

*Center for Advanced Human Resource Studies
(CAHRS)*

CAHRS Working Paper Series

Cornell University ILR School

Year 2003

Dynamic Organizations: Achieving
Marketplace And Organizational Agility
With People

Lee Dyer
Cornell University

Richard A. Shafer
Cornell University



Center for Advanced Human Resource Studies

CAHRS / Cornell University
187 Ives Hall
Ithaca, NY 14853-3901 USA
Tel. 607 255-9358
www.ilr.cornell.edu/CAHRS/

WORKING PAPER SERIES

Dynamic Organizations: Achieving Marketplace And Organizational Agility With People

Lee Dyer
Richard A. Shafer

Working Paper 03 - 04



Dynamic Organizations: Achieving Marketplace And Organizational Agility With People

Lee Dyer

School of Industrial & Labor Relations
Cornell University

&

Richard A. Shafer

Johnson Graduate School of Management
Cornell University

January 17, 2003

<http://www.ilr.cornell.edu/cahrs>

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.

Most (if not all) of the CAHRS Working Papers are available for reading at the Catherwood Library. For information on what's available link to the Cornell Library Catalog: <http://catalog.library.cornell.edu> if you wish.

ABSTRACT

Driven by dynamic competitive conditions, an increasing number of firms are experimenting with new, and what they hope will be, more dynamic organizational forms. This development has opened up exciting theoretical and empirical venues for students of leadership, business strategy, organizational theory, and the like. One domain that has yet to catch the wave, however, is strategic human resource management (SHRM). In an effort to catch up, we here draw on the dynamic organization (DO) and human resource strategy (HRS) literatures to delineate both a process for uncovering and the key features of a carefully crafted HRS for DOs. The logic is as follows. DOs compete through marketplace agility. Marketplace agility requires that employees at all levels engage in proactive, adaptive, and generative behaviors, bolstered by a supportive mindset. Under the right conditions, the essential mindset and behaviors, although highly dynamic, are fostered by a HRS centered on a relatively small number of dialectical, yet paradoxically stable, guiding principles and anchored in a supportive organizational infrastructure. This line of reasoning, however, rests on a rather modest empirical base and, thus, is offered less as a definitive statement than as a spur for much needed additional research.

Financial support for the research that went into this document was provided by The Center for Advanced Human Resource Studies (CAHRS), School of Industrial and Labor Relations, Cornell University.

The authors would like to thank Randall Peterson, Brent Smith, Pat Wright, and an anonymous reviewer for helpful comments on an earlier draft of this paper.

Dynamic Organizations: Achieving Marketplace and Organizational Agility With People

Increasingly, firms find themselves, either by design or circumstances, operating in business environments fraught with unprecedented, unparalleled, unrelenting, and largely unpredictable change. For them, competitiveness is a moving target. In this rough and tumble world, many stumble and a few fall, often because the rate of change in their marketplaces outpaces their organizational capacity to keep up (Foster & Kaplan, 2001). Naturally enough, this has led a number of firms to experiment with new, and what they hope will be more dynamic, organizational forms. This, in turn, has opened up exciting new theoretical and empirical venues for students of leadership, business strategy, organizational theory, and the like (Child & McGrath, 2001). One domain that has yet to catch the wave, however, is that of strategic human resource management (SHRM).

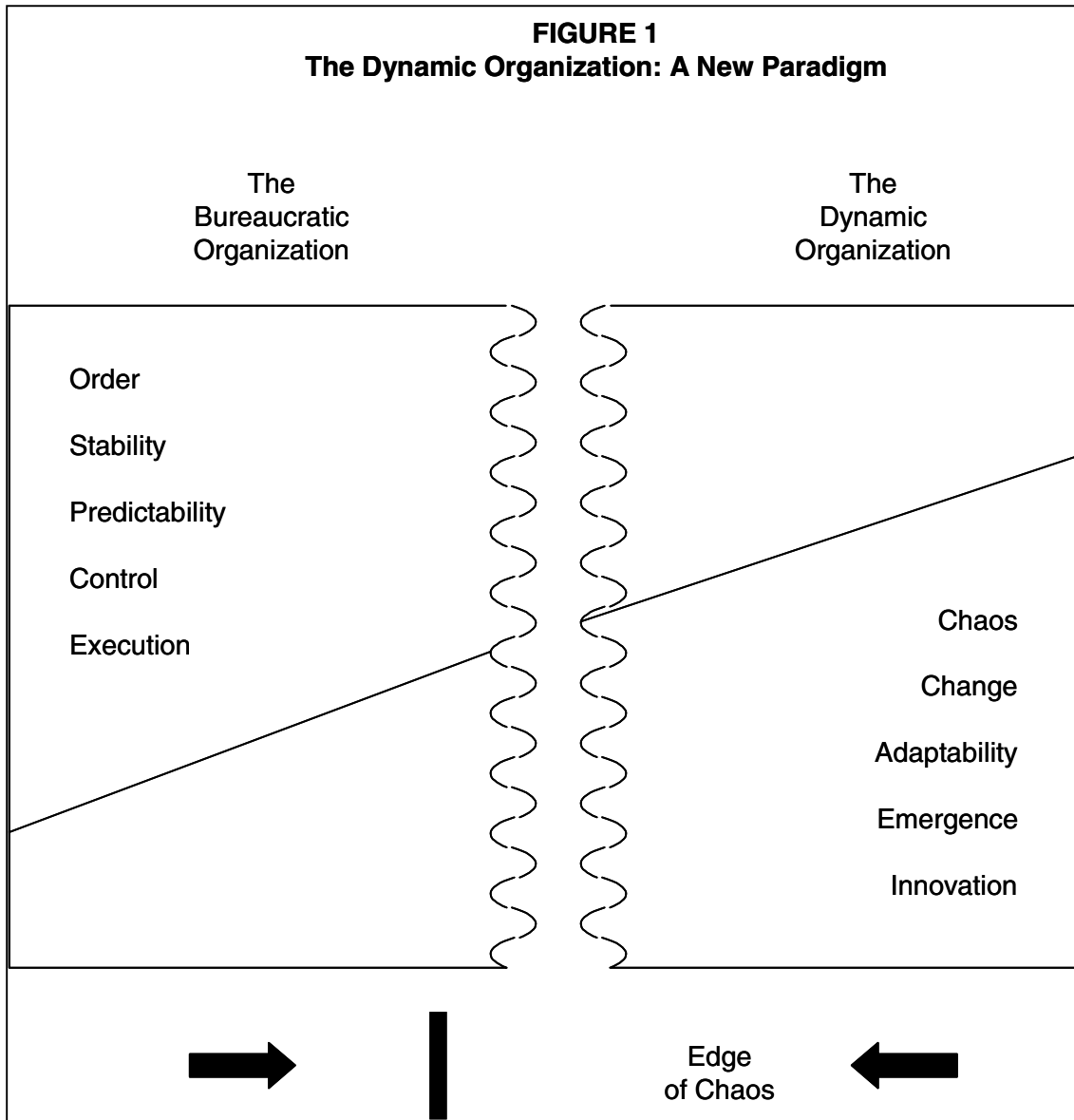
SHRM is concerned with the contributions that human resource strategies (HRSs) make to organizational effectiveness, and the ways in which these contributions are achieved. A fundamental, although not universally accepted, tenet of the field stems from the resource-based view of the firm (Barney, 1991). As adapted, it postulates that a carefully crafted HRS can be, or at least can result in, a source of sustainable competitive advantage in the marketplace. The phrase carefully crafted here refers to a HRS that successfully engenders a pool of highly motivated and uniquely capable people who individually and collectively use this drive and talent to build and deploy organizational capabilities in ways that competitors cannot easily replicate or obviate (Wright, Dunford & Snell, 2001). This intuitively appealing, and deceptively simple, notion raises a number of very thorny conceptual and empirical issues that, as we shall see, have been addressed in a variety of ways.

The resource-based view implies, for example, that a HRS must be tailored to the particulars of the context in which it is embedded (the so-called contingency perspective), since

presumably a more generic approach (the so-called universalistic or best practice perspective) would at best produce only parity with other firms. But, there is a question as to just how specific, or tailored, this fit needs to be. Here, we take a middle ground, by assuming that there is a HRS that is particularly appropriate for dynamic organizations (DOs) in general, while realizing that any particular DO would find it necessary to tailor the specifics, or perhaps fine-tune the administration, of this HRS to its own unique circumstances. With this in mind, our purpose here is to draw upon the broader DO and HRS literatures, including some of our own research, to delineate both a process for uncovering, and the key features of, a carefully crafted HRS especially suited to DOs. Before getting into the heart of the analysis, though, it is necessary, first, to clarify the concept of DOs that we adopt (since there are many) and, then, to draw selectively from extant HRS theory and research to put this effort in perspective.

A Perspective On Dynamic Organizations

Bureaucratic organizations epitomize continuity. While they can and do change, they tend to do so reluctantly, incrementally or episodically, and only up to a point. Common responses to new competitive realities have taken the form of programmatic fixes -- process reengineering, total quality management, cross-functional teams, employee involvement (or empowerment), and the like (Heckscher, 1994) -- as well as seemingly endless rounds of restructuring that move the boxes around without disturbing the underlying structure. These stopgap measures, which are primarily aimed at helping firms improve what they already do, often help -- for a while. But, they fall short for firms operating in truly dynamic environments because what their need, as Figure 1 suggests, is not so much to get better as it is to get different (Hamel, 2000).



This means exploring alternative organizational paradigms. The options are numerous, many, and expanding. Here we focus on just one of the many possibilities, so-called DOs. But, since this concept, like so many others, lacks definitional specificity, it is necessary to be a bit more precise. For our purposes, we use the term DOs to refer to firms specifically designed to be capable of surfing (Pascale, Milleman & Gioja, 2000) or competing (Brown & Eisenhardt, 1998) on the “edge of chaos” (see Figure 1). That is, we focus on organizations that deliberately seek to be infinitely innovative and adaptable in the marketplace by adopting loosely coupled organizational forms, referred to by Hock (1999) as “chaordic”, that

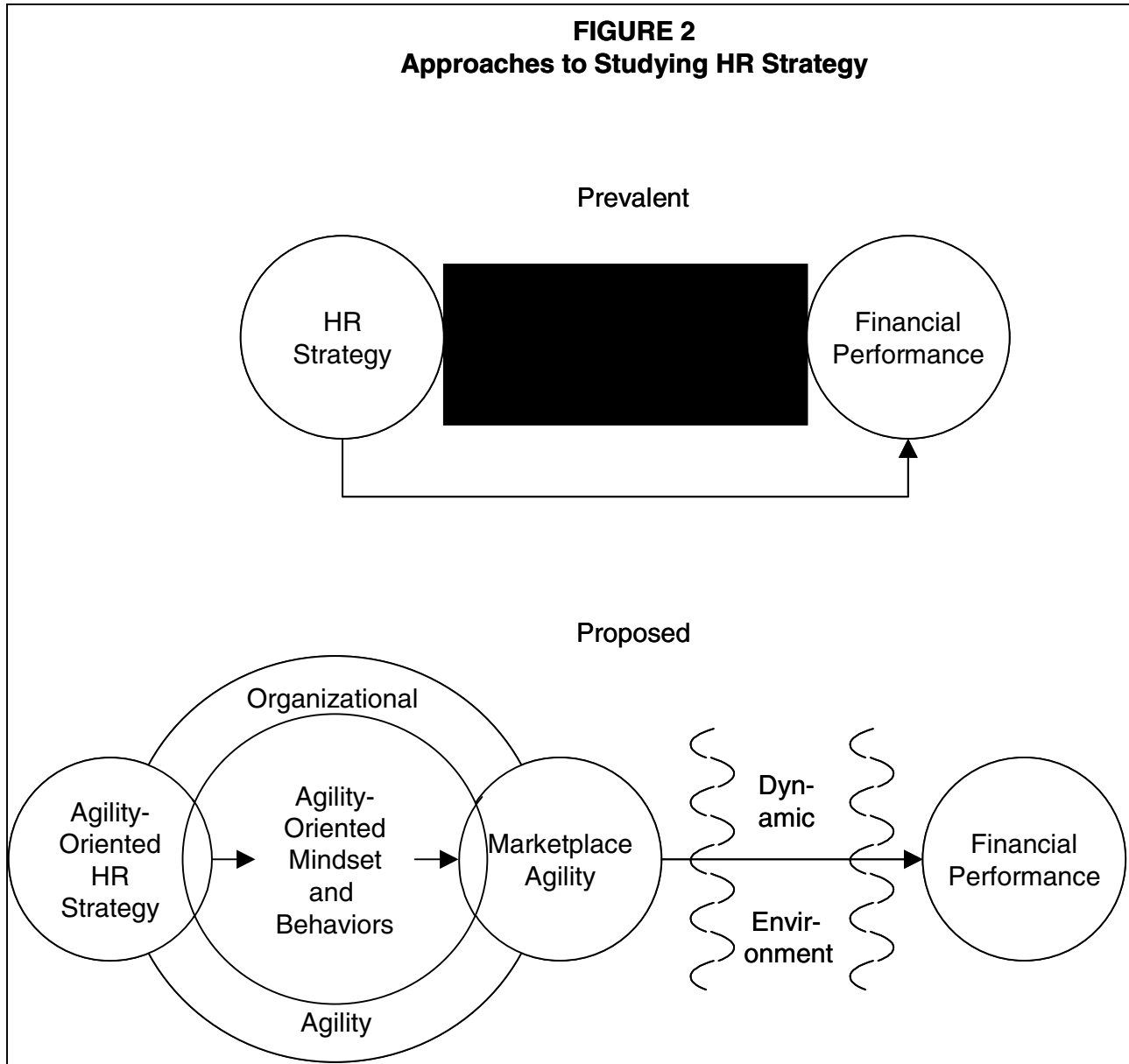
harmoniously blend characteristics of chaos, fluidity, and flexibility on the one hand with a modicum of order, control, and predictability on the other.

It is said that DOs embody paradox. And this is certainly true in the sense that they consciously embrace opposites (chaos and order, change and stability, and so forth). What makes them appear particularly paradoxical, though, is the extent to which their key features are counter-intuitive in a world imbued with traditional bureaucratic thinking.

On Studying Human Resource Strategy

As mentioned, SHRM is concerned with both what HRS's contribute to organizational success and how they do so. While theory has focused on both aspects, research has primarily addressed the former. Most of this research takes the form of large-scale survey studies in which various measures of firms' HRSs have been statistically related to one or more measures of their financial performance (e.g., return on investment, return on assets, and stock value) (for recent reviews, see Boxall & Purcell, 2000 and Delery & Shaw, 2001). Although plagued by some rather serious theoretical and methodological shortcomings, collectively these studies have produced results credible and positive enough to keep students of the field intrigued and pushing forward (Wright & Gardner, in press).

Recently, attention has shifted a bit from the what to the how; that is, to trying to determine what goes on inside the so-called "black box" between HRS and firm financial performance (see the top of Figure 2). Many models purport to provide insights here (again, for recent reviews, see Delery & Shaw, 2001, and Wright & Gardner, in press), as do a small number of studies (e.g., Wright, McCormick, Sherman & McMahan, 1999). The present analysis builds on, and we hope contributes to, these efforts by digging into DOs to deepen our understanding of the key variables and relationships that comprise the "black box" in this particular context (Dyer & Shafer, 1999; Shafer, Dyer, Kilty, Amos & Ericksen, 2001).



The general model that guides this effort is shown at the bottom of Figure 2. The logic is as follows: (1) DOs compete, and thus make money, in turbulent marketplaces through marketplace agility; (2) DOs achieve marketplace agility through organizational agility, one element of which is HRS; and (3) the mindset and behaviors of employees are key mediators between marketplace agility on the one hand and organizational agility on the other. This brings us to the fundamental proposition to be addressed by this line of inquiry:

- Proposition 1: For DOs, the basic task of HRS is to foster, in the context of other features of organizational agility, the employee mindset and behaviors required to achieve marketplace agility.

This logic subsumes positions on what are, in some cases, controversial issues in HRS theory and research. It partially accepts, as indicated earlier, the so-called contingency perspective, which postulates the need to fit HRS' to firms' business strategies (here the pursuit of marketplace agility) for best business results; this concept, referred to as vertical fit, is one that is, at once, time-honored (Dyer, 1984) but not universally endorsed (e.g., Pfeffer, 1998). Our logic also implies that an agility oriented HRS consists of a bundle of components and, thus, works best (i.e., is most likely to foster the required employee mindset and behaviors) when these components are consistent with and reinforce one another or, in the lingo, are synergistic; this concept, known as horizontal fit, has also been around a long time (Dyer, 1984), but has proven to be an elusive one to pin down (Wright & Sherman, 1999). Further, the model treats employee mindset and behaviors as key mediating variables between HRS and marketplace agility, which again is a persistently popular, although not universally accepted, view among HRS theorists and researchers (Cappelli & Singh, 1992; Schuler & Jackson, 1987; Wright & Gardner, in press). In addition, the model assumes that HRS is but one element of organizational agility and that it is, ultimately, the entire context that fosters the required employee mindset and behaviors, a position not generally found in the HRS literature (Boxall, 1999; Dyer & Shafer, 1999). And finally, and more broadly, our logic infers that, with respect to DOs, HRS research should be conducted at the business unit level, rather than the more common corporate and plant levels, since this is the point at which marketplace agility is manifest (Wright & Gardner, in press).

Obviously, the preceding suggests that it is premature to formulate hypotheses about these matters. Rather, current levels of understanding dictate a focus on exploratory research in the form of carefully selected, qualitatively oriented, intensive case studies to help identify and

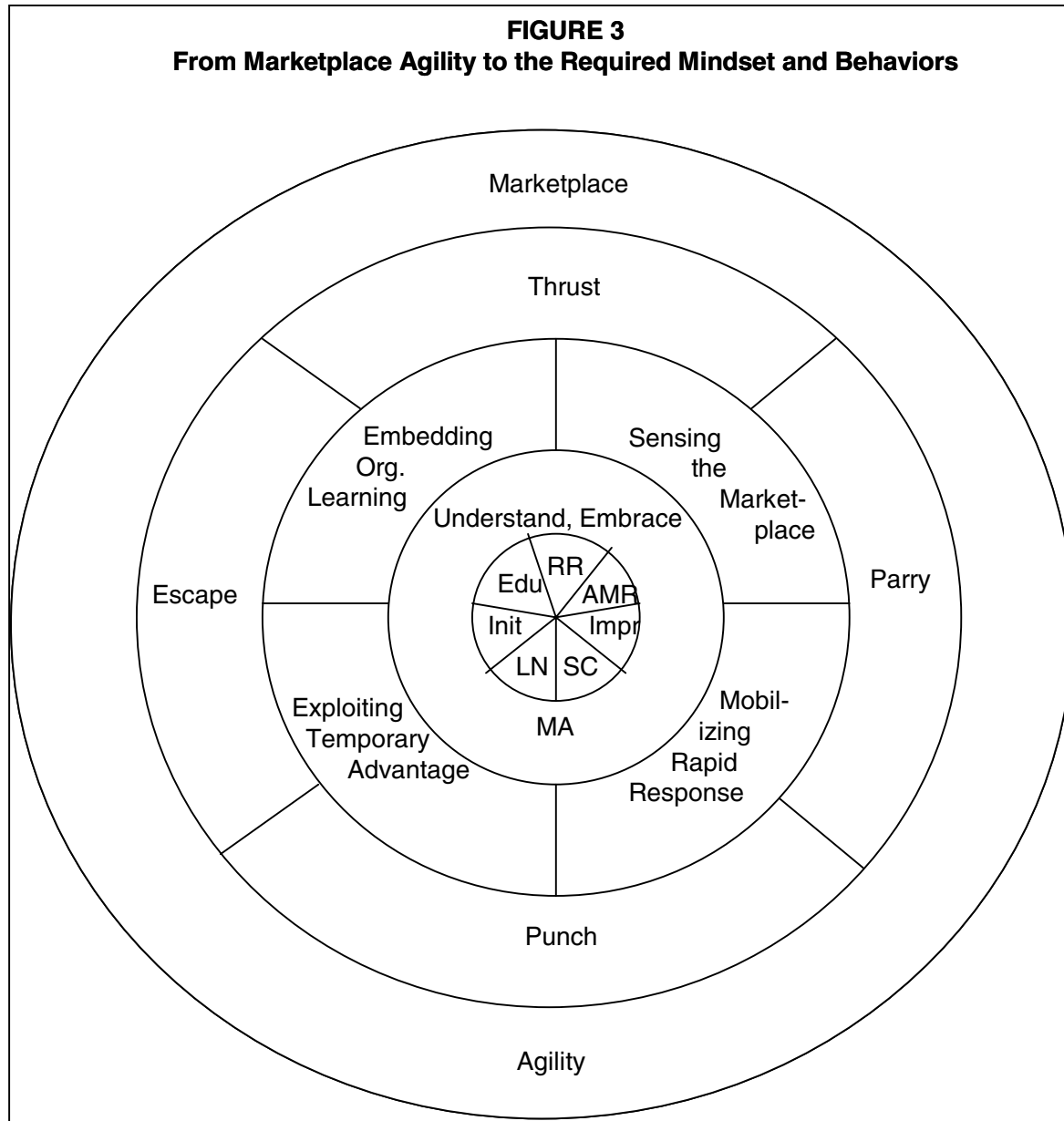
clarify the nature of the variables and relationships inherent in our general model (and, thus, eventually to guide survey studies as the number of DOs expands to the point where a decent sample can be identified). Procedurally, the model and logic dictate that these case studies focus on both (Wright & Dyer, 2000):

- Marketplace agility to better grasp its dynamics and imperatives and, especially, the specifics of the employee mindset and behaviors it requires to succeed.
- Organizational agility to ascertain how various components of HRS interact with one another (i.e., achieve horizontal fit) and with other important elements of the organizational agility construct (i.e., a broader notion of horizontal fit) to foster the required employee mindset and behaviors (vertical fit).

In the sections that follow, we illustrate this research approach using data and examples drawn, or inferred, from the DO and HRS literatures.

From Marketplace Agility To The Required Mindset And Behaviors

Figure 3 depicts the first half of our analytical journey, that from marketplace agility to the required mindset and behaviors. The research task here is to “peel the onion”, to understand, first, how DOs’ compete in the marketplace and the organizational competencies this requires and, second, what it is that employees are required to believe and do if marketplace agility is to be achieved.



Marketplace Agility and Organizational Competencies

DOs thrive by being infinitely adaptable in the marketplace -- preferably by inducing continuous change, but otherwise by swiftly reacting to disruptions generated by others. They strive to stay ahead of actual and would-be competitors by being consistently better and faster at spotting and exploiting potential opportunities, as well as at discerning and ducking emerging threats. They live, as Figure 3 suggests, in an event-driven world characterized by endless, overlapping rounds of thrust, parry, punch, and escape (Fradette & Michaud, 1998). This involves constant and simultaneous: (1) experimentation with ideas not only for new products and services, but also for potentially radical breakthroughs in basic business models (Hamel, 2000); (2) adjustments to often unanticipated curveballs tossed by customers, competitors, purveyors of new technologies, government regulators, and the like; (3) execution to deliver high quality products or services of value to a current customer base; and (4) withdrawals of products and services, and from partnerships and even businesses, when they are no longer delivering above average returns (to free up resources for potentially more productive uses) (Brown & Eisenhardt, 1998; Foster & Kaplan, 2001).

Competing in this manner is a tall order that obviously requires a unique set of organizational capabilities (Barney, 1991). Here the search is for routines or processes that, first, make it possible for DOs to attain and sustain the agile edge and, second, are primarily “people embodied competencies” (Hamel & Prahalad, 1994) that derive more from the mindset and behaviors of employees than, say, leading-edge technologies. Preliminarily, as shown in Figure 3, we suggest there are four such organizational competencies: sensing the market, mobilizing rapid response, exploiting temporary advantage, and embedding organizational learning (Dyer & Shafer, 1999).

Sensing the market refers to the ability to scan external environments, locate and analyze emerging developments, and quickly turn the resulting information into actionable decisions (Mara & Scott-Morgan, 1996; Teece, Pisano & Shuen, 1997). Market in this context

refers not only to current and potential customers, but also to actual and would-be competitors and suppliers, as well as to broad developments and trends in demographics, lifestyles, technology, and public policy. Sensing the market is a “people embodied competency” in DOs because employees at all levels, and 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 relevant parties.

Mobilizing rapid response, the second organizational competency, is defined as the capacity to quickly and easily make decisions, translate these decisions into action, and choreograph the essential transitions (Brown & Eisenhardt, 1998). In some cases, this may involve little more than coming up with and making relatively small-scale accommodations to evolving customer needs or competitors’ initiatives. More often, though, it involves making major changes: adding, adjusting, or even cannibalizing products or services; scrapping tried and true business models to pursue newer, riskier versions; and totally revamping key business processes (Hamel, 2000). Either way, success depends in large part on the ease and speed with which resources -- financial, physical, intangible (e.g., information), and, especially, human -- can be moved from less to more promising opportunities.

DOs must make money. Thus, amidst the ongoing innovation and adaptation, there is also the need to execute. This brings us to the third organizational competency, exploiting temporary advantage, which refers to the capacity to quickly and easily enter new markets and to deliver competitively priced products or services to these markets as long as, but not longer than, they remain the most attractive options on the horizon. The challenge here is to find ways to infuse DOs with centers of excellence that are necessarily counter-cultural in the sense that they must approach the chaos/order paradox from the latter rather than the former direction; to some extent, these centers of excellence serve as a force for relative stability in DOs. Some DOs seek to evade the “people embodied” component of this organizational competency (while

lowering costs) by outsourcing all or some parts of it. Cisco systems, for example, serves an ever-changing marketplace with a constantly evolving product line in part by outsourcing most of its manufacturing; orders are routed on-line directly to contract manufacturers who build and ship the products and process the billing without any involvement by Cisco employees (Serwer, 2000).

The fourth, and final, organizational competency is embedding organizational learning, which is the inherent capacity to constantly create, adapt, distribute, and apply knowledge (Grant, 1996; Levine, 2001; Nonaka, 1991). Learning, in this context, is of two types (Morgan, 1997). 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 all aspects of a business, up to and including its fundamental operating principles, core values, and even strategic direction and vision. DOs, in particular, require generative or double-loop learning to avoid the formation of defensive routines, such as obfuscating problems and diluting bad news, that can quickly result in organizational ossification and the loss of marketplace agility (Argyris, 1985; Morgan, 1997).

Taken together, our model suggests, to pursue marketplace agility through these four organizational competencies requires that employees share an agility-oriented mindset and actively engage in agility-oriented behaviors.

Agility Oriented Mindset and Behaviors

These topics have engaged a great deal of our time and attention. Some insights have emerged from the literature (e.g., Campbell, 2000). But, so far, with one exception (Shafer, et al, 2001), we have had only limited success in the field, primarily because, quite surprisingly, firms seem seldom to think about these issues, at least explicitly. So, what follows is, perhaps, the most speculative section of our analysis.

Agility-Oriented Mindset: A shared mindset exists when all employees perceive, think about, and value both organizational purposes and processes in a common way (Ulrich & Lake, 1990). In DOs, as the top of Table 1 shows, this means that every employee is required to fully understand and embrace the essentiality and essence of marketplace agility. Top to bottom, everyone is expected to be able to credibly articulate: the realities of dynamic environments, approaches to competing successfully in such environments and the consequences thereof, and the nature and necessity of sensing the market, mobilizing rapid response, exploiting temporary advantage, and embedding organizational learning.

- Proposition 2: If marketplace agility is to be achieved, all employees must fully understand and embrace its essentiality and essence.

TABLE 1
Agility-Oriented Mindset and Behaviors

EVERY EMPLOYEE MUST Understand and Embrace the Essentiality and Essence of Marketplace Agility		
Be Proactive	Be Adaptive	Be Generative
<u>Initiate</u> Actively search for opportunities to contribute to organizational success and take the lead in pursuing those that appear promising <u>Improvise</u> Devise and implement new and creative approaches to pursuing opportunities and dealing with threats	<u>Assume Multiple Roles</u> Perform in multiple capacities across levels, projects, and organizational boundaries – often simultaneously <u>Rapidly Redeploy</u> Move quickly from role to role <u>Spontaneously Collaborate</u> Engage often and easily with others with a singular focus on task accomplishment (and disengage just as easily when contribution is no longer needed)	<u>Learn</u> Continuously pursue the attainment of proficiency in multiple competency areas, eschewing over-specialization and complacency <u>Educate</u> Actively participate in the sharing of information and knowledge through the organization, as well as with its partners and collaborators
Understand and Embrace the Essentiality and Essence of Organizational Agility		

Agility- Oriented Behaviors: Marketplace agility requires that top-level leaders serve as the primary (but not the only) custodians of a firm's broad strategic direction and domain, but not as the only progenitors of these. In Hamel's (2000: 244) words, "... top management's job isn't to build strategies. Its job is to build an organization that can continually spawn cool new business concepts, to design context rather than invent content". Then, within this context, the remaining leaders -- everyone is a leader, as well as a peer and a follower, at one time or another in DOs -- are, in the broadest terms, required to do whatever it takes to attain marketplace agility.

More specifically, as Table 1 shows, fostering marketplace agility requires that employees at all levels be proactive, adaptive, and generative:

- Employees who are proactive **initiate** and **improvise**. They continually and actively search for marketplace opportunities and threats and set in motion whatever actions appear necessary to pursue the former and mitigate the effects of the latter. Further, they generate these ongoing modifications quickly, striving to reduce the time between discovery and execution close to zero (Weick & Quinn, 1999), but also creatively, relying on previously utilized procedures only when they are clearly appropriate (Weick, 1998).
- Adaptive employees **assume multiple roles**; that is, they perform in multiple capacities -- leader, major team member, minor team member, and individual contributor -- across projects and even external organizational boundaries, sometimes serially, but often simultaneously. Further, they **rapidly redeploy** across these roles with a minimum of wasted time and effort, so that help happens when it needs to happen. And, once in new roles, they **spontaneously collaborate** by actively engaging with colleagues around the task at hand, rather than getting caught up in the peripheral or disruptive activities that so often waste valuable team time.
- Generative employees simultaneously **learn** and **educate**. They continuously pursue the attainment of proficiency in multiple competency domains, while avoiding the temptations of either over-specialization or complacency. To this end, they also take responsibility for each other's learning by openly sharing information and knowledge with colleagues within their own, as well as partner, organizations.

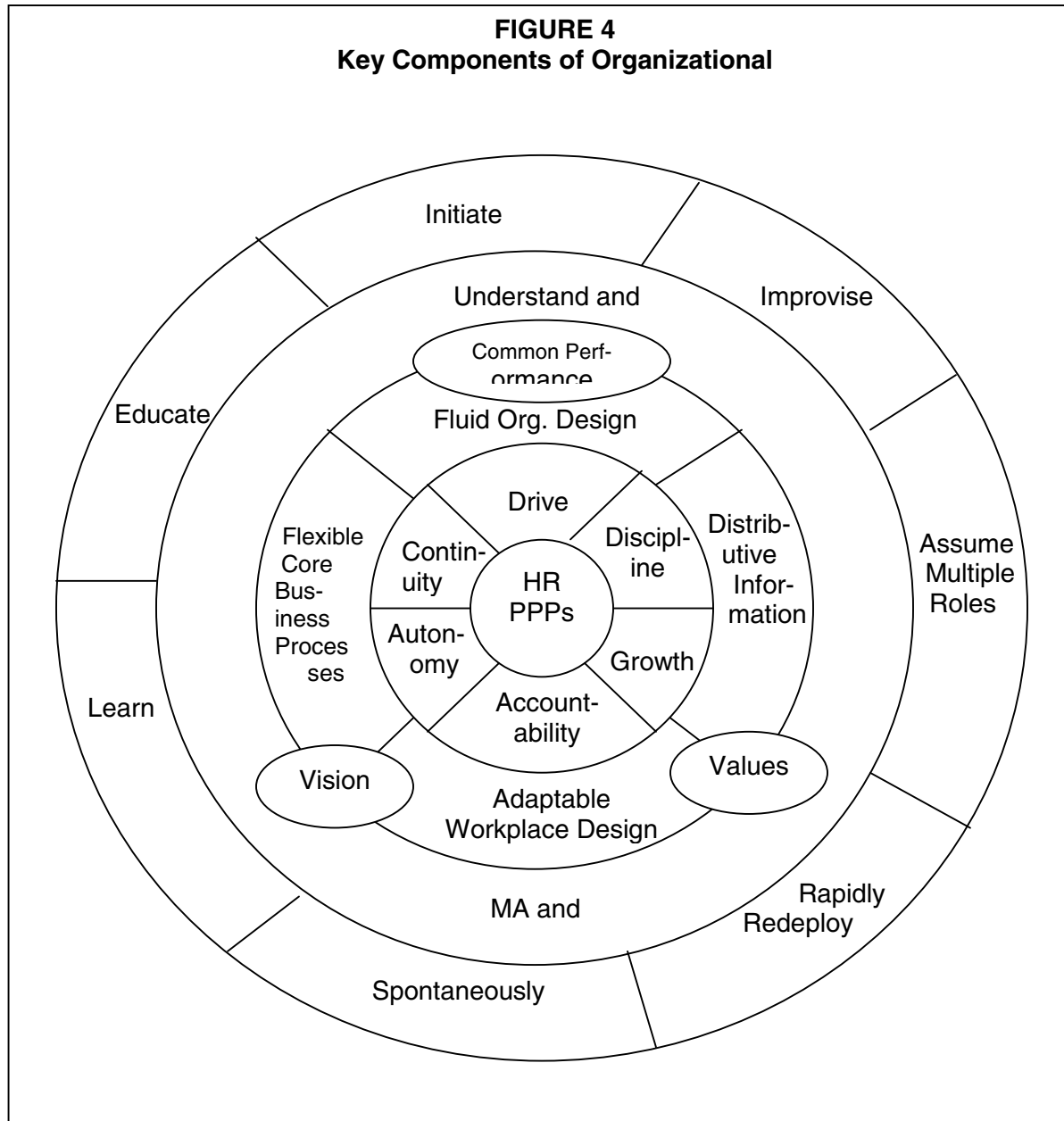
- Proposition 3: If marketplace agility is to be achieved, all employees must continuously and proficiently demonstrate the full range of proactive, adaptive, and generative behaviors.
- Proposition 4: To achieve marketplace agility requires that all employees both internalize an agility-oriented mindset and manifest agility-oriented behaviors. The former without the latter generates no output, while the latter without the former engenders considerable misdirected activity.

If these are the mindset and behaviors required to achieve marketplace agility, how can and do DOs bring them about?

Using Organizational Agility To Achieve The Required Mindset And Behaviors

The second half of our analytical journey is depicted in Figure 4. The starting points, indicated by the two outer rings of the “onion”, are the requisite employee mindset and behaviors. The challenge is to delineate a parsimonious set of factors that foster these. One way to go about this is to apply force field analysis (Lewin, 1951); that is, by undertaking a systematic search for conditions or activities that, on the one hand, nurture or, on the other, hinder the development or manifestation of the desired mindset and behaviors. (Hindering factors can be illuminating; in one business unit we studied, for example, the vice president was adamant about the need for employees to take “smart risks” [in our parlance to improvise] and highly concerned that few were doing so. During interviews with those deeper in the organization, several people cited examples of colleagues who had “stuck their necks out only to have them chopped off”, which of course highlighted the agility-hindering effects of the unit’s appraisal and reward systems.)

FIGURE 4
Key Components of Organizational



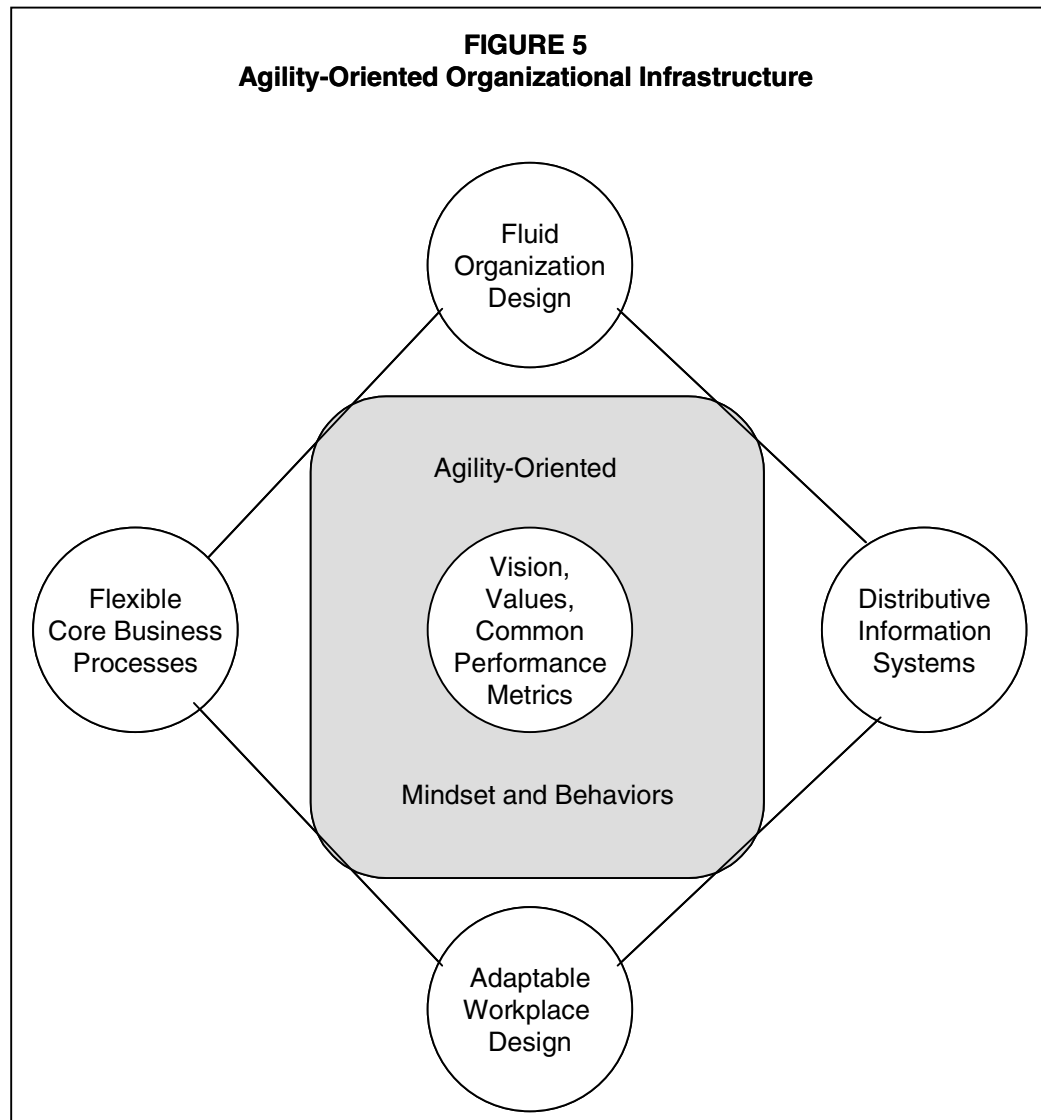
Our model, as Figure 4 suggests, focuses the search for helping and hindering factors on what in the literature is broadly labeled organizational capability (Ulrich & Lake, 1990), and which in the current context we call organization agility. Broadly, organizational agility stems from combining two components: an agility-oriented organizational infrastructure and an agility-oriented HRS. The basic premise is that the two must be synergistic:

- Proposition 5: Both an agility-oriented organizational infrastructure and an agility-oriented HRS are necessary, and together they are sufficient, conditions for fostering agility-oriented mindset and behaviors.

This line of reasoning represents a departure from prevailing practice in the SHRM literature, which, to date, has basically ignored organizational infrastructure as a potentially important construct (Wright & Gardner, in press). To support our position, we draw on an example from our own research: When studying a healthcare network that had deliberately set out to become, in the CEO's words, "nimble and change-hardy", we found that salutary behaviors engendered by a very carefully crafted HRS were, to a noticeable degree, hindered by the glacial pace of the information flow coming from an outmoded computer system. A study focusing only on HRS would have missed this unsupportive element of the network's organizational infrastructure (Shafer, et al, 2001).

Agility-Oriented Organizational Infrastructure

As Figure 5 shows, an agility-oriented organizational infrastructure consists of two main components that operate much as a gyroscope (a metaphor drawn from Hewlett Packard) -- that is, there is a relatively stable inner core surrounded by a constantly reconfiguring frame, or outer ring. Both components, in turn, consist of several elements.



Stable Inner Core: The role of the stable inner core (assuming, as we shall see, that the HRS is successful in embedding its elements deep into the organization) is to provide some vector for the thrust and, thus, keep organizational agility from degenerating into a metaphor for complete chaos. Our research suggests that in DOs the stable inner core consists of some combination of three elements (Dyer & Shafer, 1999, Shafer, et al, 2001):

- A clearly articulated vision that is both worthy of pursuit (depicting a cause more than a business, in Hamel's [2000] terms) and, unlike goals, essentially unattainable and thus forever pursuable (Collins and Porras, 1994).

- An equally clearly articulated set of shared values that center on trust, but also often include openness, honesty, prudent risk-taking, mutual respect, and personal accountability (Heckscher, 1994; Shafer, et al, 2001).
- A few important common performance metrics that capture the essence of marketplace agility. Rich Fairbank, Chairman and CEO of Capital One, articulates a common metric: “Fifty percent of what we’re marketing now did not exist at this company six months ago ... I’m proud of that fact -- until I reflect on its implications. It means that 50% of what we’ll be selling six months from now doesn’t exist yet.” (Fishman, 1999: 218).

Reconfigurable Outer Ring: This, as Figure 5 shows, contains four elements each of which, notwithstanding variations in practice, appears to comply with certain common design principles. Necessarily brief descriptions of these elements and principles follow:

- Fluid Organization Design: DOs view organization design as a verb, not a noun. Rather than being locked into fixed structures, they adopt designs that foster fluidity both within an organization (e.g., in the form of temporary teams) and across two or more organizations (e.g., in the form of temporary alliances with other firms in their evolving networks). Common organizing principles include: flat (but not without some hierarchy), minimal formal authority, boundarylessness, cellular division into small sub-units, and team based (Ashkenas, Ulrich, Jick & Kerr, 1995; Dove, 2001; Hamel, 2000; Morgan, 1997; Youngblood, 1997).
- Flexible Core Business Processes: As much as possible, DOs favor soft- over hard-wired business processes, templates over standard operating procedures. Thus, we see, for example: emergent business strategies (vs. formal plans), decisions based on expertise and dialogue (more than formal position or authority), open markets for allocating some resources (mixed with formal procedures for allocating others), and an emphasis on surround communication (as opposed to that based on designated channels) (Hamel, 2000; Heckscher, 1994). Here the guiding principle is: routinize only where, when, and as much as absolutely necessary, otherwise have faith in employees’ common sense and savvy (Foster & Kaplan, 2001).
- Distributive Information Systems: DOs run on real-time, easily accessible information. They favor “broadcast” or consumer models of information technology that facilitate the full and timely flow of information both in and out, while placing responsibility on end-users to establish their own information requirements and, thus, to

access only that which is needed when it is needed. The guiding principles: First, systems designed for self- rather than system-control and, second, what one knows all must be able to easily and painlessly access (Dove, 2001).

➤ **Adaptable Workplace Design:** Fluid organizations require equally adaptable and non-confining workplace designs; that is, tensile and modular or mobile buildings, open plan offices, nomadic workstations, plug and play technologies, free standing and movable panels instead of walls, and even remote workplaces (e.g., homes and leased spaces in office “hotels”) (Becker & Sims, 2000). The underlying concept is an “integrated portfolio strategy (IPS)” fashioned to deliver just the right amount and type of space, when and where it is needed, for only as long as it is needed (Becker, 2000; Becker, in press.)

For a long time, our research focused on finding prevailing patterns in the elements of organizational infrastructures. The intent was to derive an ideal typology for DOs. This pursuit has given way to the realities of reconfigurability (and perhaps equifinality). We now believe that it is important to study not only the content of organizational infrastructures, but also the ways in which they are reconfigured in DOs. Alignment, or synergy, in this context, then, refers more to degree and pattern of reconfigurability than to an immutable pattern of features in the various elements of organizational infrastructure.

The delightfully non-linear paradox here, however, is that in DOs an agility-oriented organizational infrastructure is apparently both a cause and effect of employee mindset and behaviors.

➤ **Proposition 6:** The right combination of stability (from the inner core) and reconfigurability (in the elements comprising the outer ring) in a DO’s organizational infrastructure constitutes an “edge of chaos” environment that fosters agility-oriented behaviors among employees.

➤ **Proposition 7:** The cumulative agility-oriented behaviors of employees determine the degree and pattern of reconfiguring that occurs and, thus, the various forms that a DO’s organizational infrastructure assumes over time.

➤ **Proposition 8:** The process of continuously reconfiguring an organizational infrastructure, if successful, helps employees understand and embrace the essentiality and essence of organizational agility (the second key component of an agility-oriented

mindset, as shown at the bottom of Table 1) -- which in turn enhances the likelihood that employees will continue and, indeed, continuously improve the effectiveness and efficiency of the reconfiguring process.

The research challenge here, in brief, is to improve our understanding of the dynamics of so-called self-organizing or emergent behavior in actual organizations (Dove, 2001; Pascale, et al, 2000).

Agility-Oriented Human Resource Strategy

Students of HRS, as noted earlier, are engaged in a lively ongoing debate over the proper conceptualization (and, in quantitatively-oriented research, measurement) of the strategy construct. In our research, we focus, in part, on uncovering broad principles that appear to guide the choice of policies, programs, and practices, and it is to these that attention is now turned (Dyer & Shafer, 1999; Shafer, et al, 2001; Wright & Dyer, 2000; Wright, 1998).

Principles: Organizations rarely make these specific, so the search for them is an extrapolative exercise (Shafer, et al, 2001). The challenge is to specify a set of principles -- or what Galunic and Eisenhardt (2001) call "simple rules" -- that meets the twin tests of necessity and sufficiency; that is, that engender only (or mostly) appropriate policies, programs, and practices in sufficiently synergistic bundles that they foster the required employee mindset and behaviors. At this juncture, we offer a set of six principles that seem to meet these tests, arranged to reflect the paradoxical and dialectical nature of DOs:

Drive and Discipline
Autonomy and Accountability
Growth and Continuity

Drive and Discipline: To promote a relentless pursuit of marketplace agility among all employees DOs requires HR policies, programs, and practices that: **(P1) Forge a Sense of Common Purpose.** The idea here is to promote DOs as both causes and businesses (Hamel, 2000) by enhancing employee understanding and internalization of the three elements that

comprise the stable inner core of an agility-oriented organizational infrastructure (refer again to Figure 5). To promote the cause, there is a need to embed the organizational vision and core values deep into the bowels of the system. To get down to brass tacks, there is the further need to keep the common performance metrics of choice front and center among all employees. But, alas, fired up employees operating in uncertain environments can easily get off track. So, it is also necessary to: **(P1) Promote Contextual Clarity**. This is done by implementing HR policies, programs, and practices that foster a clear grasp of the dynamics of marketplace agility, as well as of the four elements that comprise the reconfigurable outer ring of an agility-oriented organizational infrastructure (i.e., fluid organization design, flexible core business processes, distributive information systems, and adaptable workplace designs). The assumption here is straightforward: In DOs, employee actions are more likely to be effective and efficient to the extent they know what it takes to compete successfully in turbulent environments and understand the complexities involved in manipulating various elements of an organizational infrastructure toward desired ends.

Autonomy and Accountability: In DOs, employees require considerable freedom to pursue agility-oriented behaviors. This freedom emanates from HR policies, programs, and practices that govern work design and the movement of employees within the organization. Hence: **(P3) Foster Fluid Assignments**. But, this, too, can go too far. Fluidity can degenerate to the point where everyone is responsible for everything, and no one is responsible for anything. Thus, DOs must find ways to help employees coordinate their activities and, more important, take personal accountability for the consequences of the decisions they make and the actions they take. This requires that DOs have HR policies, programs, and practices that: **(P4) Instill Ownership of Outcomes**.

Growth and Continuity: Continuous learning is a key behavioral expectation in DOs. Rather than simply getting better and better at what they already know how to do, however, employees are expected to be constantly reaching out to learn new things. An over-emphasis

on honing current competences tends to inhibit change because employees fear the prospect of obsolescence. More appropriate to DOs are what Godin (2000) calls serial incompetents, employees who are relentlessly uncomfortable with the status quo and who willingly and repeatedly run the risk of becoming incompetent -- for a while -- in the interest of tackling new challenges. To this end, DOs need HR policies, programs, and practices that encourage the thirst for, as well as the rapid development of, new competencies: **(P5) Facilitate Serial Incompetence.** Agility-oriented employees gravitate in this direction naturally. The challenge for DOs is to assure that they do so within their organizations rather than in the open labor market (realizing, of course, that nothing is forever in this increasingly market-mediated world [Cappelli, 1999]). This calls for HR policies, programs, and practices that enhance DO's positions as "employers of choice" for the agility-oriented people they need. While this is a complex issue (Wright, Dyer & Takla, 1999), we suggest that, in general, it requires activities that: **(P6) Encourage Continuous Employment.**

- Proposition 9: Adhering to HR principles pertaining to drive, autonomy, and growth (numbers 1, 3, and 5) promotes, through motivation, opportunity, and competencies (Boudreau & Ramstad, in press), the innovative behaviors required of employees to achieve marketplace agility.
- Proposition 10: Adhering to HR principles pertaining to discipline, accountability, and continuity (numbers 2, 4, and 6) promotes, through focus, responsibility, and accumulated social capital, the degree of self-control and efficient execution-oriented behaviors required of employees to achieve marketplace agility.
- Proposition 11(a): Adhering to HR principles pertaining both to drive, autonomy, and growth and to discipline, accountability, and continuity is necessary, and also sufficient, to instill an agility-oriented mindset and elicit agility-oriented behaviors among employees.
- Proposition 11(b). In DOs, more emphasis must be put on the HR principles that promote innovation than on the HR principles that promote of self-control and efficient execution, otherwise agility-oriented mindset and behaviors will eventually diminish as employees revert to their natural tendencies to seek and, indeed, try to create order, stability, and predictability in their environments (Heckscher, 1994; Pascale, et al, 2000).

Do these six HR principles foster marketplace agility? Or, in more formal theoretical terms, do they collectively demonstrate vertical fit (Wright 1998; Wright & Sherman, 1999)? Ultimately, of course, this is an empirical question. But, assuming the validity of our first analytical exercise (i.e., that we have correctly identified the mindset and behaviors required to achieve marketplace agility) a modest test of vertical fit involves a simple logic check to see if: (1) each aspect of mindset and each behavior is addressed by one, or preferably, more, of the HR principles and (2) if each HR principle addresses one, or preferably more, of the various aspects of mindset and behaviors. Briefly, as Table 2 shows, the six HR principles pass these tests. Each aspect of mindset and/or each behavior is addressed by a minimum of four HR principles, while each HR principle addresses at least three aspects of mindset and/or behaviors. Notice that we are not claiming that these six HR principles are the only possible, let alone the one best, set for enhancing agility-oriented mindset and behaviors and, thus, marketplace agility. Rather, we are making a case that it is, at a minimum, a workable set on which to base a discussion of agility-oriented HR policies, programs, and practices.

TABLE 2
Testing for Vertical Fit*

Agility Oriented Mindset and Behaviors	Relevant AOHR Principles
Initiate and Improvise	<p><u>DRIVE</u> reinforces the need for being action-oriented and creating <u>DISCIPLINE</u> shows how these behaviors contribute to marketplace agility. <u>AUTONOMY</u> nurtures these behaviors, while <u>ACCOUNTABILITY</u> changes them toward marketplace agility. <u>GROWTH</u> provides essential competencies, while <u>CONTINUITY</u> reinforces sensible risk-taking.</p>
Assume Multiple Roles and Rapidly Redeploy	<p><u>DRIVE</u> reinforces the need for internal mobility. <u>DISCIPLINE</u> shows how moving agility and provides <u>AUTONOMY</u> allows competencies. <u>DISCIPLINE</u> to opportunities contributes to marketplace guidance in the “move/don’t move” decision. <u>GROWTH</u> provides multiple movement.</p>
Spontaneously Collaborate	<p><u>DRIVE</u> reinforces the need for joint effort. <u>DISCIPLINE</u> shows how joint effort contributes to marketplace agility. <u>ACCOUNTABILITY</u> reinforces mutual commitments. <u>CONTINUITY</u> provides a sense of community, familiarity, comfort.</p>
Learn and Educate	<p><u>DRIVE</u> reinforces the need to nurture collective organizational intelligence. <u>AUTONOMY</u> promotes cross-fertilization of ideas. <u>GROWTH</u> develops dissatisfaction with status quo and mechanisms for individual learning. <u>CONTINUITY</u> supports experimentation and sensible risk-taking and promotes dialogue (real conversation).</p>

*Assumes alignment among essential elements of marketplace agility and agility-oriented mindset and behaviors.

Agility-Oriented HR Policies, Programs, and Practices

The challenge here, to remind, is to uncover (or, if in an organization, develop) a synergistic set of HR policies, programs, and practices that adhere to the preceding HR principles and, thus, foster agility-oriented mindset and behaviors. The possibilities are many, and space precludes a full discussion. So, we focus on HR policies, programs, and practices that meet one or more of the following conditions: unique to DOs, particularly important theoretically, supported empirically, or congruent with multiple HR principles. The discussion, as shown in Table 3, is organized around the HR principles, not HR policies, programs, and practices, just as we believe HRSs should be (Shafer, et al, 2001).

TABLE 3
From AOHR Principles to AOHR Policies, Programs, Practices

AOHR Principles	Prototypical AOHR Policies, Practices, Programs
Drive (Common purpose)	<ul style="list-style-type: none"> • “Surround communication” to promote vision and core values; rewarding (and punishing) those who live (or fail to live) the vision and core values; “breakthrough” objectives focused on core values (Shafer et. al., 2001)
Discipline (Contextual clarity)	<ul style="list-style-type: none"> • “Open book management” – widespread availability of marketplace intelligence; opportunities to learn the inner workings of the AO business model (MA, organizational competencies, AOOI); real time feedback and returns tied to organizational, team, and individual performance (Stack, 1992)
Autonomy (Fluid assignments)	<ul style="list-style-type: none"> • Discretionary based work design (Dyer & Shafer, 1999) • Open market for talent – bidding and posting (Hamel, 2000)
Accountability (Ownership of outcomes)	<ul style="list-style-type: none"> • Commitment management protocols to negotiate authentic commitments to outcomes, focus attention on these outcomes, and on-the-spot reinforcement for delivery of the outcomes (Haeckel, 1999)
Growth (Continuous development)	<ul style="list-style-type: none"> • Egalitarianism in perks and amenities (Pascale, et. al., 2000) • Commensurate returns, awards, perks, rewards equal to commitment expected (Shafer et. al., 2001) • Layoffs as last resort – amply justified and compensated if unavoidable (Fradette & Michaud, 1998)
Continuity (Continuous employment)	<ul style="list-style-type: none"> • On-the-fly assessments of learning gaps (Shafer et. al., 2001) • Zero tolerance of competency obsolescence (Shafer, et. al., 2001) • Communities of practice to nurture collective intelligence (Dove, 2001)

Drive/Forge a Sense of Common Purpose: The HR policy: keep the organization's vision, core values, and common performance metrics front and center among all employees at all times. Program and practice options include:

- Involving a cross-section of employees in shaping these three elements of the agility-oriented organizational infrastructure's stable inner core (in newly emerging DOs where these elements are not already in place).
- "Surround communication" to assure that virtually every piece of formal communication going to and among employees reinforces some aspect of organizational vision, core values, or common performance metrics (for an example of how this was carried out at Albert Einstein Healthcare Network, see Shafer, et al, 2001).
- Team building efforts, top to bottom, to reinforce core values. Albert Einstein Healthcare Network, for example, in addition to "surround communication", used groups of employees to identify instances where their units' usual behaviors did not live up to the organization's (new) core values. Where gaps were found, these teams formed and implemented action plans to eliminate the lapses. The exercise began with the top executive team, whose members were then used to cascade the process down to the next level, and so forth until virtually the entire organization was involved (again, see Shafer, et al, 2001).
- Forming "breakthrough objectives" around key dimensions of vision, core values, or common performance metrics and using games and contests as fun ways to pursue these (very serious) objectives (once again, for an example, see Shafer, et al, 2001).

Discipline/Promote Conceptual Clarity: Here the HR policy imperative is to assure that all employees have all the information they need to thoroughly understand, first, the dynamics of marketplace agility and, second, the functioning and operation of the reconfigurable elements of an agility-oriented organizational infrastructure. Here we cite one tried and true program and one highly speculative one:

- "Surround communication", as above except that the focus is on the realities of the marketplace and the essence of the DO business model (again, an example can be found in Shafer, et al, 2001).
- "Open book management". This technique was pioneered in a decidedly non-agile manufacturing firm (Stack, 1992). But, presumably it could be adapted to DOs

since it's all about promoting conceptual clarity. Core elements include: sharing financial and operating information with all employees, facilitating employee understanding of financial statements and of the contribution their work makes to financial results, involving employees in targeting priority areas for improvement and regularly reviewing results, collectively celebrating successes, and (discussed later) providing relevant financial payoffs (Davis, 1997).

Autonomy/Foster Fluid Assignments: Broadly, the HR policy is to have all employees positioned as owners of fluid assignments with responsibility for results (and not as occupants of fixed positions with responsibility for completing tasks). On the one hand, this involves discretionary-based work design and, on the other, an open market for talent.

➤ In DOs, one instance of TIM-J (that isn't my job) (Bridges, 1994) is one too many. So, programmatically DOs must think of work in terms of assignments, not jobs, and insist that employees frame their assignments in ways that minimize the number of required tasks and maximize zones of discretion in which they are expected to operate as they deem necessary. Discretionary-based work design goes well beyond traditional notions of "empowerment". It relies on employees to define their own assignments (unencumbered by job descriptions) in ways that continuously expand the arenas in which they are expected to function. ("Empowerment", in contrast, is usually a top-down exercise in which managers redesign subordinates' jobs by allowing them to take on a few previously forbidden activities, as, for example, when managers increase the value of returns sales persons can write off without approval). Discretionary-based work design (not to mention organizational learning) is fostered by processes such as the U.S. Army's "after action review", which follows each major exercise or project with a detailed examination of where discretion was used wisely and not so wisely, and a search for ways to improve (Pascale, et al, 2000: 252-253).

➤ A truly open market for talent involves open auctions in which project managers bid for the employees they need and, by deciding when and where to go, employees exercise career control (Hamel, 2000). A modified version involves a more traditional posting system which is more fluid than the typical informal (i.e., old boy or, perhaps, old girl) network, but approaches the fluidity of a truly open market when restrictions on who can be "poached", who can be "protected" from being "poached", and where and how often employees can move are minimized or eliminated. In organizations where projects

last a long time, DOs can institute a practice of periodically reshuffling team memberships, much as occurs at Capital One (Pascale, et al, 2000: 260-261).

➤ **Accountability/Instill Ownership of Outcomes:** From an HR policy perspective, all employees must at all times be clear about what outcomes they owe to whom by when. Programmatically, the best approach we have seen thus far is Haeckel's (1999: 148-154) concept of commitment management. This involves a rigorous protocol designed to make it relatively quick and easy for employees to negotiate (and renegotiate) "authentic commitments" with one another and, subsequently, to track the extent to which these commitments were or were not met. Just as discretionary-based work design differs from empowerment, so does commitment management differ from the typical approach to management by objectives (MBO). MBO, like empowerment, is a top-down process involving the assignment of (usually annual) goals by managers to subordinates within their units rather than ongoing negotiations of authentic commitments among employees at various levels across multiple units. For an example of the commitment management process at work, warts and all, at a unit of IBM, see Haeckel (1999: 243-247). (it should be noted that the commitment management process, also helps to promote conceptual clarity since, through negotiations, employees and teams come to clarify the ways in which their efforts mesh to promote marketplace agility.)

Growth/Facilitate Serial Incompetence: As a matter of policy, DOs seek to keep everyone developing in new directions at all times. Careful selection certainly helps, as will be discussed in a subsequent section. Other relevant programs and practices include:

- "Surround communication", as described above, only in this context focused on the message that, in terms of competencies, standing still is tantamount to falling behind (Shafer, et al, 2001).
- An open market for talent, also as described above. In DOs, constant change means constantly moving competency requirements. Even a moderately open market for talent requires that buyers recognize the need to look for serial incompetents. The corresponding message to employees is one of zero tolerance for complacency or slow learning; those who are over-specialized or unable to learn on the fly soon find fewer and fewer, and eventually no, bidders for their services.
- Training on the fly. Encouraging the need for serial incompetence (in either a positive or negative way) is one thing, helping employees minimize its consequences is

quite another. So, DOs invest heavily in employee development. But, because they defy predictability and are by nature very busy places, their heaviest investments are directed toward learning that takes place on assignment and on the spot, often through Web-based or other types of self-study programs, often done on employees' own time (Shafer, et al, 2001). Further, DOs learn to treat well-intentioned mistakes or breakdowns that occur on assignments as learning opportunities, not occasions for recriminations (Pascale, et al, 2000: 250-257).

➤ Communities of practice. Fluid organization design has a way of disrupting natural clusters of those with common occupational identities and baseline competencies. So, DOs develop communities of practice whereby those with common interests and needs can congregate, physically or virtually, to help each other stay up to speed (Cohen & Prusak, 2001: 53-80).

Continuity/Encourage Continuous Employment: Certainly, no DO can adopt a policy of employment security and probably none of their employees expect them to. But, neither can they operate as revolving doors. Employees who thrive at the edge of chaos are (and undoubtedly will continue to be) in short supply. Even more to the point, DOs have no choice but to invest in human capital and it makes little sense to keep pouring time, effort, and money into a constantly eroding resource. So, DOs adopt policies, with supporting programs and practices, such as the following:

➤ Minimize voluntary turnover. Baseline offerings here are, first, the freedom, flexibility, excitement, and opportunities that DOs inherently offer and, second, competitive pay packages (which we'll get to in a minute). Other approaches involve: careful selection (also discussed later), intensive orientation programs (Shafer, et al, 2001); constant communication and story-telling to reinforce the special nature of the place and, especially, the people in it (Cohen & Prusak, 2001: 112-132); and even an array of time-saving, firm-binding, and indeed paternalistic perks and amenities (e.g., day care centers, take-home meals, concierge services, and the like) (Useem, 2000).

➤ Minimize layoffs or otherwise the effects of layoffs (Lawler, 1996: 190-193). The former involves the first use of standard stopgap measures during temporary downturns. Inevitably, though, DOs encounter ongoing situations in which these measures are inadequate or inappropriate. Equitable severance and outplacement programs, certainly apply here. So do attempts to stay on the radar screens of laid off employees' for the

time when things turn around. Charles Schwab, for example, recently offered laid off employees (through the founder's foundation) up to \$20,000 to cover tuition at accredited educational institutions, along with a guaranteed bonus of \$7,500 for any laid off employee who was rehired by the firm within 18 months (Dunham, 2001).

Selection and Rewards: These HR activities cut across most, if not all, of the HR principles cited. Since DOs aren't for everyone, it is essential to carefully select new employees who are predisposed to operate in such milieus. One DO we studied revised its selection process to include situational interviews to assess value congruence between applicants and the organization (Shafer, et al, 2001). Kriegel, Inc., a consulting firm in California, has developed "Change-Ready Profile", a copyrighted self-assessment tool that might be adapted by DOs for selection purposes (Brandt & Kriegel, 1996). But, of course, these are obviously only cautious first steps, and much work remains to develop valid selection instruments in the special context of DOs. Even less progress seems to have been made with respect to rewards systems for DOs (Shafer, et al, 2001). We can speculate about the essential features of an appropriate reward system using the various HR principles to identify potentially key components: (1) For drive, pay in part for organizational results (profit sharing, stock options), subject to a GE-type practice of no payoffs for those who fail to adhere to the organization's core values; (2) for discipline, a piece that pays for effective team performance; (3) for autonomy, base pay within wide bands based on individual marketability (rather than job evaluation, since there are no jobs); (4) for accountability, awards or small bonuses for keeping commitments; (5) for growth, recognition and awards for taking on challenging assignments and for rapid learning, and (6) for continuity, providing commensurate returns (i.e., assuring, as much as possible, that employees' total returns, both financial and non-financial, are equal to the substantial contributions they are asked to make to firm success). But, how, if at all, these speculations actually come to life in DOs remains to be seen.

Testing for Horizontal Fit: Here we are interested in ascertaining whether or not the various HR policies, programs, and practices are congruent and mutually reinforcing to the point

they collectively constitute a synergistic bundle (Wright, 1998; Wright & Sherman, 1999). Obviously, given the piecemeal nature of our presentation, it is premature to attempt any such analysis, although Table 4 demonstrates a possible approach. As above, it is a simple logic check to judge whether or not: (1) each HR principle is addressed by multiple HR policies, programs, and practices and (2) each HR policy, program, and practice addresses multiple HR principles. An even better approach, once the domain of HR policies, programs, and practices is more complete, would be estimate the degree of complementarity among the full set by judging the extent to which doing more (or less) of any one of them would increase (decrease) the returns to doing the others (Milgrom & Roberts, 1995; for a preliminary application, see Dyer & Shafer, 1999).

TABLE 4
Testing for Horizontal Fit, Internal Fit, or Synergy

Selected AOHR Policies, Programs, Practices*	AOHR Principles					
	Drive	Discipline	Autonomy	Accountability	Personal Growth	Continuity
Staffing						
• Selection based on value congruence	+			+		+
Training						
• Cascading gap analysis					+	+
• Survival tactics workshops	+				+	+
Work Design						
• Flexible assignments			+			
• Project teams			+			+
Performance Management						
• Commitment management protocols		+		+		
Communication						
• Surround sound	+	+				
Returns						
• Recognize, appreciate, celebrate		+		+		

Adapted from Shafer et. al., 2001

Bringing It All Together

In a world where real shift happens, even embellished forms of the bureaucratic model, which has served so long and so well, are likely to be inadequate to the task of simultaneously achieving requisite levels of innovation tinged with appropriate levels of discipline (Foster & Kaplan, 2001; Heckscher, 1994; Pascale, et al, 2000). So, new organizational models are generating interest in practice, as well as among students of leadership, business strategy, organization theory, and the like (Child & McGrath, 2001). The DO is one such model. It is, as defined here, a “chaordic” form, constantly poised on “the edge of chaos” by attempting to harmoniously blend elements of change, emergence, and innovation on the one hand and stability, coordination and execution on the other (Brown & Eisenhardt, 1998; Hock, 1999; Pascale, et al, 2000).

Thus far, theory and research have generated only a surface understanding of how this delicate balancing act is achieved in practice. From a human resource perspective, it can be said with some certainty that DOs require of employees a mindset and set of behaviors quite different from those expected of employees in classic bureaucratic organizations (and perhaps in other new organizational forms as well)(Proposition 1 above). Thus, the current interest in probing the “black box” between HRS and firm financial results is well placed (Boxall & Purcell, 2000; Delery & Shaw, 2001; Wright & Gardner, in press). But, the efforts need to be conceptualized in broader terms. Specifically, we believe that researchers interested in HRS need to widen their perspectives to include studies of the determinants of required employee attitudes and behaviors (see Propositions 2, 3, and 4 above), as well as more common studies of the factors that bring these attitudes and behaviors about. And in the latter context, in turn, it would be helpful if researchers would focus their attention on organizational capability (in DOs on organizational agility) rather than HRS alone (see Proposition 5 above).

It would also be helpful if at least some of the empirical forays into the “black box” took the form of truly exploratory, intensive, qualitative case studies particularly focused on

knowledge-based firms, as most DOs are, and specifically designed to derive grounded theory (Brown & Eisenhardt, 1998; Shafer, et al, 2001). Some thoughts on designing such studies follow:

- Choose research sites, preferably small to medium-sized business units, on the basis of extant business strategies, and especially on the basis of how the units are trying to compete in the marketplace (price, speed, service, marketplace agility, etc.) (Boudreau & Ramstad, in press). Initially lean toward those that provide relatively clear-cut cases of success and (where access can be achieved) a noticeable lack of success.
- Start the analysis by teasing out the mindset and behaviors required of employees; in the DO context such studies could be guided by Propositions 2, 3, and 4 above. This may require segmenting employees into various categories such as core and non-core (Delery & Shaw, 2001; Lepak & Snell, 1999), although probably not in DOs, where (we believe) all employees are part of the strategic core work force. In most cases, the search for requisite mindset and behaviors is an interpretive exercise. One set of potentially determining factors to consider here are key organizational competencies (capabilities, resources) (Barney, 1991), such as sensing the market, mobilizing rapid response, exploiting temporary advantage, and embedding organizational learning.
- Next look for factors that help or hinder the manifestation of the required mindset and behaviors. Here the interest is in what is broadly called organization capability (Ulrich & Lake, 1990), or what in DOs we call organizational agility (Proposition 5 above). Components include organizational factors -- again, such as elements of agility-oriented organizational infrastructure (Propositions 6, 7 and 8 above)-- and the principles that guide the choice of HR policies, programs, and practices (Propositions 9, 10, and 11 above), as well as the details of the policies, programs, and practices themselves (Wright, 1998). Analyze these components for degree of vertical and horizontal fit, or more broadly the synergies of the system (Delery & Shaw (2001) (see Tables 2, 3, and 4).
- Finally, where fit is found, combine these components into a proposed model of organizational capability appropriate to the particular business strategy followed by the firm or unit under investigation. Figure 4 depicts the components of organizational agility that we postulate are appropriate for firms and business units attempting to compete on the basis of marketplace agility.

Our analysis rests on two fundamental assumptions: (1) that dynamic organizational competencies (reading the market, mobilizing rapid response, and so forth) required to achieve marketplace agility are stable over time and (2) that the organizational agility required to develop and sustain these competencies is a synergistic system whose guiding principles can, and indeed must, endure over time (even as the administrative details vary over time and across DOs). The challenge is to discover and articulate these guiding principles in the interest of advancing both the design and execution of an agility-oriented organizational infrastructure and HRS. Our initial efforts in this direction are, of course, tentative and, we assume, ephemeral. They are offered, therefore, not so much in the hope that they will see the light of day in practice as in the desire that they may spur and influence additional theoretical and empirical work to shed light on the specifics of marketplace and organizational agility, and as a corollary on HRS's infamous "black box".

References

- Argyris, C. (1985). *Strategy, change, and defensive routines*. Boston: Pitman.
- 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, 1: 99-120.
- Becker, F. (2000). Integrated portfolio strategies for dynamic organizations. *Facilities*, 18, 10-12: 411-420.
- Becker, F. (in press). Workplace flexibility: Value for money. *Journal of Facility Management*.
- Becker, F. & Sims, W. (2001). *Offices that work: Balancing communication, flexibility, and cost*. Ithaca, NY: International Workplace Studies Program, Cornell University.
- Boudreau, J. & Ramstad, P. (in press). Strategic I/O psychology and utility analysis. In Borman, W., Klimoski, R. & Ilgin, D. (eds). *Handbook of Industrial and Organizational Psychology*.
- Boxall, P. (1999). Human resource strategy and industry-based competition: a conceptual framework and agenda for theoretical development. In Wright, P., Dyer, L., Boudreau, J. & Milkovich, G. (eds). *Research in Personnel and Human Resources Management (Supplement 4: Strategic Human Resources Management in the 21st Century)*. Stamford, CT: JAI Press.
- Boxall, P. & Purcell, J. (2000). Strategic human resource management: Where have we come from and where are we going? *International Journal of Management Reviews*, 2, 2: 183-203.
- Brandt, D. & Kriegel, R. (1996). *The change ready profile: a tool for understanding your response to change*. Nevada City, CA: Kriegel, Inc.
- Bridges, W. (1994). *Job Shift*. Reading, MA: Addison-Wesley.
- Brown, S. & Eisenhardt, K. (1998). *Competing on the edge: Strategy as structured chaos*. Boston, MA: Harvard Business School Press.
- Campbell, D. (2000). The proactive employee: Managing workplace initiative. *Academy of Management Executive*, 14, 3: 52-66.
- Cappelli, P. (1999). *The new deal at work*. Boston, MA: Harvard Business School Press.
- Cappelli, P. & Singh (1992). Integrating strategic human resources and strategic management. In Lewin, D., Mitchell & Scherer, P. (eds). *Research Frontiers in Industrial Relations and Human Resources*. Madison, WI: Industrial Relations Research Association.
- Child, J. & McGrath, R.G. (2001). Organizations unfettered: Organizational Form in an Information Intensive Economy. *Academy of Management Journal*, 44, 6: 1135-1148.
- Cohen, D. & Prusak, L. (2001). *In good company: how social capital makes organizations work*. Boston, MA: Harvard Business School Press.
- Collins, J. & Porras, J. (1994). *Built to Last*. New York: Harper-Collins.
- Davis, T. (1997). Open book management: Its promise and pitfalls. *Organizational Dynamics*, Winter: 7-19.
- Delery, J. & Shaw, J. (2001). The strategic management of people in work organizations: review, synthesis, and extension. In Ferris, G. (ed). *Research in Personnel and Human Resources Management, Vol. 20*. Oxford, UK: Elsevier Science.
- Dove, R. (2001). *Response Ability: The language, structure, and culture of agile enterprise*. New York: Wiley.
- Dunham, K. (2001). Employers seek ways to lure back laid-off workers when times improve. *Wall Street Journal*, June 19: B1.
- Dyer, L. (1984). Studying human resource strategy: An approach and an agenda. *Industrial Relations*, 23, 2: 156-169.

- Dyer, L. and Shafer, R. (1999). From human resource strategy to organizational effectiveness: lessons from research on agile organizations. In Wright, P., Dyer, L., Boudreau, J. & Milkovich, G. (eds). *Research in Personnel and Human Resources Management (Supplement 4: Strategic Human Resource Management in the 21st Century)*. Stamford, CT: JAI Press.
- Fishman, C. (1999). This is a marketing revolution. *Fast Company*, May: 204-218.
- Foster, R. & Kaplan, S. (2001). *Creative destruction: why companies that are built to last underperform the market and how to successfully transform them*. New York: Currency.
- Fradette, M. & Michaud, S. (1998). *The power of corporate kinetics*. New York: Simon and Schuster.
- Galunic, C. & Eisenhardt, K. (2001). Architectural innovation and modular corporate forms. *Academy of Management Journal*, 44, 6: 1229-1250.
- Godin, S. (2000). In the face of change, the competent are helpless. *Fast Company*, January-February: 230-234.
- Grant, R. (1996). Prospering in dynamically competitive environments: Organizational capability as knowledge integration. *Organizational Science*, 7, 4: 375-387.
- Haeckel, S. (1999). *Adaptive Enterprise: creating and leading sense-and-respond organizations*. Boston, MA: Harvard Business School Press.
- Hamel, G. (2000). *Leading the Revolution*. Boston, MA: Harvard Business School Press.
- Hamel, G. & Prahalad, C. (1994). *Competing for the future*. Boston, MA: Harvard Business School Press.
- Heckscher, C. (1994). Defining the post-bureaucratic type. In Heckscher, C. & Donnellon, A. (eds). *The post-bureaucratic organization: New perspectives on organizational change*. Thousand Oaks, CA: Sage.
- Hock, D. (1999). *Birth of the chaotic age*. San Francisco, CA: Barrett-Koehler.
- Lawler, E.E. III (1996). *From the ground up: six principles for building the new logic corporation*. San Francisco, CA: Jossey-Bass.
- Lepak, D. & Snell, S. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *Academy of Management Review*, 24, 1: 31-48.
- Levine, L. (2001). Integrating knowledge and processes in a learning organization. *Information Systems Management*, 18, 1: 21-33.
- Lewin, K. (1951). *Field Theory in Social Sciences*. New York: Harper and Row.
- Mara, A. & Scott-Morgan, P. (1996). *The accelerating organization*. New York: McGraw-Hill.
- 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 Organization* (2nd Ed.). Thousand Oaks, CA: Sage.
- Nonaka, I (1991). The knowledge creating company. *Harvard Business Review*, November-December: 96-104.
- Pascale, R., Millemann, M. & Gojja, L. (2000). *Surfing the edge of chaos*. New York: Crown Business.
- Pfeffer, J. (1998). *The human equation: building profits by putting people first*. Boston, MA: Harvard Business School Press.
- Schuler, R. and Jackson, S. (1987). Linking competitive strategies and human resource management practices. *Academy of Management Executive*, 1, 3: 207-219.
- Serwer, A. (2000). There's something about Cisco. *Fortune*, May 15, 2000: 114-138.
- Shafer, R., Dyer, L., Kilty, J., Amos, J. & Ericksen, J. (2001). Crafting a human resource strategy to foster organizational agility: A case study. *Human Resource Management*, Stack, J. (1992). *The great game of business*. New York: Currency.
- Teece, D., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18, 7: 509-533.

- Ulrich, D. & Lake, D. (1990). *Organization capability: Competing from the inside out*. New York: Wiley.
- Useem, J. (2000). Welcome to the new company. *Fortune*, January 10: 62-70.
- Weick, K. (1998). Improvisation as a mindset for organizational analysis. *Organizational Science*, 9, 5: 533-555.
- Weick, K. & Quinn, R. (1999). Organizational change and development. In J. Spence, J. Darley & D. Foss (eds). *Annual Review of Psychology*, 50: 361-386.
- Wright, P. (1998). HR-strategy fit: Does it really matter? *Human Resource Planning*, 21,4: 56-57.
- Wright, P., Dunford, B. & Snell, S. (2001). Contributions of the resource based view of the firm to the field of HRM: Convergence of two fields. *Journal of Management*, 27: 701-721.
- Wright, P. & Dyer, L. (2000). *People in e-business: New Challenges, New Solutions*. New York: Human Resource Planning Society.
- Wright, P., Dyer, L. & Takla, M. (1999). *Execution: The Critical "What's Next" In Human Resource Management*. New York: Human Resource Planning Society.
- Wright, P. & Gardner, T. (in press). Theoretical and empirical challenges in studying the HR practice-Firm Performance Relationship. In D. Holman, T. Wall, C. Clegg, P. Sparrow & A. Howard (eds). *The new workplace: People, technology, and organization*. London: Wiley.
- Wright, P., McCormick, B., Sherman, W. & McMahan, G. (1999). The role of human resource practices in petro-chemical refinery performance. *The International Journal of Human Resource Management*, 10: 551-571.
- Wright, P. & Sherman, S. (1999). The failure to find fit in strategic human resource management: Theoretical and empirical considerations. In Wright, P, Dyer, L., Boudreau, J. & Milkovich, G. (eds). *Research in Personnel and Human Resources Management (Supplement 4: Strategic Human Resources Management in the 21st Century*. Stamford, CT: JAI Press.
- Youngblood, M. (1997). *Life at the edge of chaos: creating the quantum organization*. Dallas, TX: Perceval Publishing.