

**THE TIMES OF CAUSE AND FLOW  
IN ORGANIZATIONAL CHANGE**

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**ABSTRACT**

New ways of managing change have run aground on the uncritical acceptance of a limited view of temporality, identified here as *causal time*. Because it emphasizes identity and state-transitions, causal time is inherently static and past-centered. An alternative view, called *flow time*, emphasizes the dynamic of the always arriving future. The claim is made that a future-centered temporality gives access to the knowledge change agents need to cope with accelerating and ongoing change.

In their introduction to the special research forum on organizational change and development published in the *Academy of Management Journal*, Pettigrew, Woodman, and Cameron (2001) identified time as one of six key issues about which “the organizational change literature remains underdeveloped (p. 697),” and hence that organizational change scholars should devote more attention to it. We believe a major reason that little attention has been given to time in the change literature is that students of change have regarded time as a constant rather than a variable, a belief Bluedorn (2000a) ascribes to people in general. Further, as Bluedorn notes, the belief that time is a constant is deeply institutionalized, which suggests that most people, most of the time, do not even consider the possibility that time may vary. This suggests one should speak of “times” rather than time, which means time is a collective noun (Bluedorn, 2000a, p. 118). Beliefs this firmly institutionalized make them examples of basic underlying assumptions (Schein, 1992), so they generally go unquestioned. This has certainly been true in the organizational change literature where assumptions and beliefs about time have seldom been discussed explicitly (Huy, 2001, being a notable exception).

Our purpose in this chapter is to identify the set of key assumptions about time that seem to predominate in the field of organizational change and development, a set of assumptions and beliefs that we will label *causal time*. These assumptions are important because like any definition of the situation they influence the way people behave, in this case how they plan change and try to implement it. We then propose an alternative set of assumptions that we label *flow time* and describe how a flow-time concept of time can deal with problems and issues inherent in a causal time approach to organizational change. We do not suggest that the causal-time, flow-time distinction represents the only assumptions about time that are possible, or that this distinction is the only way that times may differ (see Bluedorn, 2002, chap. 2, for an

extensive discussion of ways that times may differ). However, starting with the causal-time assumptions, we have identified and developed descriptions of these temporal forms because they focus so directly on the phenomenon of organizational change. Thus causal time and flow time are likely to directly address change-related issues and by doing so more directly inform thinking about change as well as the practice of change management.

But before proceeding to a discussion of causal and flow times, we should note some key beliefs about the current environment and context of change itself. These need to be noted because they provide the rationale for developing an alternative to what we call causal time. This context is revealed in aphorisms extolling the constancy of organizational change in a turbulent environment and their abundance in the management literature and popular business press. We are told that “change is here to stay,” that managers must learn to manage in “permanent whitewater” (Vaill, 1996) and “thrive in chaos” (Peters, 1987). Alvin Toffler’s (1970) popular book, *Future Shock*, produced in the public consciousness a sense that the world was entering a state of continuous flux, evidenced by the unrelenting dynamic of change, and the incessant emergence of novelty in every segment of society and culture. In the past decade, the management of change has become a mainstream topic in most business schools and corporate universities. And the performance bar is being raised, for change itself is accelerating, and the successful manager or change agent must cope with change faster and more effectively. Whether this means faster product development cycle time (Stalk & Hout, 1990), speed to market (Meyer, 1993), fast-cycle organization development (Anderson, 1999), accelerating the organization (Tenkasi, Mohrman & Mohrman, 1998), or “real-time” competition (McKenna, 1997), the message comes through loud and clear: speed, faster response times, and “real-time” decision-making are the yellow brick road to survival and financial success.

Underlying this focus on change and the technologies of acceleration is a consensus view of time (Burrell, 1992, p. 165), grounded in a sense of temporal alienation. In this consensus view, the passage of time—its turbulence and dynamics—are viewed as negatives. Time itself is seen as a noxious and unruly force, and the aim of management is to bring it under control. Such attitudes have ancient historical roots as revealed in time's personification as Father Time, a winged old man holding a sickle or scythe, tools symbolizing "the inevitable harvest of human life after a finite period of time" (Macey, 1994, p. 209). And the general view was that time harvested all things, not just human life, hence Ovid: *tempus edax rerum* (time devours all things, Lippincott, 1999, p. 171). However, in the current hour planned change, strategic planning, and other forms of rational control become the antidote to time's debilitating effects, the means of ensuring the ongoing survival of the organization in a hostile temporal environment. Given how much of an organization's resources are directed toward this end, how exhausting it often seems to try to keep up with change, and how indifferent the success of such efforts often proves to be, it is indeed surprising that this view of time as the metatheoretical frame for change interventions has not received more attention.

In this chapter we examine the understandings of time that inform current change theories (causal time) and propose a radical alternative (flow time), based on cultivating the direct experience of time. Our focus is the relationship between time and knowledge. In the prevailing model, knowledge is a process that happens over time, and takes time to accumulate. When the rate of change itself is steadily accelerating, this means that it becomes highly problematic whether the knowledge needed to manage change can be accessed in a timely manner. This inherent tension between coping with change and acquiring knowledge arises because the passage of time is the enemy of knowledge acquisition (i.e., a harvester). In the model we will

introduce, on the other hand, this tension dissolves, because time itself is the carrier of knowledge. And the more managers and theorists can access a direct and dynamic experience of time, the more they will have access to the knowledge it carries, a knowledge that is inherently as fluid and dynamic as time itself.

Our analysis is divided into three sections. We begin by identifying a “causal time” framework as underlying current change theory. The causal-time framework leads to change-management approaches that analyze current situations in terms of the past conditions that gave rise to them. It results in knowledge that is bound to the inertia of past routines and the gravity of organizational identity, and thus proves counterproductive when the truths that held in the past mutate with ever increasing rapidity. Attempts to manage such temporal turbulence through the speed-up of knowledge acquisition (so-called “real-time” responses) do not address this fundamental flaw, since they continue to depend on knowledge accumulated through the analysis of past circumstances and their impact. To clarify how these limitations operate, we introduce an alternative model based on an alternative way of framing time, that of *flow time*.

In the second section, we review extant theories of organizational change and organization development in light of the distinction between causal time and flow time. We argue that some of the more promising recent theoretical innovations can be viewed as attempts to tap into the knowledge that flow time makes available. However, we conclude that recent work remains too closely bound to the causal-time framework to allow for real innovation in the acquisition of knowledge.

In the last section, we develop the implications of a flow-time temporal framework for knowledge acquisition and change management. Unlike causal time, which is centered on the past, flow time is centered on the future. We distinguish this future-centered approach from the

recent interest in change guided by “future perfect” visions of what is possible (Das, 1986; Davis, 1996; Weick, 1979), which we regard as still bound to the past and to the causal-time framework. Whereas causal time regards the future as an empty and indeterminate dimension, closed off to knowledge, flow time redefines the future as immediately available, in its present arriving. Understood in this way, the future gives access to the dynamic of time, and knowledge attuned to this dynamic can serve as a more reliable guide to managing continuing change. The practical implication is that organizations and organizational actors can engage the turbulence of time in a sure-footed, graceful way. They can respond appropriately to change because they are wholly embedded in change. We conclude with some thoughts on how this approach can be implemented, and on the possibilities for organizational transformation it offers.

## **CAUSAL TIME**

### **Identity in Linear Time**

Models of change in current organizational theory rest on a theoretical understanding of time whose guiding concept is permanent identity. Applying this concept means seeing objects, entities, and things as having a fixed identity that is fundamentally unchanging; that is, which stands outside the flow of time. “Time” and “things” are placed in opposition; for if time is a river, then things and entities of all kinds are the solid rocks that remain unmoved as the current flows by. Yet opposition to this concept of identity and permanence extends back at least as long ago as the ancient Greek philosophers, an opposition presented most profoundly by Heraclitus in his famous statement: “You cannot step twice into the same river; for fresh waters are ever flowing in upon you” (Benjamin, 1981, p. 8). Heraclitus focused on the water in the river and how it changed constantly, but we also note that the rocks in the river are constantly changing too—just more slowly as the current and the wind slowly erode them. Everything in

the river is constantly changing, so the question is not about which parts of the river change and which do not. Instead, the proper questions are, do the parts of the river change at different rates? And if so, what are the different rates? Which parts change more rapidly than others?

So the identity concept appears to be problematic in general, and for complex entities such as organizations, the issue of identity is more complex than for such “things” as tables, rivers, and rocks. Maintaining an identity “over” time depends on the operation of a narrative that gives coherence to a temporal sequence of events, a “founding story” (Tulku, 1987) or deep structure, collectively constructed and constantly reaffirmed. Nonetheless, the net result in terms of the causal time framework is the same. On the basis of its founding story, the organization exists “in” time, and although its identity evolves and changes “through” time (Gioia, Schultz, & Corley, 2000), at the deepest level it remains constant “across” time. The effect is to turn time into a hostile, alien force, a relentless enemy armed with a foreboding scythe. The more we focus on identity, the more we find ourselves standing outside the time-stream. When temporal change comes, it can only be a threat to our ways of coping, to our success, and even to our survival.

The focus on identity leads to a linear conception of temporality. For the narratives that sustain identity to take hold, time must operate in a sequential way. This temporal unfolding finds its clearest expression in the causal sequence through which one event gives rise to another. Hence, we will refer to this conception of temporality as the ‘time-as-causal-sequence’ model, or simply as “causal time.” Causal time is seen as one-dimensional, structured in terms of past, present, and future. An unending sequence of present moments arise and pass away in a linear series, each somehow causally giving rise to the next. This “time-line” of causal time readily becomes a measurement scale, an abstract grid that allows events and objects to be indexed and

located in terms of “points” in time, conceived in terms of equal units or intervals such as minutes, hours or days.

Causal time has Newtonian roots (Adam, 1990). Newtonian time functions simply as a measure of motion: the numerical interval between two static states. In the causal time model, the mover is distinguished from the act of moving; the movement itself essentially disappears. It follows that the effect is inherent in the cause: the end state  $t_2$  is inherent in the initial state  $t_1$ . In this “from-to” causal structure (Tulku, 1994), the past is necessarily privileged, for whatever arises in the future has its origin in the past. Explanations are constructed by tracing the causal temporal chain backwards; predictions are made by extrapolating and projecting the chain forward.

### **The Apotheosis of Causal Time in “Real-Time” Change**

One attempted answer to the limits on causal time is to negate time entirely, a strategy that has ironically come to be known as operating in “real time.” The real-time approach is based on what Arendt (1963) called the “means-end paradigm,” according to which the aim of any action or strategy is to do whatever it takes to bring about a desired result. In this model, time is conceptualized as an obstacle to the attainment of future desires and goals. The ideal would be to eliminate time entirely, to shrink to zero the gap or temporal distance between the present state and a desired future state. This is what is called “operating in real time.” In effect, real-time is “chronoscopic time” (Virilio, 1997), a sequence of punctuated temporal intensities fixated on the present-instant.

With the advent of digital technology, the hope has emerged that time-negating real-time operations can become a reality, for digital technology shrinks the distance between “here and there,” “now and then.” By shortening clock-time units, it compresses space and time (Giddens,



1984; 1991); often to the point of virtual instantaneity. Regis McKenna (1997, p. 3) celebrates the potential of this transformation in the opening sentences of his book, *Real Time*: “Imagine a world in which time seems to vanish and space seems completely malleable. Where the gap between need or desire and fulfillment collapses to zero. Where distance equals a microsecond in lapsed connection time.”

Real-time is nonetheless causal time, which means that it centers on the past. Its concern, however, is with the future, which it aims to control through the technology of instantaneity. In effect, the future is replaced by a despatialized, dehistoricized, and detemporalized present (Jameson 1997; Adam, 1988). Nowotny notes this trend:

We are about to abolish the category of the future and replace it with that of the extended present...The category of the future is shrinking towards becoming a *mere extension of the present* because science and technology have successfully reduced the distance that is needed to accommodate their own products. (1988, pp. 14-15, emphasis in original)

And historical practices provide a benchmark for measuring the extent to which the future, hence concerns about it, has shrunk to “a mere extension of the present.” One such practice was described by Benford: “The oak beams in the College Hall of New College, Oxford, needed replacing in the nineteenth century, so the college cut down some oaks planted in 1386 for that express purpose (1999, p. 26).” For that express purpose trees were planted, trees that would not be used for centuries. The planting of those trees represents a concern with a genuine future, a future that was not merely an “extension of the present.” The depth of the future such behavior reflects can be contrasted with data about one American corporation

indicating people in that company saw the *long-term* future beginning *30 days ahead* (Bluedorn & Ferris, in press). As this historical contrast reveals so starkly, times have indeed changed.

Real-time promises autonomy and independence from the flux of time, but its method for doing so is to only ensure further ensnarement in the momentum of linear time. As Adam (1998) puts it, real-time does not depart from the mechanistic principle of repetition without change—a standardized order that is intolerant of all variation. The accelerating forward trajectory of real-time has its source, ironically, in the past, and its acceleration is only the continued acceleration of past routines. The result is a characteristic disconnect between real-time and knowledge. Organizational actors who are always responding to a series of real-time instants are forced to “think and act immediately” (McKenna, 1997), and demands for instant responses frequently means relying on learned routines, established algorithms, and unconscious cognitive biases (Purser, Pasmore, & Tenkasi, 1992). The real-time digital “time freeze” thus makes the future more unknowable than ever—for at least two reasons.

The first reason is that rather than developing the ability to engage the changing realities of their situation, organizations find themselves trying to map learned routines and algorithms onto what time presents. The instant response always comes a moment too late, and fast is never fast enough. Even when a real-time response does seem to meet the immediate need, a destructive cycle is set in motion. The real-time actor is bound to an endless series of causal reenactments, a continuous instant-replay, with each cycle demanding greater speed and efficiency. The “speed-slippage-more speed” cycle is a vicious causal loop, intensifying the inadequacy of past-centered responses.

The second reason the future is less knowable is that as the technological capacity develops to shrink more and more the gap between the current and the desired state, less and less

of the past will be used to address the constantly arriving future. This is because the most recent past experiences will be used to guide responses to the new conditions and as the gap between current and desired states shrink, so too will the sizes of past episodes. And this results in using less and less of the past to deal with changing conditions. Several studies (see Bluedorn, 2002, pp. 117-118, 270-271; Bluedorn & Ferris, in press) show that the further organizations and individuals look into the past, the further they look into the future. So if the past that is seen as relevant shrinks due to increasingly efficient real time technologies, less of it will be used to interpret and manage the changing conditions arriving from the future. This means that if patterns exist in the past that could help deal with changing conditions, perhaps because the changing conditions are repeating an approximation of the patterns that occurred in the past, it is less likely that the past patterns will be noticed because the amount of the past being used to cope with change is too short to allow the pattern to be detected, the ability to detect patterns and cycles being one of the potential virtues of a long-term view (Benford in Bluedorn, 2002, p. 138). This also means that real time leads to an alienation from the past because more and more of it will be defined as irrelevant, hence lacking strategic meaning.

If this discussion sounds as if we believe the past still has a major role to play in planning and managing organizational change, that is our intent. For our quarrel is not with the use of the past in such endeavors per se; rather, it is with approaches to using the past that make planning and change management constricted, bound, and trapped by it. Indeed, Santayana anticipated this issue when he noted, “The error involved in attributing value to the past is naturally aggravated when values are to be assigned to the future” (1953, p. 68). The problem as we see it is not that value is attributed to the past, but *too* much value. We believe that too many approaches to planned change remember and value the past in the wrong way, that what should

be remembered is that similar situations are not the same thing as identical situations and that no two situations are ever completely identical. The key is how similar the situations are, hence how similar the responses should be—if they should be similar at all. Neustadt and May made this point very well in their advice about how to use history in decision making: “Comparing all those seemingly analogous situations with the present one, what are *Likenesses* and *Differences*? Compare ‘now’ with ‘then’ *before* turning to what should be done now (emphases in the original, 1986, p. 41).” So we do not advocate forgetting or ignoring the past. Instead, we urge a more circumspect use of the past and take the position, and building upon Santayana’s famous aphorism about repeating the past, believe that those who do not learn how to transcend the past are doomed to mindlessly try to repeat it.

### **CAUSAL TIME IN ORGANIZATIONAL CHANGE THEORY**

We have already pointed out that a causal-time perspective is implicit in real-time theories of change-management. How effective are causal-time approaches to change management? Two studies (Porras & Silvers, 1991; Robertson, Roberts & Porras, 1993) have attempted to address this question. The Robertson et.al. (1993) study is the more recent and comprehensive, applying meta-analytic procedures to integrate fifty-two previous empirical evaluations of planned change interventions reported between 1969 and 1989. Both studies, however, arrive at similar results. They find either mixed or inconclusive results for planned change interventions with respect to their intended change targets. Based on the analysis in the first part of this paper, we conclude that the failure to achieve better results traces to a reliance on the fundamental assumptions that a causal-time framework puts into play. As long as the planned-change process is based on the assumption of fixed identities and discrete entities that

move through time, there can be no alternative to recreating routines from the past and reproducing interventions that fall within a limited range.

### **Causal Time Distortions of the Change Process**

The model of sequential change from one static state to the next ignores what Bergson (1911) refers to as “true duration” (*durée*), a concept that captures many aspects of what we have called “flow time.” The causal-time focus on identity and form “solidifies into discontinuous images the fluid continuity of the real” (Bergson, 1911, p. 303); it turns organizational attention toward the “unmovable plan of the movement rather than the movement itself.” When change processes become invested in “the plan” as a means to generate movement from the present state to the desired future state, that movement is mistakenly analyzed in terms of a sequence of frozen moments. Weisbord (1988) calls this approach “snapshooting,” and presents it in a positive light. He describes it as follows:

We freeze the action at a moment in time, arrange key factors in a conceptual framework, and observe—with our clients—the relationship highlighted in the conceptual frame. Diagnosis has two purposes: to produce valid guidelines to action and to stir up more people than the person we first contacted to want to do something. This stirring up can be thought of as a movie-making problem. (1988, p. 65)

The need to “stir up” change, to go from the frozen moments and still frames of the snapshot to responsive and dynamic action—what Weisbord calls the “movie-making problem”—goes to the heart of the issue. Bergson argued that it was impossible to constitute movement, change or momentum out of the immobile: “every attempt to reconstitute change out

of states implies the absurd proposition that movement is made of immobilities.” He argued that instead we must enter the flow of time directly:

It is no use trying to approach duration: we must install ourselves within it straight away. This is what the intellect generally refuses to do, accustomed as it is to think the moving by the means of the unmovable. (1911, p. 299)

In contrast to causal-time, Bergson’s time of “duration” “is a dynamic and continuous flow of new experiences: this flow of new experiences does not occur *in* time, rather it *is* time” (Li Destri & Daggino, 2003). Bergsonian time cannot be frozen or abstracted into “snapshots,” or “still photos,” because time is seen as a dynamic continuity. Further, every instant of time is inseparable from memory of the past, and anticipation of the future. Duration and the subjective sense of dynamic continuity does not lend itself to methods that are predicated on causal-time, which attempts to divide instants of time, assuming that static snapshots of the flow can give rise to dynamic and creative change. As Li Destri and Daggino (2003) point out:

The crucial difference between the adoption of a Bergsonian and a Newtonian conception of time is thus to be identified in the *nature of the interconnection between one period and the others* that surround it. In the Bergsonian perspective, the elapse of time implies a *necessary* change in the *way* actors *interpret* the data set they face: they must, in other terms, *change perspective*. In this sense, each instant of time is heterogeneous from the others that precede or follow it. As time flows by, actors modify the interpretative functions with which they elaborate the events they

live or have knowledge of and, thus, they value situations and act in a different manner than they would have done the period before.

(p.6)

Bergson also used the analogy of cinema to make his point, but with very different implications than Weisbord. Consider when action is filmed with a motion picture camera, the mechanism of the camera is in effect abstracting moments—capturing motion in a series of single frames—which essentially amounts to dissecting what is in reality a continuous flow. Such static pictures are equivalent to the analytic “freezing” – or “snapshots,” that underlie all causal-time plans for implementing organizational change. Both divide and dissect, fictitiously freezing or arresting what is essentially an undivided flowing movement. The causal-time view of organizational change reflects this perspective in its core assumptions. Emphasizing form over movement, it emphasizes the state to be achieved and the causal sequence of intermediate states that will make change possible. Yet Bergson long ago pointed out the fallacy in this approach:

[I]n reality the body is changing form at every moment; or rather, there is no form, since form is immobile and the reality is movement. What is real is the continual *change* of form: *form is only a snapshot view of a transition.* (1911, p. 301, italics in original)

In today’s organizational environment of increasingly rapid continuous change, the consequences of working within the causal-time frame become increasingly problematic and fraught with error.

### **Recent Attempts to Think Through the Impact of Continuous Change**

In a recent review, Weick and Quinn (1999) focus on emerging theoretical insights that suggest a continuous, evolving, and incremental view of change more in keeping with flow time. They use the notion of “continuous change” to group together organizational changes that tend to be ongoing, evolving and cumulative. There is a shift away from planning to the insight that change is emergent, “the realization of a new pattern of organizing in the absence of explicit a priori intentions” (Orlikowski, 1996, p. 65). It is a process of “accommodations to and experiments with the everyday contingencies, breakdowns, exceptions, opportunities, and the unintended consequences” of action, as well as the assumption that everything changes all the time (Ford & Ford, 1994). As laid out by Orlikowski:

There is no deliberate orchestration of change here, no technological inevitability, no dramatic discontinuity, just recurrent and reciprocal variations in practice over time. Each shift in practice creates the conditions for further breakdowns, unanticipated outcomes, and innovations, which in turn are met with more variations. Such variations are ongoing; there is no beginning or end point in this change process. (1996, p. 66)

In this way of understanding change, planning is no longer the central focus. Instead, “change is a phenomenon of time. It is the way people talk about the event in which something appears to become, or turn into, something else, where the ‘something else’ is seen as a result or outcome” (Ford & Ford, 1994, p. 759). On-going variations emerge frequently, sometimes even imperceptibly, in the slippages and improvisation of everyday activity. They involve simultaneous composition and execution, or repeated acts of learning that enlarge, strengthen or



shrink the repertoire of responses (Weick, 1991). The metaphor of improvisation has gained popularity in organizational theory as a means for managing in a context of continuous change.

Indeed, in the face of continuous change, Lewin's three-part equilibrium/transition model for change—unfreeze, move, re-freeze—is no longer pertinent. Weick and Quinn (1999) offer what initially seems on the surface to be a more plausible change sequence: “freeze, rebalance and unfreeze.” To freeze continuous change is to make a sequence visible and to show patterns in what is happening, through cognitive maps, schemas, or “war stories.” To rebalance is to reinterpret, re-label, and re-sequence the patterns so that they unfold with fewer blockages; for instance, by reframing issues as opportunities and reinterpreting history. Finally, to unfreeze after rebalancing is to resume improvisation and learning, processes that are inherently more mindful of sequences, more resilient to anomalies, and more flexible in their execution. Viewing change as non-discrete and continuous requires a focus on “changing” rather than “change” (Weick & Quinn, 1999, p. 382). Describing this shift in orientation, they state:

A concern with "changing" means greater appreciation that change is never off, that its chains of causality are longer and less determinate than anticipated, and that whether one's viewpoint is global or local makes a difference in the rate of change that will be observed, the inertias that will be discovered, and the size of accomplishments that will have been celebrated (Weick and Quinn, 1999, p. 382).

Weick and Quinn's (1999) working assumption seems to be that as long as things remain in balance, new knowledge is not required, and the organization can flow within the stream of time. But when perturbations occur, when difficulties arise, one must first freeze the flow

cognitively, mapping it in order to make sense of it. Only then is it possible to rebalance what has gone out of alignment, after which the flow can resume. Freezing (the first stage of their model) is enacted by assuming a position outside of the movement, allowing change agents to work off-line for (a period of time) in order to make sense of the changing situation. The problem with this formulation is that time keeps moving on, that is, continuous change is unceasing. Temporarily stepping outside of the flow (freezing) to engage in sense-making--which amounts to accounting for and reflecting on what is by now the past--fails to engage the dynamic of the time-of-flow directly. One can freeze time conceptually, just as one can take a photograph of a constantly changing scene. Unfortunately, time itself does not stop. The future continues to arrive, and soon the cognitive map generated from a frozen image becomes outdated. Their change model is contingent on stepping outside of duration in order to freeze time's flow as a means for recomposing ("rebalancing" in their terms) change based on a snapshot of the organization in time.

Their formulation on changing simply proclaims that the flow is continuous and less predictable, with exhortations for more appreciation that this is the case. For Weick and Quinn, time is reduced to simply a framework for experience, in which "changing" is enacted. Upon deeper inspection, it appears that Weick and Quinn's alternative to the Lewinian change sequence still adheres to causal-time assumptions.

Another, more radical way of "installing ourselves in duration," is to accept (on more than just an intellectual level) that everything is impermanent, *everything is change*, which goes against the Western tradition that has privileged the idea that organizational identity is separate from, or independent of, the flow of time. There are not so much "things that undergo constant

change,” but rather, “things are constant change” (Low, 2002). For Bergson (1911), impermanence was a fundamental assumption:

Reality is flowing. This does not mean everything moves, changes and becomes; science and common experience tell us that. It means that movement, becoming, change is everything there is, there is nothing else. There are no things that move and change and become; everything is movement, is change (p.28).

If organizational identity is not actually separate from the flow of time, then there is no solid ground for staking a permanent position that could support claims of identity. Instead, there is only duration, and the ongoing social constructive acts that constitute an attempt to secure a relative position of stability. What has been thought of as identify might be better seen as a *dynamic continuity*, as a continuously developing set of connections with the past and the future, temporal domains that are themselves constantly changing. Traditional concepts of managing and leading change based on causal-time assumptions need to yield to methods aimed at deepening participation or immersion in the immediacy of the temporal flow.

### **FLOW-TIME MANAGEMENT OF CONTINUOUS CHANGE**

Time scholars have proposed an intriguing dichotomy that describes different ways humanity sees the future and people’s relationship with it (Fraise, 1963, p. 173; Kern, 1983, p. 90; Minkowski, 1970, pp. 83 and 87). Minkowski labeled these two modes activity and expectation (1970, pp. 83 and 87). Activity is a proactive stance in which people and groups see themselves moving into the future and creating it, at least in part, as they do so. Conversely, the expectation perspective is a frame in which the future is seen as arriving; that is, people see the future as coming toward them. Bluedorn summed up this difference in the following question:

“So do we seize the day or does the day seize us?” (2002, p. 238). Causal time and the approaches to organizational change it fosters, exemplify the activity mode, hence the belief that if the planning and the technology are good enough, the organization can create its future, and in the stronger view, dominate and determine its future. But the alternative mode, expectation, does not imply a requisite passivity (Minkowski, 1970, p. 87), far from it, for it too requires decisions about actions to take and actions to forgo. Of course, neither mode is usually held to the complete exclusion of the other—in organizational change management or any other human activity (see Bluedorn, 2002, p. 238)—but an overall emphasis usually seems to be given to one mode over the other. And the causal time complex seems to emphasize the activity mode; indeed, it has institutionalized it in both theory and practice. But what would a concept of time for organizational change management look like that emphasized expectation rather than activity?

The need for such a concept of time in theories of organizational change is necessary because if change is continuous and accelerating rapidly—and it is difficult to argue it is not—the issue of acquiring the knowledge necessary to manage change becomes newly problematic. So in this section we will proceed to develop a change-relevant concept of time that emphasizes expectation rather than activity. We begin by investigating how the causal-time framework, which relies on planning for the acquisition of knowledge, fundamentally restricts the possibilities for the kinds of knowledge that could become available to change agents. We then explore the “future-perfect” approach, much discussed in the literature, which might appear to offer an alternative to causal time, but proves not to do so. Finally, we suggest how moving to a flow-time framework makes the future available directly, so that the knowledge needed for managing (to) change is already at hand.

### **Managing Change through Planning: Virtual Knowledge Drawn from the Past**

In a causal-time framework, planning will be the vehicle of choice for change management. Bennis, Benne, Chin and Corey describe how planning addresses the future and the changes it brings:

A planner's present situation always includes a time perspective forward—a future different from the present, yet populated with more or less clearly delineated agents and counteragents, objects to be avoided, objects to be embraced, means to empower avoiding or embracing, and some context of interrelated factors and forces, human and non-human, benign, hostile, or neutral. (1976, p. 427)

Planning is a tool, a paradigmatic example of the “calculative thinking” (Heidegger, 1962) that is directed toward achieving desired ends or controlling one's environment. But a tool is only as good as the knowledge that guides it. The passage just quoted identifies this knowledge as the ability to delineate (i.e., discover and differentiate) “agents and counteragents, objects to be avoided, objects to be embraced, means to empower avoiding or embracing, and some context of interrelated factors and forces.” It is a knowledge, in other words, that proceeds by manipulating identified entities.

Identified entities, however, are past-dependent. When rapid change guarantees that the future will differ radically from the past, past-dependent knowledge quickly becomes irrelevant. For instance, Delbecq (2000) has stated that a typical Silicon Valley start-up goes through 12–14 basic changes in identity (mergers, acquisitions, etc.) in the first eighteen months of its existence. In such circumstances, planning loses much of its effectiveness. The future will be different from the past in ways that cannot be predicted or spelled out in advance.

The same point can be made at the micro-level. Planning depends on acquiring and analyzing data. But while this investigation is taking place, change continues. In a turbulent environment, this will mean that solutions are out of date even before they emerge. The first step in planning—freezing time—proves inherently self-defeating, for time itself does not stop: The future continues to arrive. Soon the cognitive map generated from a frozen image becomes outdated, but there is no opportunity to create a new one.

At both these levels, living in an environment of continuous change brings into sharp relief a limitation inherent in all planning; namely, that planning is *necessarily* based on ignorance. Depending as it does on the causal-time framework of static states in linear succession, planning attempts to deal with the future by identifying likely problems and their solutions. But this is an impossible task, for the future is open, and there is nothing there to be identified or known in advance, hence the aphorism that prediction is difficult, especially about the future.

In response to this ignorance of the future, planning can offer only *virtual knowledge*. The assumption is made that the future will be a variation on the past, thus the past is treated as a metaphor for the future (Bluedorn, 2002, pp. 124-131), and that sequences of events set in motion in the past will interact in predictable ways with predictable consequences to generate the future. Just as we might send a robot into a poisonous environment where human beings cannot go themselves, so we send our plans—our virtual, extrapolated “knowledge”—into the future, where knowledge cannot go. In more settled times, such virtual knowledge will often prove a useful substitute for the real thing. But in the world of “faster” (Gleick, 1999), virtual knowledge will no longer suffice.

Aware of this difficulty, planning theorists have tried to modify the structure of planning. The “real-time” approach to change management described in the first part of this chapter is one such attempt. The logic inherent in the real-time remedy is this: If the temporal gap between past and future, or between the time of planning and the time of implementation—can be reduced to the vanishing point, the corresponding gap between knowledge and virtual knowledge can safely be ignored. The hope is to compensate for the tendency of virtual knowledge to decouple from reality by instituting a kind of micro-planning, in which virtual-knowledge assumptions are constantly being corrected, what Weick and Quinn call “a series of fast mini-episodes of change (1999, p. 377).”

Of course, there are major practical problems with this approach. On the one hand, constantly generating new micro-plans works against any attempts at coherent strategic planning. Either such mini-responses to changing conditions tend toward chaos, or they build up a momentum that can be reversed only with difficulty when more substantial changes present themselves. On the other hand, if organizations opt for coherence, real-time changes will be possible only around the fringes, resulting in a penny-wise/pound-foolish approach to planning that leaves the real-time model largely irrelevant. In either case, the real-time “solution” to the planning dilemma remains firmly bound to the logic of planning. Relying on virtual knowledge, ‘real time’ can only offer a virtual future, confabulated out of data collected in the past.

### **Managing Change Through Vision: The Reign of the Future Perfect**

A very different response to the shortcomings of planning is to focus instead on vision (Boulding, 1976; Davis, 1996). The visionary is more proactive than the planner; she takes control of the change process to produce a desired end. The focus is not on the rationality of forecasting or diagnosis, but on the subjective will, whose power can shape events in accord with

the change agent's wishes and desires. In practice, of course, the subjectivity of the vision is at some point linked to the rationality of the plan. In one sense, planning and vision go hand and hand. As Bennis, *et. al.* note (1976, p. 427): “Whatever else planning may mean, it signifies an anticipation of some future state of affairs and the confirmation of a vision of that future in the present in order to motivate, guide, and direct present action.” Still, placing the emphasis on vision suggests a possible escape from past-bound planning, as the causal nexus yields to an emphasis on bringing future goals and intentions into being. Davis (1996, p. 42) argues that this shift amounts to a revolutionary approach to time, a shift from a Newtonian to an Einsteinian model of the temporal framework.

On closer inspection, however, this shift proves largely illusory, for the future that the visionary aims to bring into being turns out to be in essence a hypothetical version of the past (i.e., using the past as a metaphor for the future). This point was clearly worked out by the sociologist and phenomenologist Alfred Schutz (1972/1932), whose insights on this point underlie the work of such organizational theorists as Weick (1979), Das (1986), Davis (1996), and Senge (1990). Schutz explained that the future is available to us only when we imagine it to have been already completed; only, that is, in the “future perfect” tense:

[T]he actor projects his action as if it were already over and done with and lying in the past. It is a full-blown, actualized event, which the actor pictures and assigns to its place in the order of experiences given to him at the moment of projection. Strangely enough, therefore, because it is pictured as completed, *the planned act bears the temporal character of pastness*. . . . The fact that it is thus pictured as if it were simultaneously past and future can be



taken care of by saying that it is thought of in the future perfect tense . . . . (1972, p. 61, emphasis in original)

Since vision-centered models for change remain bound to the past, they bring us no closer to knowledge of the future. Considered as an ideal type, future-perfect planning has everything to do with the way we think about or project the future, and nothing to do with the happening of the future as such (Das, 1986). The risk of self-deception is obvious.

### **A Radical Alternative: Managing Change through Knowledge of the Future**

Both strategic planning and visioning initiatives try to populate the open unknown of the future with past-centered content (i.e., using the past as a metaphor for the future). These approaches are based on causal-time, which view the future time dimension in spatial terms, as located in a direction “forward,” or “up ahead.” Further, since causal-time considers time to only be an abstract framework within which events occur in the present, and retreat into past memory, it inevitably “draws a blank” when it attempts to know the future. In the framework of flow time, however, the future manifests itself as pure becoming—the arriving or happening of time, independent of the content of what arrives. Rather than viewing the future as a blank canvass for projecting content derived from the past forward, flow-time considers the future as a creative dynamic that is not limited by past-dependent knowledge. Li Destri and Daggino (2003) allude to this creative dynamic of the future, in that they suggest that the real nature of dynamic change processes, “does not reside in the mere recombination of a given set of data or variables, but must grant a critical role to *surprise* and *unforeseen* events.” (p. 7). As Bergson (1911, p. 167) maintains: “Precisely because it is always trying to reconstitute, and to reconstitute with what is given, the intellect lets what is new in each moment of a history escape. It does not admit the unforeseeable.”

William James understood that a focus on flow could make a different knowledge available. He suggests as much in his famous image of the stream of consciousness, whose real significance is largely overlooked:

The traditional psychology talks like one who should say a river consists of nothing but pailsful, spoonsful, quartpotsful, barrelsful, and other moulded forms of water. Even were the pails and the pots all actually standing in the stream, still between them the free water would continue to flow. It is just this free water of consciousness that psychologists resolutely overlook. Every definite image in the mind is steeped and dyed in the free water that flows round it. (James, 1890, p. 255)

This image suggests how knowledge of the future might be possible. Instead of focusing on the “definite images” that come when we center our understanding of time on the past, we can look to the “free water” of time’s flow. This free flow is the future, understood as the arriving of what is happening right now. We find *this* future at the edge of the present (Tulku, 1994); it arrives without taking form, otherwise it would no longer be the future! As Bergson suggested, contacting and operating from within this “real” future cannot be apprehended without the aid of intuition. It requires an experiential orientation of being open to the flow of time directly, allowing one to *know* the future *as this arriving*, and let that knowledge guide one’s actions. Knowledge of *this future* is not beyond our reach as, for example, is suggested by Brown and Eisenhardt’s conceptualization of some companies’ experiments as means of engaging the future with low-cost probes (1998, pp. 147-159).

### **Finding Knowledge Just in Time**

The knowledge available in flow time is completely different from the past-centered and content-driven knowledge that guides planning or the subjective ‘knowledge’ that emerges in the future perfect. Viewing change as continuous and emergent rather than episodic calls for approaches that rely less on planning/visioning that are based on constructing a future perfect, and more on creative action, or improvisation, in real-time (Purser, 2003). However, to do so requires coming to know the future on its own temporal terms, rather than relating to the future as a spatial dimension that is simply an extension of the past. Knowing the future in terms of its dynamic is to focus more on knowing as a capacity within the immediate flow of time.

The proposition being made here is that it is possible to know the “real future” not simply in terms of projections of the future based on past constructs (the future perfect)—the stuff visions, predictions, scenarios, or desirable images are made of—but the actual dynamic of the future in the flow of time. Tulku (1994, p. 93) distinguishes the “future infinitive” from our conventional conceptualization of the future:

But this constructed future has little to do with the future as time’s transitional indeterminacy: the future infinitive of time. The future located ‘up ahead’, projected forward along linear lines of force, is not the same as the future that will never arrive and thus never restrict. It is in this ‘never arriving’ of the future that the dynamic and power of time makes themselves available.

Knowing the future is direct and immediate; it can be equated to a contentless, creative dynamic that is infinite in its potential for giving rise to phenomenon (content). Creative insights, inspiration, epiphanies, sudden breakthroughs, inventions, peak experiences, and even

paranormal events associated with precognition and unexplainable synchronicities, may all be attributable to knowing the future as an unconditioned dynamic (Tulku, 1994, p. 141). In this sense, time is not simply an abstract framework that events are in, nor an interval between two points, but a creative dynamic that is inseparable from experience (Low, 2002, p. 90).

Organizing does not occur “in time,” but “is time.”

As Arendt (1963, p. 169) notes, it is just the new that accounts for human achievement: “[T]he faculty of freedom, the sheer capacity to begin, . . . animates and inspires all human activities and is the hidden source of production of all great and beautiful things.” In flow time, the new becomes available. Action can complement planning and creativity can come to the aid of rational thinking. We might speak here of “just-in-time knowledge”— not knowledge that arrives just in time, but knowledge that *just arrives in time*.

In an era of accelerating continuous change, future-centered or just-in-time knowledge is essential to organizational development and transformation. Butler (1995, pp. 935; 939-40) has pointed out the inadequacy of decision-making based on computation, bargaining, or judgment in situations when the environment is changing too quickly for clarity to emerge or order to apply, so that time becomes “spasmodic.” For Butler, however, the best one can hope for in such times is decisions based either on inspiration or “muddling through.” In the former case, knowledge remains mysterious: the preserve of genius. In the latter, it remains inaccessible, and we somehow have to manage without it. But we are arguing that just-in-time knowledge is available now, in the future. We turn now to investigate how this is so.

### **‘Deep Improvisation’ and the Vitality of Time**

The “real-time” approach (McKenna, 1997) to change comes quickly and in unpredictable ways, discussed above, is to promote what might be called the agile planner; the

one who can turn on a dime. A second response, closer to the view advocated here, emphasizes the need to improvise (Moorman & Miner, 1998; Crossan, Cunha, Vera, & Cunha, in press; Crossan, White, Lane, & Klus, 1996); to act in what Hatch (2000) calls “jazz time.” McKenna pays tribute to this approach as well, speaking of “the improvisational woman, who makes it up as she goes along and has got it together” (1997, p. 16). But the metaphor of improvisation is ambiguous as is revealed in the identification of several forms and levels of improvisation (Crossan et al., in press). The idea of improvisation, however, does suggest appreciation for time as it manifests itself directly, and for the possibility of accepting the future on its own terms. But it can also be interpreted simply in terms of reducing the time between action and reaction, plan and implementation, to the smallest possible duration (Weick & Quinn, 1999, p. 376, citing Moorman & Miner, 1998), and in that case improvisation will stay focused on the past. The metaphor takes on its full significance only if we bring out the connection between improvisational action and the knowledge that guides it. To clarify this ambiguity, let us call improvisation that emerges through the arriving of the future “deep improvisation.” Deep improvisation means more than simply responding nimbly to each new challenge as it comes along. It means responding without relying on the claims of identity, on what is already established as so, although it does not mean abandoning them entirely either (as we argued about the past in general earlier), for connections, hence continuity, will still occur with whatever future arrives. Instead of imposing images or trying to steer the course of change toward some pre-established aim, “action” becomes “acting,” part of the dynamic play of time.

Change agents who practice deep improvisation act from within the flow of time and have access to the creative knowledge inherent in time itself. This possibility is available in each instant—in the significance of the task at hand; in interactions with others that expand beyond

the bounds of assigned roles; in deadline situations that force organizational actors and stakeholders to acknowledge the arriving of each moment.

### **Deep Improvisation and Vision**

The knowledge that comes with deep improvisation, however, allows for a different understanding of how vision can become a transformative factor in change management. To be an organizational visionary is not just to head in a new direction, a perfect future envisioned in the future perfect. The true visionary has tapped into the dynamic of the future and draws on its knowledge. When Martin Luther King proclaimed, “I have a dream,” he inspired an entire generation. But it was not the content of his dream that accounted for its impact. Rather, it was the *having* of the dream, the “being possessed” by the arriving of the future. To function in flow time is to participate in the future in a similar sense.

It may help clarify this understanding of vision to compare it to the theory underlying “Appreciative Inquiry,” a well known change management method (Cooperrider & Srivastava, 1987). Change agents who apply Appreciative Inquiry (AI) collect stories from the actors in an organization that relate to times when people were performing at their best, and then arrange for collective discussion of those stories. Its practitioners theorize that as individuals share such stories, they create or “dream” a shared image of a new and better future, and thus help bring it into being (Bushe, 1995). From a flow-time perspective, however, this interpretation of why AI is successful is too closely linked to causal time; indeed, it brings to the surface in an unmistakable way the future-perfect understanding of temporality. As an alternative explanation, consider that the key to AI may be the element of collective discussion. It is not that such discussion generates new ideas or images or confirms old ones, though this may happen. Rather, participants in the discussion, encouraged to let go of their usual identities by an appreciative

focus on excellence, have the opportunity to live in future time. If this is so, the emphasis in AI theory on “better theories/ideas/images” (Bushe 1998, p. 2) is misleading. The real focus is what Bushe calls “inquiring with the heart.” Translating between terminologies, this amounts to inquiry that happens in flow time, giving access to the knowledge inherent in the future.

In the process of engaging the dynamic of flow time, organizational members become not only more aware of future probabilities, but also how their thinking in the present conditions how they are likely to think about and interpret their actions in the future. This is the very nature of temporal conditioning. Indeed, every time we generalize from the present moment, we condition the future. But such generalizations can potentially limit the ways in which we will experience the future. For example, if we think that organizational change is inherently difficult, we condition a future in which changes will likely be experienced as problematic or burdensome. In some ways, whether we are managers or consultants, we are looking for problems. Conversely, if we believe that organizational change should be easy, we create the conditions for disappointment when we encounter resistance or periodic difficulties. This conditioning is compounded if we find external support for our thinking.

Preparing organizational members to operate more routinely in flow time requires a certain degree of openness, as well as becoming less emotionally reactive when situations do not flow smoothly. The intuitive competency being described here amounts to being able to tune into the present moment with a subtlety and depth that lets us sense the potential of our thinking, speech and behavior to condition the future. To the degree that organizational members can enhance their awareness of time as a creative dynamic for change, such a capacity can be further cultivated and developed. However, when actions are conditioned by causal time, they are not likely to be optimally responsive to the needs of the moment. We are unable to read and respond

to the uniqueness of every situation because we're operating from a model of what has worked in the past.

When we say that organizational members can learn how to “tune into the future consequences of their actions,” we do not mean they can suddenly become clairvoyant, knowing precisely how things are going to pan out as a consequence of what they are doing. Rather, we are making the case that operating in flow time means being able to sense when the connection to the ongoing dynamic of change has been lost or attenuated, and making the necessary micro-adjustments in terms of how we are thinking, how we are listening, what we’re saying, and how we are saying it, in order to stay connected with the energy, vitality and immediacy of present moment.

### **A DIFFERENCE THAT MATTERS**

How important the distinction between causal time and flow time is depends, in part, on it resulting in different approaches to managing organizational change. That the distinction does lead to different approaches to change management should be apparent from our preceding discussions (e.g., of Appreciative Inquiry), but using both lenses to deal with a concrete organizational change phenomenon should make this point even clearer. We should note at the outset that not all change phenomena, even all time-linked change phenomena, will necessarily yield different theoretical interpretations, let alone different implications for practice, by viewing them through these different times lenses. Even so, the potential for different interpretations and guidance for practice is likely to be wide-reaching. For example, Bluedorn (2000b) found that individuals’ general orientations to change (i.e., how much people liked or disliked change in general) was consistently positively correlated with polychronicity, a fundamental temporal behavior pattern dealing with the extent to which people prefer to be engaged in two or more



tasks or events at the same time. The specific finding was that the more people liked change in general, the more polychronic they preferred to be (i.e., the more they liked to be involved in two or more tasks simultaneously). How this relationship might be seen differently from the causal-time or flow-time frames might not be apparent initially. Perhaps this is because the relationship is simply a statement of how two variables are related and does not directly deal with change over time. Once change over time is examined directly, however, the causal-time, flow-time distinction becomes central to the interpretation, and even more so, to the management of that change.

Thus people who tend toward a more polychronic orientation might be more apt to realize that organizational change efforts seldom proceed exactly as planned, and indeed, often not even close to how the effort was planned (more of a flow-time view of change than a causal time view). Further, they might be more comfortable with such a view of time as well. These suggestions follow from the nature of polychronic behavior and its relationships with other variables. The “at the same time” in the definition of polychronicity covers a wider gamut of behaviors than are not apparent at first, for although the phrase does refer to things that are literally addressed simultaneously, it also refers to a pattern of addressing several events or tasks within a given time interval by moving back and forth, often several times, among the tasks or events (Bluedorn, 2002, p. 52). Such a pattern anticipates dealing with the same issues or tasks multiple times, which could well extend to the anticipation of revisiting tasks or issues in the change process as a perfectly normal part of any change effort—the revisiting being necessary in part because the future unfolds in unexpected ways. And the unexpected unfolding of the future certainly introduces ambiguity into any change effort, which more polychronically oriented people may find more comfortable because tolerance for ambiguity and polychronicity are

positively correlated (Bluedorn, 2002, p. 68). These interpretations and extensions of the polychronicity/preference-for-change relationship follow from the flow-time perspective, which is less determinate and less linear.

A manager working from a causal-time perspective would more likely emphasize a different aspect of this same relationship, which is that people at the opposite end of the polychronicity continuum (i.e., people who prefer to address things one thing at a time) would not like change and would certainly prefer to follow a plan for change in a sequential, linear fashion. This would mean such people would believe that change efforts should proceed without having to re-think plans along the way and without having to revisit seemingly completed or performed tasks. Indeed, from a causal-time perspective, having to revisit a task or revise a plan would often be seen as signals that something was wrong, perhaps with the plan itself or with the original performance of tasks. Such revisiting or re-doing would be much less likely to be seen as the normal attributes of an unfolding and inherently indeterminate change process, which is the way such revisiting and re-doing is interpreted within a flow-time frame. So seen in these ways, the relationship between polychronicity and the individual's orientation to change could be extended and interpreted differently depending upon whether it is approached through a causal-time or a flow-time perspective. And these differing interpretations would lead naturally to different behaviors and actions (i.e., realizing the necessity and advantages of making microadjustments and avoiding strong, even panicky emotional reactions and becoming excessively critical, even to the point of replacing members of the team who planned and are managing the change effort).

Having described how the relationship between change and polychronicity would be seen differently from flow-time and causal time perspectives, we will now use both perspectives to

examine a specific pattern of change. This specific pattern was described by Tyre and Orlikowski (1994) in their study of technological change that were introduced in organizations and the subsequent modifications that were made to these technologies so that the technologies might function better. The authors describe the overall pattern of change as follows:

A striking finding across the three research sites was that adaptation efforts appeared to fall off abruptly after a short initial introduction period. This initial period seemed to represent a finite window of opportunity during which users found it relatively easy to make changes to new technologies-in-use. Afterward, adaptation efforts dropped off, with users finding few opportunities to examine outstanding questions or to review initial choices.

(1994, p. 104)

When this pattern is depicted graphically as the percent of all adaptive activity completed during each month tracked over all the months' that adaptive activity was tracked, the graph depicts a curve with an extremely steep negative slope (close to vertical to the eye) that, with occasional minor perturbations, seems to be approaching zero asymptotically (Tyre & Orlikowski, 1994, p. 106). The message of the pattern seems to be that people are most receptive to making modifications to a major technological change close to the onset of the change, but that receptivity appears to wane rapidly and be very difficult to rekindle after the initial "window of opportunity."

The question of interest here is, how would knowledge of this pattern be used and interpreted differently in an organization change effort based on causal-time compared with one based on flow-time? Under a causal-time-based change effort, the answer would be to use the

information in about the same way that other causal-time-based efforts proceed: plan, plan, plan. That is, the virtual knowledge this pattern represents--and virtual knowledge it must be about the future because no one knows how general this pattern is for technological changes, let alone organizational change in general--this virtual knowledge would be used in planning to estimate the size of the window of opportunity (i.e., for how long will people be relatively willing to make and deal with modifications to promote the effectiveness of the change?). This would be followed by the preparation of organizational resources, perhaps from both the technology and the human resource sides of the organization, to exploit organizational members' receptivity to further efforts to implement the change and make it more effective. This approach is actually an example of a synchronous entrainment strategy, a strategy in which the phases of two rhythms are managed so as to occur at the same time (Bluedorn, 2002, pp. 148-150). In this case the "window of opportunity" is a phase in one rhythm and the availability of organizational resources to facilitate modifications and adaptations would be a phase of another. But the success of such a strategy would depend upon the planners' ability to accurately anticipate the occurrence of the window of opportunity, and as indicated, even the existence of a window of opportunity must be regarded as virtual knowledge since its existence has been documented in only three organizations, albeit for many technological changes. If the window never appears, or if it appears later than anticipated, the opportunity costs of the planning effort and the scheduling of organizational resources for use during the window become particularly visible.

How would a flow-time-based approach differ? As the future continued to appear (i.e., the times shortly after the change is implemented), those making decisions about what to do could be sensitized by the concept and possibility of a window of opportunity (Blumer, 1954) and so be more alert for it. Fewer organizational resources, perhaps none, will be held in reserve

for use during such a window. And even if the window appears, a deeper improvisation would be employed than simply pulling a script off the shelf and repeating the set of decisions and actions taken the last time the organization was making a similar change and a window of opportunity appeared. For example, the future that arrives with the window of opportunity may arrive also containing what the decision makers may perceive as a better use of the organization's resources than for tweaking the changes in the now-present window of opportunity. So compared to the last time a similar window appeared, the organization may devote fewer resources to continuing to improve the effectiveness of that change and instead use them to deal with the other opportunity that was not included in the context dealt with by the script on the shelf.

This example can be extended to reveal other change management implications if to it we add the interpretation of the relationship between change orientation and polychronicity from a flow-time rather than a causal-time perspective. These implications address the issue of innovation and the people with tendencies to be early adopters of innovations (one form of change). Rogers (1958; 1962) described five categories of people in terms of when they adopt innovations as forming a normal distribution whose horizontal axis is the time when the people adopt the innovation. A change management practice suggested by a flow-time interpretation of the change-orientation/polychronicity relationship would be to introduce changes first among innovators and earlier adopters, especially polychronic innovators and early adopters, because they would most readily accept or adopt change. Targeting such people would have several potential advantages. First, the innovation/change could be tested and refined—the testing orientation being compatible with polychronic innovators and early adopters' higher tolerance for ambiguity, and the refining being a specific case of the polychronic behavior of shifting back-

and-forth among tasks and events. A second advantage would be the role-modeling of the change for the rest of the population, which could trigger institutionalization processes (DiMaggio & Powell, 1983), especially by the role modeling provided by early adopters who are likely to have greater legitimacy, respect, and influence than innovators (see Rogers, 1962, pp. 169-170). Thus polychronic innovators, and early adopters especially, could represent strategic choices for the initiation of change efforts. These choices would be especially strategic when the windows of opportunity are brief.

So what difference does a flow-time rather than a causal-time frame make? As this example suggests, fewer efforts will be devoted to detailed planning, the timing of decisions will be very different, and because past experience will be used to suggest just some possible actions, the content of decisions is apt to vary more too. In a sense the decisions made in flow time are more informed choices because they are made with more complete real knowledge. These are differences that make a difference.

## **CONCLUSION**

In our examination of causal time and flow time in the field of organizational change, we have exercised the temporal imagination (Bluedorn & Standifer, in press), the ability to understand the effects of concepts of time on behavior, especially when sets of concepts and assumptions are juxtaposed and contrasted with each other. Thus we have seen that causal-time approaches to change management are ill-suited to managing continuous change in creative ways. So-called real-time approaches, the Lewinian change model, the Weick-Quinn alternative, and the future-perfect concept all insist on imposing a reality on an always arriving future. This is because they all rely on virtual knowledge, an approach that today is proving itself inadequate. The flow-time alternative is responsive to change in a different way. Sensitive to intuition, not

committed to established positions in advance, it allows for deep improvisation. With the just-in-time knowledge it makes available, identity and resistance are not obstacles, and established patterns and protocols are not limits.

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## REFERENCES

- Adam, B. (1988). Social versus natural time: A traditional distinction re-examined. In M. Young & T. Schuller (Eds.), *The rhythms of society* (pp. 198-226). London: Routledge.
- Adam, B. (1990). *Time and social theory*. Philadelphia, PA: Temple University Press.
- Adam, B. (1998). *Timescapes of modernity: The Environment and invisible hazards*. London: Routledge.
- Anderson, M. (Ed.) (1999). *Fast cycle organization development: A fieldbook for organization transformation*. South-Western Publishing.
- Arendt, H. (1963). *Between past and future: Six exercises in political thought*. Cleveland: World Publishing.
- Beckhard, R. (1969). *Organization development: Strategies and models*. Reading, MA: Addison-Westley.
- Benford, G. (1999). *Deep time: How humanity communicates across millennia*. New York: Bard.
- Benjamin, C. (1981). Ideas of time in the history of philosophy. In J. T. Fraser (Ed.), *The voices of time* (2nd ed.) (pp. 3-30). Amherst, MA: University of Massachusetts Press.
- Bennis, W., Benne, K.D., Chin, R. & Corey, K.E. (1976). *The planning of change* (3rd. ed.). New York: Holt, Rinehart, and Winston.
- Bergson, H. (1911). *Creative evolution* (trans. By A. Mitchell). New York: Henry Holt.
- Bluedorn, A. C. (2000a). Time and organizational culture. In N. M. Ashkanasy, C. P. M. Wilderom, & M. F. Peterson (eds.), *Handbook of Organizational Culture and Climate* (pp. 117-128). Thousand Oaks, CA: Sage Publications
- Bluedorn, A. C. (2000b, April 14-16). *Polychronicity, change orientation, and organizational attractiveness*. Paper presented at the Annual Meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.
- Bluedorn, A. C. (2002). *The human organization of time: Temporal realities and experience*. Stanford, CA: Stanford University Press.

- Bluedorn, A. C., & Ferris, S. (in press). Temporal Depth, Age, and Organizational Performance, in A Kalleberg and C.Epstein (Eds.), *Time Reconsidered: Shifting Boundaries of Work and Social Life*. New York: Russell Sage Foundation Press.
- Bluedorn, A. C., & Standifer, R. (in press). Groups, Boundary Spanning, and the Temporal Imagination. *Research on Managing Groups and Teams*, 6.
- Blumer, H. (1954). What is wrong with social theory? *American Sociological Review*, 19, 3-10.
- Boulding, E. (1976). Learning to image the future. In W. Bennis, K. D. Benne, R. Chin, and K. E. Corey (Eds.), *The planning of change* (3rd. ed). New York: Holt, Rinehart, and Winston.
- Brown, S. L., & Eisenhardt, K. M. (1998). *Competing on the edge: Strategy as structured chaos*. Boston: Harvard Business School Press.
- Burke, W. W. (1982). *Organization development: Principles and practices*. Boston, Toronto: Brown.
- Burrell, G. (1992). Back to the future. In M. Reed & M. Hughes (Eds.), *Rethinking organizations*. London: Sage.
- Bushe, G. (1995). Advances in appreciative inquiry as an organization development intervention. *Organization Development Journal*, 13(3), 14-22.
- Bushe, G. (1998). *Five theories of change embedded in appreciative inquiry*. Paper presented at the 18th annual World Congress of Organization Development, Dublin Ireland. Available at [www.bus/sfu.ca/homes/gervase](http://www.bus/sfu.ca/homes/gervase).
- Butler, R. (1995). Time in organizations: Its experience, explanations and effects. *Organization Studies*, 16, 925-50.
- Cooperrider, D.L. & Srivavasta, S. (1987). Appreciative inquiry in organizational life. In W. Pasmore & R. Woodman, (Eds.), *Research in Organization Change and Development*, . 1, 129-169.
- Crossan, M. M., White, R. E, Lane, H. W., & Klus, L. (1996). The improvising organization: where planning meets opportunity, *Organizational Dynamics*, 24, 20-35.

- Crossan, M. M., Cunha, M. P. E., Vera, D., & Cunha, J. V. D. (in press). Time and organizational improvisation. *Academy of Management Review*.
- Das, T.K. (1986). *The subjective side of strategy making: Future orientations and perceptions of executives*. New York: Praeger.
- Davis, S. (1996). *Future perfect*. Reading, MA: Addison-Wesley.
- Delbecq, A. (2000, August 4-9). *Web businesses and time. Symposium presentation at the annual meeting of the Academy of Management*, Toronto, Canada.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147-160.
- Ford, J. D. & Backoff, R. (1988). Organization change in and out of dualities and paradox. In R. Quinn & K. Cameron (Eds.), *Paradox and transformation: Toward a theory of change in organization and management* (81-121). New York: Harper
- Ford, J. D. & Ford, L. W. (1994). Logics of identity, contradiction, and attraction in change. *Academy of Management Review*, 19, 756-785.
- Ford, J. D. & Ford, L. W. (1995). The role of conversations in producing intentional change in organizations. *Academy of Management Review*, 20, 541-570.
- Fraisse, P. (1963). *The psychology of time* (Jennifer Leith, trans.). New York: Harper & Row.
- French, W. L. & Bell, C. H. (1999). *Organization development*. (6th Edition). New Jersey: Prentice-Hall.
- Gersick, C. J. (1991). Revolutionary change theories: A multilevel exploration of the punctuated equilibrium paradigm. *Academy of Management Review*, 16: 10-36.
- Giddens, A. (1984). *The constitution of society*. Berkeley, CA: University of California Press.
- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford, CA: Stanford University Press.
- Gioia, D., Schultz, M. & Corley, K. (2000). Organizational identity, image, and adaptive instability. *Academy of Management Review*, 25, 63-81.

- Gleick, J. (1999). *Faster: The acceleration of just about everything*. New York: Pantheon Books.
- Greenwood, R., & Hinings, C. R. (1993). Understanding strategic change: The contribution of archetypes. *Academy of Management Journal*, 36, 1052-1083.
- Hatch, M. J. (2000, August 4-9). *Jazz time*. Paper presented at the annual meeting of the Academy of Management, Toronto, Canada.
- Heidegger, M. (1962). *Being and time* (trans. J. Macquarrie & E. Robinson). New York: Harper Row.
- Huy, Q. N. (2001). Time, temporal capability, and planned change. *Academy of Management Review*, 26, 601-623.
- James, W. (1890). *Principles of psychology*. New York: Holt.
- Jameson, F. (1997). *Postmodernism, or the cultural logic of late capitalism*. Durham, NC: Duke University Press.
- Kern, S. (1983). *The culture of time and space: 1880-1918*. Cambridge: Harvard University Press.
- Li Destri, A.M. & Dagnino, G.B. (2003). *Monotemporalism versus pluraltemporalism: Concepts of time and the strategic theory of the firm*. Paper presented at the "In Search of Time" conference, ISIDA, Palermo, Sicily, May 8-10.
- Lippincott, K. (1999). *The story of time*. London: Merrell Holberton.
- Low, A. (2002). *Creating consciousness: A study of consciousness, creativity, evolution and violence*. Ashland, OR: White Cloud Press.
- Macnaghten, P. & Urry, J. (1998). *Contested natures*. London: Sage.
- Macey, S. M. (1994). Father time. In S. M. Macey (ed.), *Encyclopedia of Time* (pp. 208-212). New York: Garland.
- McKenna, R. (1997). *Real time: Preparing for the age of the never satisfied customer*. Boston: Harvard Business School Press.

- Meyer, C. (1993). *Fast cycle time: How to align purpose, strategy, and structure for speed*. NY: Free Press.
- Minkowski, E. (1970). *Lived time: Phenomenological and psychopathological studies* (Nancy Metzel, trans.). Evanston, Ill.: Northwestern University Press. (Original work published in 1933).
- Moorman, C., & Miner, A.S. (1998). Organizational improvisation and organizational memory. *Academy of Management Review*, 23, 698-723.
- Neustadt, R. E., & May, E. R. (1986). *Thinking in time: The uses of history for decision-makers*. New York: Free Press.
- Nowotny, H. (1988). From the future to the extended present: Time in social systems. In G. Kirsch et al. (Eds.), *The formulation of time preferences in multidisciplinary perspective* (17-31). Aldershot: Gower.
- Orlikowski, W. J. (1996). Improvising organizational transformation over time: A situated change perspective. *Information Systems Research*, 7 (1): 63-92
- Peters, T. J. (1987). *Thriving on chaos: Handbook for a management revolution*. NY: Free Press.
- Pettigrew, A. M., Woodman, R. W., & Cameron, K. S. (2001). Study organizational change and development: Challenges for future research. *Academy of Management Journal*, 44, 697-713.
- Porras, J.I. (1987). *Stream analysis: A powerful way to diagnose and manage organizational change*. Reading, MA: Addison-Wesley.
- Porras, J.I. & Silvers, R. C. (1991). Organization development and transformation. *Annual Review of Psychology*, 42, 51-78.
- Purser, R.E., Pasmore, W.A., & Tenkasi, R.V. (1992). The influence of deliberations on learning in new product development teams. *Journal of Engineering and Technology Management*, 9, 1-28.

- Purser, R.E. (2003). *Unfreezing the future: Exploring the dynamic of time in organizational change*. Paper presented at the "In Search of Time," ISIDA Conference, Palermo, Sicily, May 8-10.
- Robertson, P. J., Roberts, D. R., & Porras, J. I. (1993). An evaluation of a model of planned organizational change. *Research in organizational change and development*, 7, 1-39.
- Rogers, E. M. (1958). Categorizing the adopters of agricultural practices. *Rural Sociology*, 23, 345-354.
- Rogers, E. M. (1962). *Diffusion of innovations*. New York: The Free Press of Glencoe.
- Santayana, G. (1953). *The life of reason or the phases of human progress* (one-volume ed., revised by the author in collaboration with Daniel Cory). New York: Charles Scribner's.
- Schein, E. H. (1992). *Organizational culture and leadership* (2nd ed.). San Francisco: Jossey-Bass.
- Schutz, A. (1972). *The phenomenology of the social world* (trans. G. Walsh & F. Lehnert, trans.). London: Heinemann Educational Books.
- Senge, P. (1990). *The fifth discipline*. New York: Doubleday.
- Stalk, G. & Hout, T. (1990). *Competing against time*. New York: The Free Press.
- Tenkasi, R. V, Mohrman, S. A.& Mohrman, A. M. (1998). Accelerated learning during organizational transition. In S. A. Mohrman, J. R. Galbraith, & E. E. Lawler (Eds), *Tomorrow's organization: Crafting winning capabilities in a dynamic world* (330-361). San Francisco: Jossey-Bass.
- Toffler, A. (1970). *Future shock*. New York: Bantam Books.
- Tulku, T. (1987). *Love of knowledge*. Berkeley, CA: Dharma Publishing.
- Tulku, T. (1994). *Dynamics of time and space: Transcending limits on knowledge*. Berkeley, CA: Dharma Publishing.

- Tyre, M. J., & Orlikowski, W. J. (1994). Windows of opportunity: Temporal patterns of technological adaptation in organizations. *Organization Science*, 5, 98-118.
- Vaill, P. (1996). *Learning as a way of being: Strategies for survival in a world of permanent white water*. San Francisco: CA: Jossey-Bass.
- Virilio, Paul (1997). *Open sky* (trans. Julie Rose). London: Verso.
- Weick, K.E. (1979). *The social psychology of organizing* (2nd ed.). Reading, MA: Addison-Wesley.
- Weick, K.E. (1991). The nontraditional quality of organizational learning. *Organization Science*, 2: 116-124.
- Weick, K.E. & Quinn, R. (1999). Organizational change and development. *Annual Review of Psychology*, 50:361-386.
- Weisbord, M. (1988). *Productive workplaces*. San Francisco: Jossey-Bass.