CONCEPTUALIZING DYNAMIC ORGANIZATIONAL FIT IN MULTICONTINGENCY CONTEXTS[1]

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ABSTRACT

Contingency Theory retains a central place in organization and management research, but the concept *organizational fit* is treated generally in a relatively static and unidimensional manner, a manner that is incommensurate with the dynamic and often unpredictable, disruptive, multicontingency nature of organizational contexts today. Organizations address multiple, shifting contingency factors simultaneously, and as equilibria are punctuated with increasing frequency, one or more factors can be expected to change constantly. Seeking constantly to establish, re-establish and maintain "good" static fit may prove to represent an inferior strategy. Yet this represents a centerpiece of Contingency Theory as we know it. The problem is that the concept *static fit* is becoming anachronistic, and both conceptual and methodological tools for assessing and predicting dynamic fit with changing organizations and multicontingency contexts remain largely absent. In this article, we work to extend Contingency Theory through conceptualization of *dynamic organizational fit*, articulating an inherently dynamic relationship between multicontingency fit and organizational performance. We begin with promising contingency conceptualizations in Organization and Management Theory, and then draw from Dynamics to inform both conceptualization and operationalization of *dynamic fit* in terms of longitudinal, multidimensional trajectories. We illustrate the ensuing conceptual integration in a punctuated equilibrium context, and elucidate important interrelationships between static and dynamic organizational fit. This moves us considerably beyond *fit* as a static concept and unidimensional construct, and offers insight into operationalization via two, new, inherently dynamic constructs. A set of evocative research propositions emerges, and we guide continued research along the lines of this investigation.

INTRODUCTION

For more than a half century, Contingency Theory has retained a central place in organization and management research. Beginning with seminal works by Burns and Stalker (1961), Woodward (1965), and Lawrence and Lorsch (1967), organization and management theory has been guided by the understanding that no single approach to organizing is best in all circumstances. Moreover, myriad empirical studies (e.g., Argote, 1982; Donaldson, 1987; Hamilton & Shergill, 1992, 1993; Keller, 1994; cf. Mohr, 1971; Pennings, 1975) have confirmed and reconfirmed that poor organizational fit degrades performance, and many diverse

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organizational structures (e.g., Functional, Decentralized, Mixed, see Duncan, 1979), forms (e.g., Bureaucracy, see Weber 1924/1947; M-Form, see Chandler Jr., A. D., 1962; Clan, see Ouchi, 1981; Network, see Miles and Snow, 1978; Platform, see Ciborra, 1996; Virtual, see Davidow and Malone, 1992), configurations (e.g., Machine Bureaucracy, Simple Structure, Professional Bureaucracy, Divisionalized Form, Adhocracy, see Mintzberg, 1979) and other groupings[i] have been theorized to enhance fit across an array of contingency factors (e.g., age, environment, size, strategy, technology).

Indeed, organization and management scholars have come to understand well how various organizational forms are and should be designed and changed to fit specific contingency contexts. For instance, *organizational technology* has been studied extensively as a powerful contingency factor (e.g., Litwak, 1961; Woodward, 1965; Pugh et al., 1969), with alternate technological characteristics (e.g., *task variability, problem analyzability*) related contingently with different organizational forms (e.g., *Craft, Engineering*, see Perrow, 1970). As another instance, *organizational environment* has been studied extensively as a powerful contingency factor also (e.g., Burns & Stalker, 1961; Galbraith, 1973; Harvey, 1968), with alternate environmental characteristics (e.g., *complexity, change*) related contingently with different organizational structures (e.g., *Functional, Decentralized*, see Duncan, 1979).

Particularly through the early phases of this research, the concept *organizational fit* has been treated in a relatively static and unidimensional manner, a manner that is incommensurate with the dynamic and often unpredictable, disruptive, multicontingency nature of organizational contexts today. In particular, the early concept has been limited largely to describing fit at a particular point in time (i.e., statically), with some specific organizational structure (e.g., Mixed Functional) prescribed as most appropriate for a single contingency factor (e.g., *organizational*

environment) and the perceived context (e.g., complex and changing) corresponding to such factor at that point in time.

But as noted above, scholars have identified an array of multiple contingency factors (e.g., age, environment, size, strategy, technology) that organizations must address, and articulated how they must be addressed as a multicontingency set (e.g., see Gresov and Drazin, 1997) along with other dimensions of organizational life (e.g., strategic choice, see Child, 1972; Hambrick, 1983; Govindarajan, 1986; culture, see Deshpande and Webster, 1989) and management interventions (e.g., see Covin and Slevin, 1989; Doty et al., 1993).

Indeed, building recently upon such research, Burton et al. (2006) identify 14 contingency factors (e.g., *goal, strategy, environment*) that an organization must address *simultaneously*, and they explain how the set of factors can change through time, circumstance and management action. Assessing fit in such dynamic, multicontingency contexts becomes more challenging in both static and dynamic terms. Statically, with multiple contingency factors in a set to address simultaneously, the contingency-organization design task is more complex, and it becomes increasingly difficult to prescribe a single organizational form deemed to be most appropriate in the context of the whole set of factors. Dynamically, with multiple contingency factors in a set changing through time, circumstance and management action, the contingency forecasting task is more complex, and it becomes increasingly difficult to anticipate any specific set of contingency factors remaining static for long.

Moreover, these challenges are exacerbated by the dynamics associated with organizational change. Since most organizations require considerable time to change structure (Pant, 1998), managers need to anticipate future changes across the whole set of contingency factors. Yet organizational scholars (e.g., Chaharbaghi and Nugent, 1994; Donaldson, 1987;

Tung, 1979) note widely that the contingency contexts of many modern organizations can change rapidly and unpredictably (Romanelli and Tushman, 1994), due to multiple factors such as globalization (Raynor and Bower, 2001), technology (Adner and Levinthal, 2002; Rahrami, 1992), hypercompetition (D'Aveni, 1994, Hanssen-Bauer and Snow, 1996), knowledge-based innovation (Jelinek and Schoonhaven, 1990), explicit linking of organizational structures to strategies (Zajac et al., 2000; Sabherwal et al., 2001; Venkatraman and Prescott, 1990), mounting competition from co-evolutionary firms (Barnett and Sorenson, 2002), high-velocity environments that are in perpetual flux (Eisenhardt and Tabrizi, 1995), and the kinds of nonlinear, dynamic environmental patterns that never establish equilibrium (Levy, 1994; Stacey, 1995).

As equilibria are punctuated with increasing frequency (Peteraf and Reed, 2007)—or even more demanding, as dynamic, multicontingency contexts move toward continuous, unpredictable change (Lengnick-Hall and Beck, 2005)—seeking to establish, re-establish and maintain "good" static fit may prove to represent an inferior strategy (Pant, 1998; Westerman et al., 2006). Yet establishing, re-establishing and maintaining "good" static fit represents a centerpiece of Contingency Theory as we know it. The problem is not with *fit* as a concept; it continues to serve us well in terms of descriptive, explanatory, predictive and normative power. The problem is with *static fit*: it is becoming anachronistic, and both conceptual and methodological tools for assessing and predicting dynamic fit with changing organizations and multicontingency contexts remain largely absent (Zajac et al., 2000).

In this article, we work to extend Contingency Theory through conceptualization of *dynamic organizational fit*, articulating an inherently dynamic relationship between multicontingency fit and organizational performance that extends well-understood static

concepts to address the dynamic reality of organization and management today. We begin with promising conceptualizations in Organization and Management Theory, and then draw from Dynamics to inform both conceptualization and operationalization of *dynamic fit* in terms of longitudinal, multidimensional trajectories. We illustrate the ensuing conceptual integration in a punctuated equilibrium context, and elucidate important interrelationships between static and dynamic organizational fit. This work moves us considerably beyond *fit* as a static concept and unidimensional construct to address longitudinal, multicontingency, organizational performance, fit and change. This work also offers insight into operationalization via two, new, inherently dynamic constructs. A set of evocative research propositions emerges from this discussion, and we discuss a number of emergent, open issues to help populate an agenda and guide continued research along the lines of this investigation.

BACKGROUND

In this section, we provide focused review of two key literatures to inform us regarding dynamic fit. We begin with promising contingency conceptualizations in Organization and Management Theory, and then draw from Dynamics to inform both conceptualization and operationalization of *dynamic fit* in terms of longitudinal, multidimensional trajectories.

Conceptualizations in Organization and Management Theory

The concept *dynamic fit* has been considered in some respects for several decades and through multiple theoretical perspectives. As one stream of relevant research, population ecologists (e.g., Hannan and Freeman, 1977; McKelvey, 1982; Hannan and Carroll, 1995) have argued that some organizational populations (e.g., consider select organizational forms or configurations) are suited inherently better for certain ecologies (e.g., consider environments) than others are. Further, forces of *adaptation* (e.g., organizational variation, selection, and diffusion) work to preserve the populations exhibiting better fit, and hence to alter the composition of organizational ecologies over time (e.g., with some populations destined to survive and others destined to fail). With this view, the dynamics of fit are deemed to manifest themselves via interactions between populations and their ecologies, and are relatively insulated from management influence; that is, most managers in relatively poor-fitting organizations are destined to see their organizations fail, whereas those in relatively well-fitting counterparts are destined to see theirs succeed. This perspective includes negligible opportunity for managerial intervention to address situations of misfit (see Scott, 2003).

An alternate, contingency theory perspective sees ample opportunity for management to adjust organizational structure in order to establish or re-establish fit. Building upon Burns and Stalker (1961), who suggest that organizations in misfit are expected to modify their structures to move into fit with their environments or other contingencies, we note how Thompson (1967, p. p. 234) discusses alignment as a "moving target," suggesting that organizational designs must change longitudinally (i.e., via managerial intervention). In discussing a contingent, dynamic linkage between organizational strategy and structure, Donaldson (1987) describes how changes in strategies can produce misfits with organizational structures, and calls for structural adaptation

to regain fit over time (again via managerial intervention). Similarly, set largely within a technological, information systems context, Sabherwal et al. (2001) embrace the punctuated equilibrium model (e.g., see Eldridge and Gould, 1972; Gersick, 1991) to assess the alignment between strategy and structure, and suggest that a dynamic re-alignment pattern may persist over long periods of time. Likewise, Romanelli and Tushman (1994) embrace punctuated equilibrium also, suggesting that the large majority of organizational transformations take place via rapid, discontinuous, management-induced change. Peteraf and Reed (2007) argue further how dynamic fit represents an important managerial capability for organizational change, highlighting in an argument against population ecology that fit trumps best practice.

Further, several researchers note the ironic need for managers to move their organizations purposefully out of fit. With a longitudinal view, the idea is that, even though an organization may enjoy a situation of good fit at some point in time and with respect to some set of contingencies, for various reasons management might benefit from creating a situation of misfit in anticipation of a different time and set of contingencies. For instance, Pant (1998) argues how managers need to anticipate environmental change, because organizations can require considerable time to change structures. Hence, in this dynamic view that considers lag time, in order to bring an organization into fit with a future and changing environment, managers must anticipate not only the environmental change, but the organization's resistance to and time required to effect change. Similarly, Westerman et al. (2006) discuss how organizational designs that fit well with "early" strategic contingencies (e.g., in the early part of the innovation life cycle) can fall into natural misfit with "later" ones. They go further by suggesting a tension between managerial approaches, one that requires some assessment of tradeoffs in this dynamic

context: either seek to minimize the negative effects of misfit situations, or seek to undertake timely organizational change.

Despite discussion of dynamic adjustments to misfit situations via organizational change, in this contingency theory perspective, the fit concept is viewed as relatively static in most cases: an organization structure may fall out of fit—whether because of environmental change or by deliberate managerial action—at some point in time, and then undergo change in attempt to re-establish fit at some other point in time. This is analogous to equilibrium models from economics, in which analysis of even shifting supply and demand is made only at conditions of static equilibrium. In our organizational context, environments, strategies and other contingencies may shift periodically, and organizational structures may be changed in either anticipation or response, but the analysis focuses on preserving or regaining static fit in some kind of (punctuated) equilibrium context. Zajac et al. (2000) argue, however, that such emphasis on static fit is inadequate for longitudinal understanding, and that examining dynamic fit can inform strategic change. They cite the need for both conceptual and methodological tools to assess and predict strategic and organizational fit with changing environments and organizations.

As one promising approach, Tushman and O'Reilly (1999) discuss ambidextrous organizations, which are able to operate simultaneously in multiple modes. For instance, an organization may take a relatively short-term focus on efficiency and control—essentially striving to exploit current organization and capabilities—while simultaneously taking a relatively long-term focus on innovation and risk taking—essentially striving to explore future organization and opportunities. They describe how an organization may even adopt multiple, inconsistent architectures or structures to pursue this approach. This is analogous to the equilibrium model in economics also, in which decisions and behaviors are made and examined

over different timeframes (esp. short-term and long-term). For instance, in the short-term, a great many economic factors of interest (e.g., costs, capabilities, supply) are fixed, but over the long-term, they become variable. Nonetheless, in our organizational context, both the short-term and long-term foci (i.e., both exploitation and exploration) concern static fit: current exploitation fits current contingencies, and future exploration fits future contingencies.

As another promising approach, Lengnick-Hall and Beck (2005) contrast the notion of adaptive fit—essentially shifting from one static-fit context to another over time—with robust transformation: "a deliberately transient, episodic response to a new, yet fluid equilibrium" (p. 742). In this view, there is no presumption that specific environmental conditions will move to equilibrium; hence organizational structures cannot be changed to achieve static fit. This represents a departure from most of the contingency research on fit. It builds upon Brown and Eisenhardt (1997), who argue that continuous change represents a more appropriate perspective than punctuated equilibrium does. It also acknowledges the kinds of hypercompetitive (D'Aveni, 1994) and high-velocity environments that are in perpetual flux (Eisenhardt and Tabrizi, 1995), and the kinds of nonlinear, dynamic environmental patterns that never establish equilibrium (see Levy, 1994, Stacey, 1995).

Robust transformation represents a complementary approach to adaptive fit: it seeks to develop responsiveness, flexibility and an expanded action repertoire as opposed to seeking higher levels of fit over time. In essence, this approach acknowledges that, at least with some environmental contingencies, an organization may be unable to change quickly enough to maintain adaptive fit, and that seeking flexibility may represent a superior approach in such situations. The authors introduce the approach *resilience capacity*, which implies a capability to recognize where objectives such as responsiveness, flexibility and an expanded action repertoire

are relatively more and less appropriate than seeking higher levels of fit over time is, along with the capability to select and enact the corresponding routines.

This is comparable in focus to that corresponding to Edge organizations (see Alberts and Hayes, 2003; Nissen, 2007), which emphasize *agility* across multiple, unpredictable environments, as opposed to current or adaptive performance in any specific contingency context. Similarly, Brown and Eisenhardt (1997) suggest that organizational semistructures, capable of balancing order and flexibility, provide a superior approach to highly dynamic environments. Even with these promising approaches, however, we continue to lack appropriate concepts and constructs to assess the *dynamic fit* of organizations with possibly perpetually changing, multiple contingencies.

Dynamics

Dynamics involves the analysis of time-dependent motion, and represents textbook knowledge in most physical science and engineering curricula (e.g., see Sandor, 1983). One area of Dynamics called Kinematics offers potential to inform dynamic organizational performance, fit and change. In this section, we draw concisely from Kinematics to present some key dynamic concepts and analytical techniques. We then draw briefly from Aerodynamics to operationalize important dynamic constructs of importance to design and performance evaluation.

Kinematics. Of particular interest in Kinematics are *coordinate systems* and *graphical analysis* of *vector positions, distances* and *trajectories* that can inform directly our conceptualization and understanding of dynamic fit. Position refers to where, in some coordinate system, an object of interest is located at some point in time. *Position* is represented generally in Kinematics as a

vector quantity, comprised of multiple variables or dimensions. *Position in space*, for instance, is

an example of vector position: it represents multiple, spatial dimensions simultaneously.
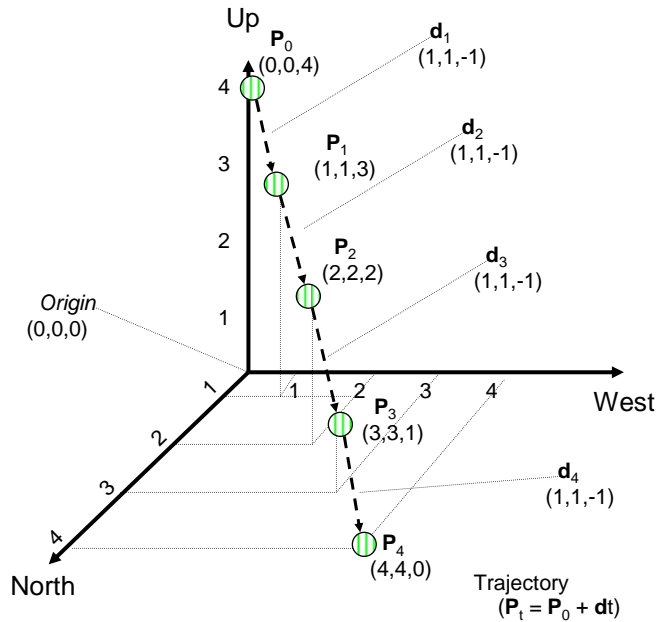

Figure 1 Coordinate System and Vector Motion

Taking the difference between any two vector positions can be used to calculate distance.

For instance, say that you are standing in the corner of a room, and that you toss an object (e.g.,

paper airplane) from a position four feet above the floor. Say also that one wall runs north, and

that the adjacent wall runs west from this corner. We assign the *origin* of a coordinate system to

the corner where these two walls meet together at the floor, and assign the coordinate (0,0,0) to

this point. Figure 1 depicts this coordinate system. The starting position (labeled "$\mathbf{P}_0$") represents

the point in this coordinate system where the object is tossed, and has coordinate (0,0,4) in this

system (i.e., zero feet to the north, zero feet to the west, four feet up above the floor). We note

this as "Time 0" on our clock. The next position (labeled "$\mathbf{P}_1$") represents where the object is

seen at the next time unit (i.e., "Time 1"), and has coordinate (1,1,3) in this system (i.e., one foot to the north, one foot to the west, three feet up above the floor). The distance between these positions is described by a vector (labeled "$\mathbf{d}_1$") with coordinate values (1,1,-1) depicting such change in position (i.e., one foot to the north, one foot to the west, one foot downward) through one time unit. The other positions (i.e., $\mathbf{P}_2$ through $\mathbf{P}_4$), coordinates, times and distance vectors (i.e., $\mathbf{d}_2$ through $\mathbf{d}_4$) follow accordingly.
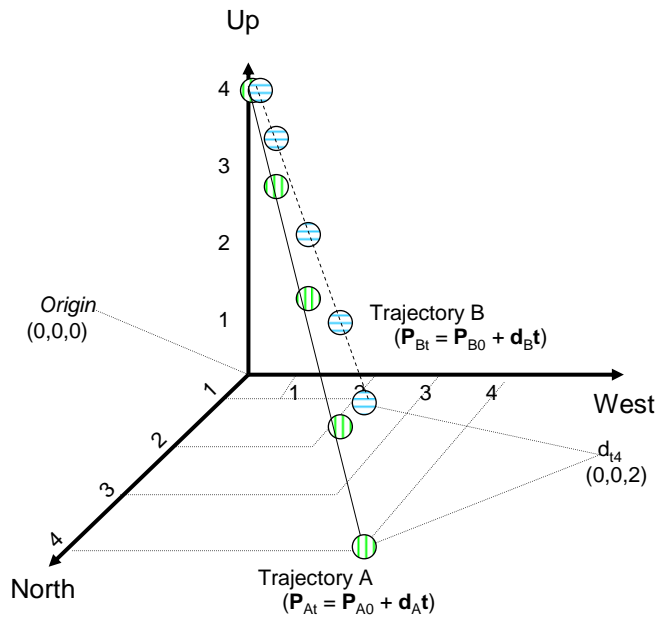

Figure 2 Coordinate System and Comparative Motion

We include an equation to characterize the trajectory as a whole ($\mathbf{P}_t = \mathbf{P}_0 + \mathbf{d}t$), where $\mathbf{P}_t$ represents the coordinate position (in three dimensions) at any point in time, $\mathbf{P}_0$ represents the coordinate position (0,0,4) when the object is tossed (i.e., Time 0), $\mathbf{d}$ represents the (constant) distance vector (1,1,-1) characterizing how far the object moves in each time period, and t represents elapsed time (i.e., Time 0 through Time 4). This is a very compact way to represent

the dynamic motion of the object. Notice that we need to know only the starting position, vector

distance and time between points to describe the complete longitudinal trajectory.

Figure 2 depicts this same, three-dimensional, spatial coordinate system with a second

trajectory plotted along with that of the object described above. We label "Trajectory A" to

represent the dynamic path delineated by the object described above. Say that this object

represents a designed system (e.g., a particular paper airplane: System A), and that another object

with motion delineated by Trajectory B in the figure represents a different designed system (e.g.,

a paper airplane with different configuration: System B). Although graphical visualization in

three dimensions requires some practice, it should be clear that Trajectory B is identical to that of

Trajectory A, except that it delineates a higher dynamic path through time. The comparative

motion of these two systems is summarized in Table 1.

Table 1 Comparative Multidimensional Motion

Time	North A	West A	Up A	North B	West B	Up B
0	0	0	4.0	0	0	4.0
1	1	1	3.0	1	1	3.5
2	2	2	2.0	2	2	3.0
3	3	3	1.0	3	3	2.5
4	4	4	0.0	4	4	2.0

Specifically, we note rows in the table for Time 0 through Time 4, and include

coordinates (i.e., north, west, up) for Trajectory A and Trajectory B in the other six columns. For

instance, at Time 0, the coordinate for Trajectory A is (0 north, 0 west, 4.0 up), that that for

Trajectory B is the same (0 north, 0 west, 4.0 up). As depicted in Figure 2, these two trajectories

begin at the same point at Time 0, and delineate identical paths in terms of coordinates *north* and

west. Moreover, both trajectories delineate similar paths in terms of coordinate *up*, but the object

with Trajectory B falls to a level of 2 feet at Time 4, whereas its counterpart with Trajectory A falls to a level of 0 feet.

Continuing with our vector notation, we can calculate the multidimensional distance between any points along the two trajectories. For instance, the distance at Time 0 (0,0,0) is the distance between north values, west values, and up values for the two trajectories, and similarly for the distance at Time 4 (0,0,2). Hence the vectors can be decomposed to compare trajectories along each dimensional axis, yet visualized and analyzed multidimensionally as well.
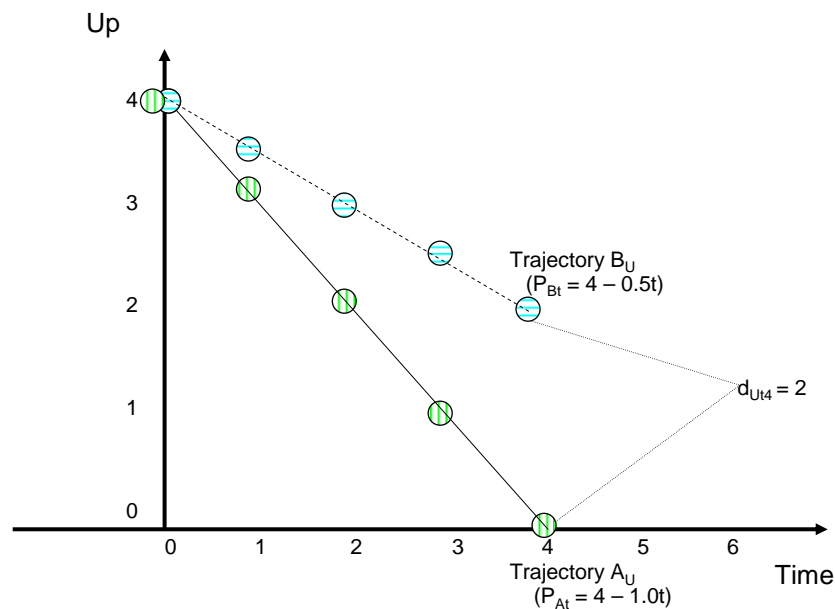

Trajectory B_U $(P_{Bt} = 4 - 0.5t)$

$d_{Ut4} = 2$

Trajectory A_U $(P_{At} = 4 - 1.0t)$

Figure 3 Longitudinal Motion along the Up Dimension

Further, because the two trajectories are identical in terms of the north and west dimensions, we can collapse the three-dimensional coordinate space depicted above into a cross-sectional plane delineating longitudinal motion along only the up dimension (i.e., the one that differs). Here, as depicted in Figure 3, the same two trajectories are plotted along the up axis as

above, but with the time axis included explicitly, and equations representing the systems'

dynamic motion expressed in terms of the up dimension only. This unidimensional

representation is equivalent to its multidimensional counterpart above. Both offer potential to

inform dynamic organizational performance, fit and change.

Aerodynamics. A great power of dynamic analysis stems from its ability to help understand the

multidimensional dynamics of even very complex systems. Although the trajectories delineated

above are purposefully simple for illustration and explanation of the approach, the same vector

techniques for visualization and analysis apply well beyond such simple systems. For instance,

Aerodynamics concerns the dynamic motion of systems designed for flight, most of which are

(unlike paper airplanes) highly dynamic, controlled systems; that is, the systems themselves have

inherent dynamic capabilities that are designed in, but they receive directional inputs during

flight (esp. from human pilots).

A tension in aircraft design exists between system stability and maneuverability.

Speaking generally, stability pertains to how a designed system reacts to disruptions to dynamic

trajectories, and maneuverability pertains to how a controlled system can adjust its own dynamic

trajectory. Hence, stability applies more to dynamic reaction, and maneuverability applies more

to dynamic control. This tension between system stability and maneuverability requires tradeoffs

to be made in aircraft designs. The corresponding constructs enable us to analogize directly to

design tensions and tradeoffs in the domain of organization and management.

Figure 4 delineates more complex, dynamic trajectories of two, controlled systems (i.e.,

System C and System D). The trajectory for System C has several parts. It begins with an initial,

steady state of horizontal motion (height = 4.0 feet), followed by the system's response over time

to a disruption at Time 0; here we start the clock when the disruption hits, and refer to this point in time as "Time 0." The trajectory continues with steady state, horizontal motion (height = 3.0 feet) through Time 4, followed by the system's return to its previous level (height = 4.0 feet) at Time 5.
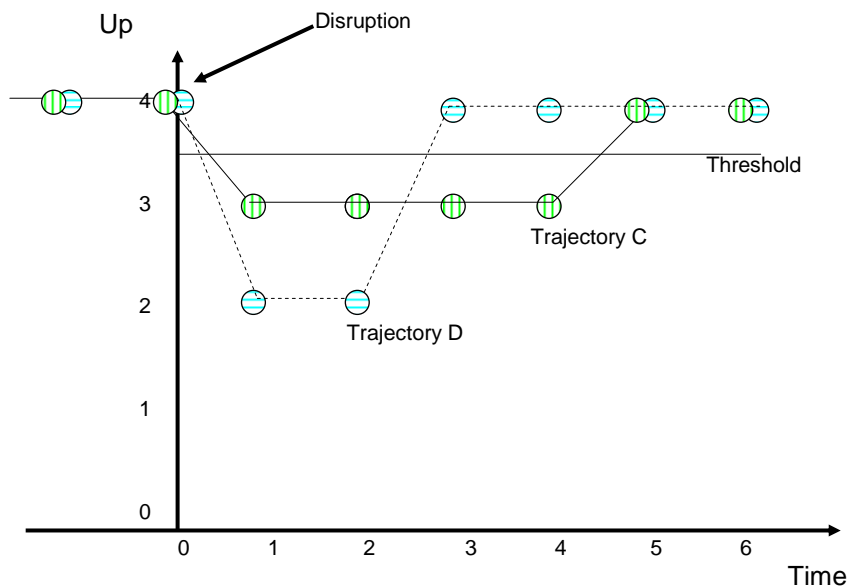

Figure 4 Controlled System Trajectories

The trajectory for System D is similar: it begins with an initial, steady state of horizontal motion (height = 4.0 feet), followed by the system's response over time to a disruption at Time 0. The trajectory continues with steady state, horizontal motion (height = 2.0 feet) through Time 2, followed by the system's return to its previous level (height = 4.0 feet) at Time 3. We include a Threshold Line (height = 3.5 feet) to indicate the level expected by a system designer. Hence both systems begin their trajectories above threshold; both fall (to different levels) below

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threshold following a disruption; and both return (at different times) to trajectories above threshold

With considerable simplification, we draw from Aerodynamics (e.g., Houghton and Carruthers, 1982) here to characterize the magnitude of disruption in trajectory as *static stability* of the system: speaking generally, the more statically stable a system is, the better that it maintains its trajectory following disruption. Large passenger jets, for instance, are very statically stable, and do not deviate from their flight paths when buffeted by gusts of wind nearly as much as small private planes or ultralight aircraft do. Indeed, large passenger jets are designed very deliberately to be highly statically stable, for this enhances aircraft efficiency and passenger comfort. However, with aircraft, static stability detracts generally from maneuverability: as a rule, the more statically stable, the less maneuverable, and vice versa. Hence aircraft designers must trade off static stability and maneuverability in their designs. The analog to the kinds of large, stable, immaneuverable organizations described broadly in the literature is direct.

With further simplification, we draw similarly to characterize the time required to recover from disruption in trajectory as *dynamic stability* of the system: speaking generally, the more dynamically stable a system is, the more quickly that it returns to its trajectory following disruption. Early generation military combat jets, for instance, were very dynamically stable, and did not experience delay in returning to their high-speed flight paths when buffeted by gusts of wind nearly as much as small private planes or ultralight aircraft did. Indeed, early generation military combat jets were designed very deliberately to be highly dynamically stable, for this enhances controllability at very high speeds and altitudes. As above, with aircraft, dynamic stability detracts somewhat from maneuverability also: as a rule, the more dynamically stable, the less maneuverable but more controllable, and vice versa. Hence aircraft designers must trade

off dynamic stability and maneuverability in their designs. The analog to the kinds of organizations attempting to operate at very high speeds described in the literature is direct.

Interestingly, modern combat aircraft are designed intentionally now to be inherently *unstable*. Indeed, without constant, immediate and accurate control inputs to stabilize constantly disrupted flight trajectories, an unstable aircraft would lose control and crash. However, such unstable design enhances maneuverability. Indeed, with the inherent instability designed into such aircraft, they are able to change directions (in three dimensions) very quickly. However, as suggested above, maneuverability detracts from both efficiency and comfort, as well as controllability, making such aircraft relatively expensive, unpleasant and difficult to fly. It is only through advances in information technology (esp. computer-controlled, fly-by-wire systems) that even the best human pilots are able to endure the conditions associated with modern combat aircraft and to keep them from crashing. The analog to using information technology (e.g., for forecasting, marketing, product design, supply chain management) for controlling the kinds of organizations facing dynamic, multicontingency contexts today is direct.

To summarize, graphical examination of multidimensional coordinate systems and vector representation of dynamic trajectories, along with the constructs *static stability* and *dynamic stability*, provide insightful concepts, analytical techniques and measures for understanding different dynamic behaviors, and the inherent tension between stability and maneuverability characterizes a rich and well-established design tradeoff space for physical systems and engineered artifacts. We seek now to adapt such dynamic concepts, techniques and measures to the dynamic, multicontingency domain of organization and management, and to use them to evaluate alternate organizational designs and performance trajectories. Combined with the

promising organization and management theory conceptualizations described above, we work to conceptualize *dynamic fit*.

CONCEPTUAL INTEGRATION

In this section, we integrate the concepts and techniques from above to conceptualize *dynamic fit*, and we illustrate how to apply such conceptualization to inform dynamic multicontingency analysis. We begin with conceptualization from the background concepts, analytical techniques and measures discussed above, and then illustrate such conceptualization through application to a stylized example reflecting punctuated equilibrium.

Drawing first from our Dynamics discussion above, we include Figure 5 to delineate the dynamic performance of some particular organization "Organization A" over time. Here, we presume that management has the drive and capability to design and change the organization to establish and maintain good static fit with its important contingencies (esp. the environment). As above, Time 0 is used to represent the organization at the start of some period of interest (e.g., disruption), and imply that it is in some kind of equilibrium state (e.g., steady performance). Here, *performance* can relate to any of myriad measures (e.g., revenue, profit, return on equity) tracked by organizational managers, and we use an arbitrary scale in the figure (Performance = 3.0). Indeed, multiple, different performance measures can be used simultaneously through multidimensional, vector representation as discussed above.

We indicate that the organization is in a condition of static fit before Time 0. The trajectory for Organization A drops below this static fit level following a punctuated equilibrium event at Time 0, and remains at this level (Performance = 2.0) through Time 4. The organization then adapts to the change, and returns to its previous level (Performance = 3.0) at Time 5, re-establishing a condition of static fit. This follows directly from our Dynamics discussion above.
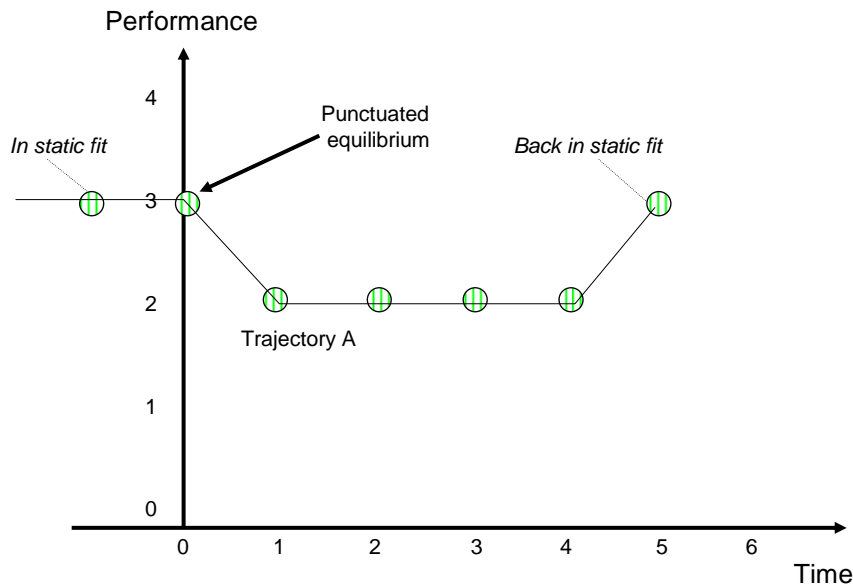
Figure 5 Dynamic Performance – Organization A

In Figure 6, we illustrate how the dynamic concepts *static stability* and *dynamic stability* can be employed as complementary constructs for *dynamic fit*. Delineating the same Organization A performance trajectory as above, we operationalize *static stability* as the magnitude of performance change corresponding to disruption from the punctuated equilibrium event; this corresponds to the deviation in performance (i.e., -1.0 performance units) scaled by the vertical axis. Notice the negative deviation in performance captured by this measure. It is possible for performance to improve following certain punctuated equilibrium events, and this measure is equipped for such possibility. Similarly, we operationalize *dynamic stability* as the time required to recover from this disruption; this corresponds to the deviation duration (i.e., 4.0 time units) scaled by the horizontal axis. Further, we operationalize *dynamic fit* as the product of

these component constructs; this corresponds to the shaded area outlined by static fit and dynamic fit (i.e., -4.0 performance-time units). As above, this compound measure is equipped for the possibility of positive or negative performance change in response to punctuated equilibrium events.
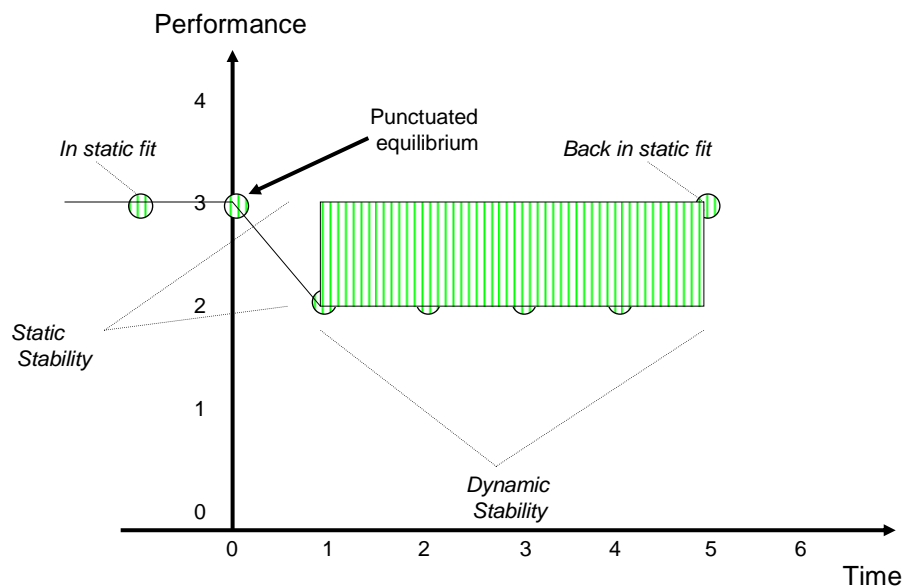

Figure 6 Static and Dynamic Stability – Organization A

The static stability measure can be related easily with extant, static-fit concepts. Instead of indicating a simple, binary contrast between an organization that is either "in fit" or "in misfit" with its contingencies, the static stability construct captures the magnitude of misfit, and hence offers greater fidelity for characterizing diverse conditions. The dynamic stability measure can be related easily with static-fit concepts also. Instead of indicating a simple, binary contrast between an organization that is either "in fit" or "in misfit" with its contingencies, at some

specific point in time, the dynamic stability construct captures the duration of misfit, and hence

offers an expressly dynamic approach to characterizing diverse conditions.
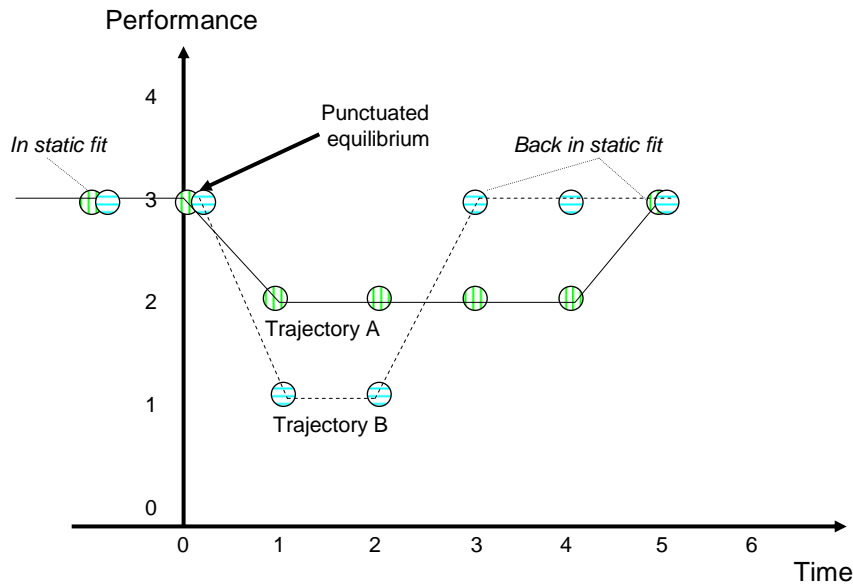

Figure 7 Comparative Dynamic Performance – Organizations A and B

Additionally, *dynamic fit,* along with its component constructs *static stability* and

dynamic stability, can be used to compare alternate organizational designs dynamically. Figure 7

delineates the performance trajectories corresponding to Organization A above and an alternate

organization "Organization B." Continuing with the discussion above, the trajectory for

Organization B drops below the static fit level (Performance = 3.0) following a punctuated

equilibrium event at Time 0, and remains at this level (Performance = 1.0) through Time 2. The

organization then adapts to the change, and returns to its previous level (Performance = 3.0) at

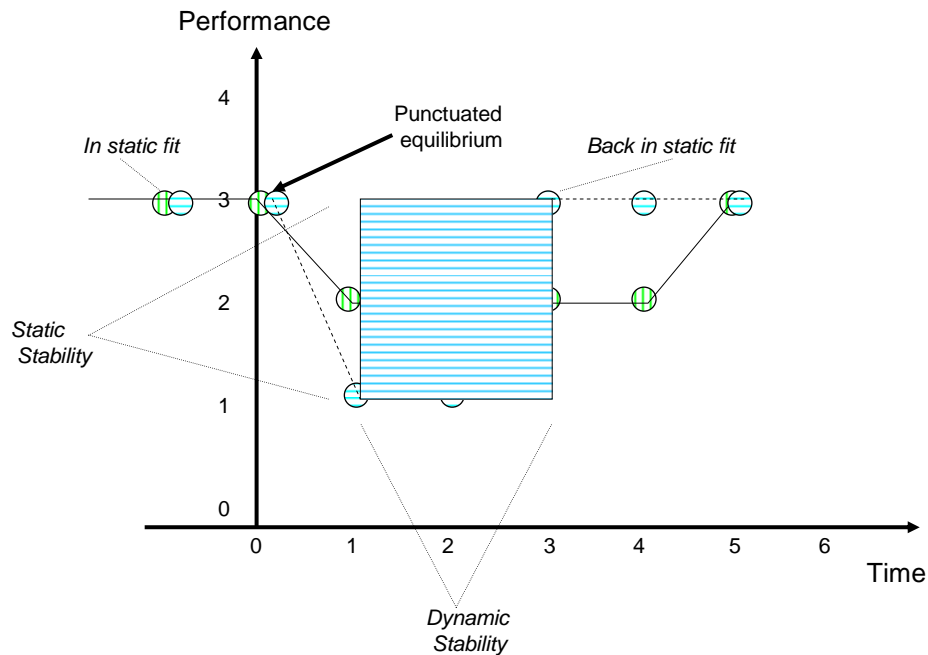Time 3, re-establishing a condition of static fit.

Figure 8 Static and Dynamic Stability – Organization B

Figure 8 illustrates and quantifies *static stability* (i.e., -2.0 performance units)*, dynamic stability* (i.e., 2.0 time units) and *dynamic fit* (i.e., -4.0 performance-time units) for Organization B. Figure 9 presents an integrated view of dynamic fit for comparison of Organizations A and B. This is simply an overlay of the views above, with a common area (red hatched) shared by both organizational designs, and separate areas for each design (green vertical stripes for Organization A, blue horizontal stripes for Organization B). In comparing the dynamic behavior of these two organizational designs, Organization B appears to experience greater disruption (Performance = 1.0 vs. 2.0) at Time 1 than Organization A does, but it recovers to its previous level (Performance = 3.0) sooner (Time 3 vs. 5). These two designs exhibit different dynamic performance in terms of reacting to disruptions, and the dynamic fit construct captures key aspects of such differential performance.
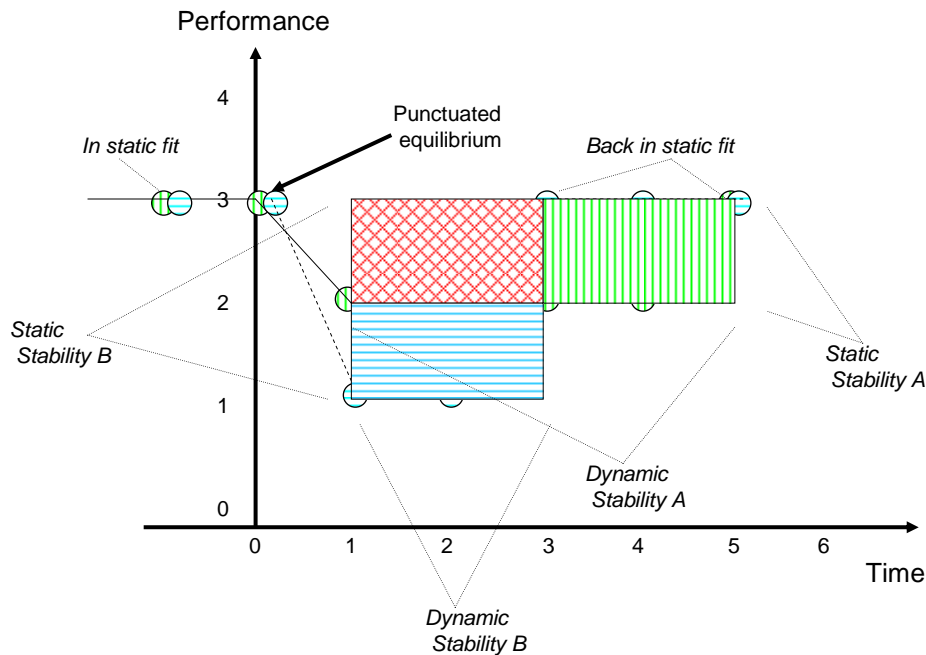
Figure 9 Static and Dynamic Stability – Organizations A and B

Where a manager has greater interest in minimizing the *magnitude* of performance change following a disruption, he or she would focus principally on organizational static stability. Organization A would represent the superior design in this case, for it suffers only a one-unit drop in performance. Alternatively, where such manager has greater interest in minimizing the *duration* of performance degradation following a disruption, he or she would focus principally on organizational dynamic stability. Organization B would represent the superior design in this case, for it suffers only a two-period (Time 1 and 2) drop in performance. Moreover, where a manager has interest in balancing these two interests, and ensuring balance between static stability and dynamic stability, the dynamic fit measurement for the alternate organizational designs (-4.0 performance-time units for both) indicates that they offer equivalent dynamic performance.

Table 2 Trajectory C and D Performance Comparison

Time	Performance C	Performance D	Difference (D-C)	Difference (Cum)
0	3.0	3.0	+0.0	+0.0
1	2.0	1.0	-1.0	-1.0
2	2.0	1.0	-1.0	-2.0
3	2.0	3.0	+1.0	-1.0
4	2.0	3.0	+1.0	+0.0
5	3.0	3.0	+0.0	+0.0

Table 2 summarizes these two trajectories and their differences in terms of both relative and cumulative position. Here, difference in Column 4 quantifies the differential performance of the alternate organizational designs at each point in time, and cumulative difference in Column 5 quantifies the differential *dynamic fit*.

DISCUSSION

Through the conceptual integration above, we offer an approach to characterizing punctuated equilibrium via dynamic concepts, and we augment static-fit conceptualization and analysis with *dynamic fit* and its component constructs *static stability* and *dynamic stability*. Using such concepts and constructs, the manager interested in ambidextrous organization (i.e., to operate simultaneously in multiple modes; see Tushman and O'Reilly 1999), for instance, can assess the degree to which a particular organizational design supports static stability versus dynamic stability relatively better. This is in addition to current capability to assess the degree of static fit or misfit corresponding to a particular design and contingency. As such, we take nothing away from static fit, yet add new conceptualization to examine dynamic fit.

Further, the manager interested in robust transformation (i.e., to develop responsiveness, flexibility and an expanded action repertoire; see Lengnick-Hall and Beck 2005), as another instance, can focus a particular organizational design more toward dynamic stability than static stability. Indeed, with *dynamic fit* as a construct, the manager seeking to pursue resilience

capacity (i.e., a capability to recognize where objectives such as responsiveness, flexibility and

an expanded action repertoire are relatively more and less appropriate than seeking higher levels

of fit over time is; see Lengnick-Hall and Beck 2005) can assess the degree to which a relative

focus via organizational design in a tradeoff space between static stability and adaptability

appears to be most appropriate, or whether a balance between the two appears to be more

prudent.

Additionally, the manager interested in organizational semistructures (i.e., capable of

balancing order and flexibility in highly dynamic environments; see in Brown and Eisenhardt

1997), as a third instance, may find it productive to focus on maneuverability, even where it calls

for sacrifice in stability. With *static stability, dynamic stability* and *dynamic fit*, we have the

concepts and constructs to compare the dynamic performance trajectories of alternate

organizational designs toward this end. As with the dynamics of advanced aircraft, however,

controlling such maneuverable organizations may become difficult—if not impossible—for

people unaided by appropriate information technologies. The nature of such control, and such

technologies, represents an open area for continued research, as does conceptualization and

operationalization of *organizational maneuverability*.

Based on the progress noted above, we develop a set of research propositions to

summarize key theoretical developments through this work, and to highlight promising

opportunities for continued research along the lines of this investigation. First, we recapitulate a

motivational argument from above regarding static and dynamic fit.

Proposition 1. As equilibria are punctuated with increasing frequency—or even more

demanding, as dynamic, multicontingency contexts move toward continuous, unpredictable

change—seeking constantly to establish, re-establish and maintain "good" static fit will

represent an inferior strategy.

Indeed, a focus on static fit may lead an organizational manager into a low-performance

dynamic trajectory over time, particularly where the time required for organizational adaptation

to change is long with respect to the frequency of such change. By the time such manager is able

to maneuver the organization into a condition of static fit with a changed environment or other

contingency, the contingency would have changed already. An alternate focus instead on static

stability (i.e., minimizing the magnitude of performance disruptions) may represent a superior

approach in such contexts, particularly where stable performance (e.g., as disclosed via firms'

quarterly earnings reports) is important to the organization. Considering static stability in this

fashion offers a fresh perspective of managerial strategies, such as buffering (Galbraith 1973,

1977), for mitigating environmental disruptions. Indeed, viewed through a lens of static

stability, Galbraith's notion of buffering an organization from environmental volatility

instantiates one of but many means through which senior managers seek static stability for their

organizations.

Likewise, a different focus instead on dynamic stability (i.e., minimizing the duration of

performance disruptions) may represent a superior approach in such contexts also, particularly

where time-based competition (e.g., where small head starts to product development and

introduction can offer exponential competitive advantages) is important to the organization.

Moreover, a balanced focus instead on dynamic fit (i.e., balancing the magnitude and duration of

performance disruptions) may represent a superior approach in such contexts as well, particularly

where the rules of competition (e.g., new product domains, markets and industries) are unknown

or can change abruptly. Research to measure such dynamic fit constructs in operational

organizations over time, and to relate the corresponding measurements to organizational strategy, structure and performance would appear in this light to be particularly elucidating and timely.

Second, we draw from the tension discussed above between stability and maneuverability.

Proposition 2. A tension in organizational design exists between stability and maneuverability: the more statically stable an organization is, the better that it maintains its trajectory following disruption; the more dynamically stable an organization is, the more quickly that it returns to its trajectory following disruption; and the more maneuverable an organization is, the more quickly that it is able to change direction, but the more difficult it is to control.

In our contingency theoretic context, we introduce the inherently dynamic concepts *stability* and *maneuverability* into the organization and management domain, and we provide the means to operationalize and evaluate such concepts via our constructs from Aerodynamics. Developing and managing an organization to become relatively more or less controllable would have more or less clear, dynamic, performance implications in some multicontingency contexts than in others, as would developing and managing such organization to become relatively more or less able to change direction quickly. Moreover, these competing management emphases would be relatively more or less appropriate in some multicontingency contexts than in others. Using the conceptual and analytical tools developed in this investigation offers potential to understand the relative appropriateness of different emphases and contexts better, and this elucidates a path toward using them in future research with both theoretical and empirical foci. For instance, building upon our conceptualization and operationalization of *organizational stability* (i.e., via *static stability, dynamic stability, dynamic fit*) in this article, research to

conceptualize and operationalize *organizational maneuverability* would appear in this light to be particularly elucidating and timely.

As these concepts are honed, we may also find that they offer explanatory power that deepens our appreciations of managerial decision making. Organizational redundancy, for example, would appear to contribute to static stability; through redundant work processes or information flows, an organization ensures that the magnitude of performance change resulting from disruptions is minimized. In this case, inefficiency is tolerated precisely because it contributes to the aim of static stability, i.e., minimal performance change by an organization due to a disruption. The inefficiency is contextually rational within a strategic perspective that emphasizes static stability. Similarly, we might expect managers who favor dynamic stability to hedge against performance disruptions through generating options on future labor. Fashioning these options can assume many forms, such as establishing flexible overtime policies, or perhaps maintaining a network of temporary subcontractors to augment the organization during periods of production surges. These instantiations reiterate our view that assessing organizational stability – both static and dynamic – depends heavily upon preconceived trajectories of organizational performance. Emphasis on organizational maneuverability, in contrast, is underscored by an alternate vision of dynamic contingent environments, one that necessitates *fluidity* in organizational trajectories.

Finally, characterizing the dynamic nature of multicontingency contexts can inform continued extension of Contingency Theory along the lines of this investigation.

Proposition 3. The multicontingency contexts of organizations are inherently dynamic, and the magnitudes and frequencies of changes to contingencies—individually and in combination—are

important to understand before developing organizational strategies and managerial responses

to such contexts.

Dynamic, nonlinear, even chaotic environments are used with increasing frequency to characterize the contexts of modern organizations. We understand from more advanced analytical techniques in Dynamics how a given set of control responses to different dynamic conditions can result in qualitative divergent behaviors, and how even relatively small control adjustments can produce comparatively very large dynamic effects. The more nonlinear an environment becomes, the more that we can expect similar results as managers work to design, control and change organizations. Moreover, the more that managers tend to focus on maneuverability as opposed to stability, and the more that forecasting future environmental conditions becomes increasingly difficult, the more dramatic that organizational trajectories are likely to react both to environmental disruptions and management controls. Research to develop methods to forecast such dynamic environments—and to predict the dynamic performance of alternate organizational designs in different environments—would appear in this light to be particularly elucidating and timely.

Further, as environments become increasingly nonlinear and even chaotic, our concept of order and predictability may require adjustment. Quite unlike the kinds of relatively stable performance trajectories delineated above, where conditions of static and dynamic fit can be examined and compared in a straightforward manner, performance in nonlinear and chaotic environments may be more difficult to assess. Indeed, one may find that performing "poorly" at some point in time places an organization in better position to perform "well" at another, and that what appears to be chaos in terms of a multicontingency context may become orderly when viewed through an alternate lens. Research to recognize and understand different dynamic

attractors (e.g., fixed point, limit cycle, strange; see Priesmeyer, 1992) and the responses of organizations as complex adaptive systems would appear in this light to be particularly elucidating and timely.

This represents a fledgling research pursuit today, as does understanding the relative merits of competing organizational strategies and management controls across diverse multicontingency contexts. Nonetheless, this may define the dominant focus of Contingency Theory in the future. Conceptualizing *dynamic organizational fit* provides a metaphorical stepping stone to continue progress in this direction.

CONCLUSION

Contingency Theory retains a central place in organization and management research, informing scholar and practitioner alike that no single approach to organizing is best in all circumstances. In most of this research, however, the concept *organizational fit* is treated in a relatively static and unidimensional manner, a manner that is incommensurate with the dynamic and often unpredictable, disruptive, multicontingency nature of organizational contexts today. Organizations must address sets of multiple contingency factors simultaneously, factors that change through time, circumstance and management action.

Indeed, as equilibria are punctuated with increasing frequency—or even more demanding, as dynamic, multicontingency contexts move toward continuous, unpredictable change—one or more contingency factors can be expected to change constantly. Seeking constantly to establish, re-establish and maintain "good" static fit may prove to represent an inferior strategy. Yet this represents a centerpiece of Contingency Theory as we know it. The problem is not with *fit* as a concept: it remains very powerful. The problem is with *static fit*: it is becoming anachronistic, and both conceptual and methodological tools for assessing and

predicting dynamic fit with changing organizations and multicontingency contexts remain largely absent.

In this article, we work to extend Contingency Theory through conceptualization of *dynamic organizational fit*, articulating an inherently dynamic relationship between multicontingency fit and organizational performance that extends well-understood static concepts to address the dynamic reality of organization and management today. We begin with promising contingency conceptualizations in Organization and Management Theory, finding punctuated equilibrium, anticipation of future change, organizational lag time, ambidextrous organization and robust transformation to be particularly informative.

We then draw from Dynamics to inform both conceptualization and operationalization of *dynamic fit* in terms of longitudinal, multidimensional trajectories via vector representation. We illustrate the ensuing conceptual integration in a punctuated equilibrium context, and elucidate important interrelationships between static and dynamic organizational fit. Drawing in turn from Aerodynamics, we operationalize *static stability, dynamic stability* and *dynamic fit* for use to characterize, visualize and measure dynamic fit. We draw further to characterize a tension between stability and maneuverability, a tension that informs the rich tradeoff space faced by organizational designers.

This work moves us considerably beyond *fit* as a static concept and unidimensional construct to address longitudinal, multicontingency, organizational performance, fit and change. A set of evocative research propositions emerges from this discussion. In particular, we propose that seeking static fit represents an inferior strategy under dynamic, multicontingency conditions; that organizational design must trade off stability and control; and that understanding the dynamics of multicontingency conditions is important to organizational design, control and

change. Also, a number of emergent, open issues come to light through this discussion. In particular, we emphasize how research to measure dynamic fit in operational organizations, to conceptualize and operationalize *organizational maneuverability*, to develop methods to forecast dynamic, nonlinear, even chaotic environments, and to predict the dynamic performance of alternate organizational designs in different environments would appear to be particularly elucidating and timely. We offer these research topics to help populate an agenda and guide continued research along the lines of this investigation.

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[i] As a note, although we recognize differences in meaning between terms such as *organizational structure, form, configuration* and others (e.g., see Doty et al., 1993; Meyer et al., 1993; Morrison and Roth, 1993; Snow et al.,

2005; Payne, 2006), unless the specific meaning is important to our argument, in this article we use them interchangeably for the most part.