, and common performance metrics; some AOs, for example, have a strict policy of embedding their core values into every training and development program. Third, many AOs provide at least some level of training on the fundamentals of managing change. Fourth, most AOs seem to be a ways away from developing a set of integrated training and development activities that is clearly focused on a full range of agile attributes (although, obviously, much of the assignment-specific training touches on these).

AOs use a wide variety of training and development designs. Particularly supportive of agility are the tendencies, first, to make increasing use of just-in-time training (e.g., in the form of individualized on-line instruction) and, second, action learning designed in a way that reinforces at least some (e.g., generative and adaptive) agile attributes.

While AOs provide the resources, employees are held responsible for their own learning and for staying on the leading-edge of their fields (or bearing the consequences if they fail to do so). Finally, at least some AOs are extending their training and development opportunities beyond their organizational boundaries to incorporate employees of customers, suppliers, and actual or potential partners in virtual organizational arrangements.

Performance Management

While still conducting regular performance reviews, many respondents cite their incompatibility with OA. In flat organizations with fluid assignments it is difficult to find an assessor, or even a group of assessors, who have the requisite knowledge to do the job. An obvious solution would appear to lie in formal 360-degree appraisals, but they appear to be rare in AOs, perhaps because, as customarily performed, they tend to be rather cumbersome and time-consuming (read bureaucratic). Certainly, given the pace of change in AOs, waiting six, let alone 12, months to begin correcting emerging performance deficiencies is a dangerous game. Accordingly, some AOs have attempted to engage in goal-setting around common performance

metrics and to establish a norm giving all employees a right to receive (and, thus, of course, a corresponding obligation to provide) real-time, primarily informal performance related feedback, either positive or negative (but preferably stacked toward "catching someone doing something right"). To activate this norm, AOs emphasize the opportunity it presents to "walk the talk" on shared values (embracing change, trust, prudent risk-taking, teamwork and cooperation, open information exchange, and the like) and, usually, provide training on the fine art of goal setting, assessing behavior and performance, and, especially, providing constructive feedback.

Reward and Recognition

Our information on rewards is rather sparse, primarily because the organizations in our sample have treated compensation as a lag, rather than lead, activity in the march to agility (some, admittedly, because they were unclear about how to proceed and considered compensation a high-risk area for experimentation). At any rate, governing principles with respect to compensation in AOs seem to include: broadbanding (dictated by "dejobbing" and the move toward fluid assignments) with pay levels heavily oriented toward market rates; occasional, judicious, and temporary use of skill- or competency-based pay to encourage the learning that facilitates fluid assignments; liberal use of contingent compensation (e.g., large upside bonus potentials, stock options for all employees); payout pools for contingent compensation based on a combination of project or unit and organization-wide performance (on common performance metrics) to enhance a sense of ownership and spontaneous collaboration, with individual payouts based on a combination of contribution to the greater good (notwithstanding the measurement difficulties) and compliance with core values.

AOs are liberal users of, often on-the-spot, recognition such as public praise (e.g., "pat on the back" notices on bulletin boards and in newsletters), small cash awards, trips, special assignments, symbolic awards, and the like (in the spirit of "catching someone doing something right"). It is common, for example, for AOs to give teams small amounts of money to spread around in the form of instant cash awards to individuals or other teams for contributions above and beyond the call. Special attempts are made to assure that compliments from customers find their way to appropriate individuals or teams.

Work Context

AOs consciously focus on work context. Otherwise, seemingly isolated policy decisions can easily create a web of rules and set of working conditions that are anything but agile (Bridges, 1994). The guiding principle is flexibility (backed by personal accountability and trust). Thus, AOs naturally embrace policies such as flextime, job sharing, telecommuting, team allocation of paid time off, symbolic egalitarianism with respect to such perks as dining facilities and parking spots, defined contribution pension schemes (e.g., 401K and deferred profit sharing

plans) with wide choice of investment options, and the like.

Employee Communication

Employee communication is the HR activity that permeates all others and serves as the glue that holds them together. It greases the wheels of change, adaptability, and learning. Consequently (as noted earlier), AOs strive to attain real-time, seamless flows of information down, up, and across organizational levels and boundaries. Employees, then, to repeat a recurring theme, are responsible not only for sharing all relevant information, but also for identifying their own information needs and for sorting through the clutter to access (only) that which is needed at a particular point in time. On the other side, AOs go out of their way, through surveys, chat groups, skip-level forums, and the like, to learn what is on employees' minds.

Atypically, many AOs subscribe, in principle if not in name, to the tenets of "open book management" (Stack, 1992); that is, to the general notion that employees at all levels need to know at least as much about the business as any fully informed analyst on Wall Street. Thus, information about the marketplace and the status of the business (positive and negative) is widely disseminated and, backed by training in the fine art of financial analysis, expertly worked over at every level in search of opportunities for improvement or even entirely new initiatives. A second unique feature of employee communication in AOs is the extensive focus on the three dimensions of the stable inner core: vision, values, and common performance metrics. Often, even routine communications (such as memos and newsletters) are specifically crafted to include specific references to these core levers.

AOs employ a full range of employee communication mechanisms, of course, both high tech and high touch. A defining characteristic, however, is extensive use of multiple forums to disseminate new ideas and learning, especially laterally (sometimes backed up with measures and rewards based on amount and usefulness of information shared). These include not only electronic forums (e-mail, intranets, and electronic bulletin boards), but also more mundane mechanisms such as special councils (organized around specific topics and often involving customers, suppliers, and actual or potential alliance partners) and frequent technology and patent fairs set up to give "inventors" opportunities to show their wares.

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REFERENCES

- Adler, P.S. & Borys, B. (1996). Two Types of Bureaucracy: Enabling and Coercive. Administrative Science Quarterly, 41: 61-89.
- Argyris, C. (1985). Strategy, Change, and Defensive Routines. Boston: Pitman.
- Arthur, J.B. (1994). Effects of Human Resource Systems on Manufacturing Performance and Turnover. Academy of Management Journal, 37: 670-687.
- Ashkenas, R., Ulrich, D., Jick, T., & Kerr, S. (1995). The Boundaryless Organization. San Francisco: Jossey-Bass.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. Journal of Management, 17: 99-120.
- Barney, J.B. (1997). Gaining and Sustaining Competitive Advantage. Reading, MA: Addison-Wesley.
- Becker, B. & Gerhart, B. (1996). The Impact of Human Resource Management on Organizational Performance: Progress and Prospects. Academy of Management Journal, 39: 779-801.
- Becker, B. & Huselid, M. (In press). High Performance Work Systems and Firm Performance: A Synthesis of Research and Managerial Implications. In G.R. Ferris (Ed.) Research in Personnel and Human Resource Management, Vol. 16. Greenwich, CT: JAI Press.
- Bloom, M. & Milkovich, G. (In this volume). Strategic Perspectives on International Compensation.
- Boxall, P. (In this volume). Human Resource Strategy and Industry-Based Competition: A Conceptual Framework and Agenda for Theoretical Development.
- Bridges, W. (1994). Job Shift. Reading, MA: Addison-Wesley.
- Chadwick, C. & Cappelli, P. (In the companion volume). Alternatives to Generic Strategy Typologies in Strategic Human Resource Management.
- Collins, J.C. & Porras, J.I. (1994). Built to Last. New York: HarperBusiness.
- Daft, R.L. & Lewin, A.Y. (1993). Where are the Theories for the New Organizational Forms? An Editorial Essay. Organization Science, 4: i-vi.
- Delery, J.E. & Doty, D.H. (1996). Modes of Theorizing in Strategic Human Resource Management: Tests of Universalistic, Contingency, and Configurational Performance Predictions. Academy of Management Journal, 39: 802-835.
- Dyer, L. (1984). Studying Human Resource Strategy: An Approach and an Agenda. Industrial Relations, 23(2): 156-169.
- Dyer, L. & Kochan, T.A. (1995). Is There a New HRM? Contemporary Evidence and Future Directions. In B. Downie, P. Kumar, & M.L. Coates (eds). Managing Human Resources in

- the 1990s and Beyond: Is the Workplace Being Transformed?. Kingston, Ontario: Industrial Relations Centre Press, Queen's University.
- Dyer, L. & Reeves, T. (1995). Human Resource Strategies and Firm Performance: What Do We Know and Where Do We Need To Go?. International Journal of Human Resource Management, 6: 656-670.
- Fradette, M. & Michaud, S. (In press). The Power of Corporate Kinetics. New York: Simon and Schuster.
- Gerhart, B. (In the companion volume). HRM and Business Performance: Challenges in Making Causal Inferences.
- Goldman, S.L., Nagel, R.N., & Preiss, K. (1995). Agile Competitors and Virtual Organizations. New York: Van Nostrand Reinhold.
- Guest, D. (1997). Human Resource Management and Performance: A Review and Research Agenda. International Journal of Human Resource Management, 8(3): 263-276.
- Hammer, M. (1996). Beyond Reengineering. New York: HarperBusiness.
- Huselid, M.A. (1995). The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance. Academy of Management Journal, 38: 635-672.
- Huselid, M. & Becker, B.E. (1996). Methodological Issues in Cross Sectional and Panel Estimates of the HR-Firm Performance Link. Industrial Relations, 35: 400-422.
- Huselid, M., Jackson, S.E., & Schuler, R.S. (1997). Technical and Strategic Human Resource Management Effectiveness as Determinants of Firm Performance. Academy of Management Journal, 40: 171-188.
- Kaplan, R.S. & Norton, D.P. (1996). The Balanced Scorecard: Translating Strategy Into Action. Boston: Harvard Business School Press.
- Lawler, E.E. III. (1996). From the Ground Up: Six Principles for Building the New Logic Corporation. San Francisco: Jossey-Bass.
- Maira, A. & Scott-Morgan, P. (1996). The Accelerating Organization. New York: McGraw-Hill.
- McMahan, G., Virick, M., & Wright, P.M. (In the companion volume). Alternative Theoretical Perspectives for Strategic Human Resource Management: Progress, Problems, and Prospects.
- Meilich, O. (1997). The Flexibility-Efficiency Debate: Review and Theoretical Framework. Paper presented at the annual meeting of the Academy of Management, Boston.
- Mintzberg, H. (1989). Mintzberg on Management. New York: The Free Press.
- Miles, R. & Snow, C. (1995). The New Network Firm: A Spherical Structure Build On a Human Investment Philosophy. Organizational Dynamics, Spring: 5-18.

- Milgrom, P. & Roberts, J. (1995). Complementarities and Fit: Strategy, Structure, and Organizational Change in Manufacturing. Journal of Accounting and Economics, 19: 179-208.
- Morgan, G. (1997). Images of Organizations (2nd Edition). Thousand Oaks, CA: Sage.
- Schuler, R. S. & Jackson, S.E. (1987). Linking Competitive Strategies with Human Resource Management Practices. Academy of Management Executive, 1: 207-219.
- Senge, P. M. (1990). The Fifth Discipline. New York: Currency Doubleday.
- Shafer, R.A. (1997). Creating Organizational Agility: The Human Resource Dimension. Unpublished Ph.D. Dissertation, Cornell University.
- Sifonis, J.G. & Goldberg, B. (1996). Corporation on a Tightrope: Balancing Leadership, Governance, and Technology in an Age of Complexity. New York: Oxford University Press.
- Stack, J. (1992). The Great Game of Business. New York: Currency-Doubleday.
- Teece, D.J., Pisano, G. & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. Strategic Management Journal, 18(7): 509-533.
- Tushman, M.L. & Romanelli, E. (1985). Organizational Evolution: A Metamorphosis Model of Convergence and Reorientation. In L.L. Cummings and B.M. Staw (eds). Research in Organizational Behavior, 7: 171-222. Greenwich, Ct: JAI Press.
- Ulrich, D. (1997a). Human Resource Champions. Boston: Harvard Business School Press.
- Ulrich, D. (1997b). Judge Me More By My Future Than By My Past. Human Resource Management, 36: 5-8.
- Ulrich, D. and Lake, D. (1990). Organizational Capability: Competing From the Inside Out, New York: Wiley.
- Wright, P.M. & Sherman, W.S. (In the companion volume). Failing to Find Fit in Strategic Human Resource Management: Theoretical and Empirical Problems.
- Wright, P.M., McMahan, G., & McWilliams, A. (1994). Human Resource and Sustained Competitive Advantage: A Resource-Based Perspective. International Journal of Human Resource Management, 5: 301-326.
- Wright, P.M. & Snell, S.A. (In press). Toward a Unifying Framework for Exploring Fit and Flexibility in Strategic Human Resource Management. Academy of Management Review.
- Youngblood, M.D. (1997). Life At the Edge of Chaos: Creating the Quantum Organization. Dallas, TX: Perceval Publishing.