# **Developing Awareness of Time in Organizational Change**

Abstract

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**Headnote**

Abstract

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Ever since Emery and Trist (1965) warned us that society was shifting to a new, different environment whose causal texture had become "turbulent," we have continued to witness increasing complexity, uncertainty, and now, what many are calling "chaos." Yet, in the midst of all this turbulence, social and technological flux, many remarkable changes and unprecedented gains have occurred in the world. In the last 40 years a whole new culture and economy grew up around the personal computer; we saw the legitimization of civil rights for minorities, women and gender minorities; advances in medicine, science and technology; increases in the numbers of people attending colleges and universities; the end of the Cold War; increased industrial development in Asia and Latin America, and so on. With all of these developments, we see that access to knowledge plays a major role in the ability to change and develop. Indeed, it is now quite commonplace to make references to the idea of a new "knowledge economy," and a shift to "knowledge work." Now, with burgeoning developments in the Internet, and network, telecommunications, digital, and Web-based technologies, planetary culture itself is being transformed as human beings will have "global access" to a wealth of increasing knowledge.

Western industrial society has succeeded in creating and utilizing knowledge to shape the forces of nature, to create material abundance, and to free a vast number of human beings from the drudgery of physical labor. Despite this onward and upward progress, many of us- both in our professional and personal lives-are experiencing the rhythms and pressures of change to an even greater degree. With instantaneous communications now possible, as new knowledge emerges and then becomes obsolete in shorter and shorter cycles, time itself seems as if it is speeding up (Giddens, 1990; Harvey,1989). We feel subject to, even victims of, on an accelerating momentum that is disorderly, chaotic, and out-of-control. Turbulence, and the discordant temporal patterns associated with it, appears and is experienced as if it is an external force bearing down on us- a force whose pace and power we cannot seem to control or change. Instead, organization development consultants tell us we should learn how to "adapt to turbulence," we are exhorted to "embrace and learn to live with chaos," and "to become more flexible so we can manage change." We hold out the promise that "organizational transformation" is just around the corner if only organizations would create a "shared vision," and engage in more reflective forms of inquiry and team learning (Senge, 1990). Yet, most of us in the field have all witnessed (or even been a part of and advocate of) management fads, techniques, and programs that come and go, or are simply recycled and repackaged under new labels. Content with pouring old wine into new bottles, we stake our hopes that the next tool, technique, or set of theories will deliver us to the Promised Land of organizational transformation. But our hopes and aspirations for a brave new humanistic workplace, which provides the individual a measure of human dignity, autonomy, and an environment for self-actualization- what some may claim are the core values of OD- seems to be thwarted by the forces of convention, the lack of trust in human capabilities, the demand for quick economic results.

While we live in a time where knowledge and information are expanding and proliferating with rapidity, we also bear witness to symptoms of social fragmentation, culture wars, and malaise. Despite all the hype about the Internet and the Knowledge Revolution, in many respects, our knowledge is relatively weak since we are very uncertain about the future. The quality of our knowledge in society lacks depth and breadth. Proceeding in a linear fashion, knowledge accumulates, organizations supposedly "learn" (learn what?), but the sort of knowledge that would contribute a deep transformation toward wholeness, peace and harmony in our world never seems to fully emerge.

A key indicator that our conventional approach to change and development is limited is evident in that social turbulence continues unabated. We know many industrial practices and consumption habits are degrading the environment, yet we refuse to look deeper into the root causes. In the United States, one of the wealthiest societies the world has ever known, we continue to tolerate people sleeping on the streets. Our children are being raised by media surrogates- TVs, video games, and computers- and not very well. While overall violent crime is down, children murder each other in urban streets, suburban shopping malls, and rural high schools. Elevenyear olds commit suicide, have babies, take hallucinogens, die of heroin overdoses, turn tricks, and contract AIDS. Employees in midlife with families to raise are thrown out of work at the drop of the bottom-line, while the elderly are afraid to leave their homes and are dying alone and in despair. Educated people, even Webdevelopers, are joining cults and becoming fanatics and terrorists. Depression, anxiety-disorders, and other mental health problems are epidemic. Personal bankruptcies are at an all time high.

It seems America is deep into a period of what Strauss and Howe (1998) refer to as an "Unraveling." Institutions in society- those which we have turned toward for creating a sense of social stability and order- the family, public government, education, and business- are rapidly breaking down, or have lost their legitimacy. This period of unraveling is not dissimilar to what happens just before the emergence of a major scientific revolution. Anomalies and problems become too visible to ignore. Dominant theories and existing methods no longer work. The field in question enters a crisis. Are we now moving into such a period in American history? Are we on the verge of entering a major societal crisis that is beyond our ability to conceive and imagine from this standpoint in time? While we can only speculate, we can certainly acknowledge that we are now experiencing the consequences and effects of turbulence, and that the need for transformational knowledge is increasing. But what is transformational knowledge? How can we generate and apply knowledge that will bring benefits to persons, organizations, and society as a whole? Is such knowledge to be obtained by applying new models, theories, methods and techniques? Or is transformative knowledge more accessible and readily available, dependent more on our mode of questioning and creative inquiry, than on our adoption of models, "tools" and techniques? Perhaps the transformative knowledge we seek has more to do with changing the way the mind interprets and conceptualizes its basic frameworks for experience- a metanoia- that amounts to an expansive embodiment of space and time that relies more on creative vision, imagination and inspiration, than on words, labels and concepts?

I believe we are now entering a period of breakdown and cultural disintegration, where our standard approaches to generating and applying knowledge to solve personal, organizational, and societal problems- a reliance on tools and techniques, whether it be psychotherapy, psychopharmacology (e.g., in the 70's it was Valium, in the 90's it is Prozac), reengineering, organization development, social and governmental programs- are problematic, and are not resulting in fundamental change or a reduction of societal turbulence. Further, our so-called attempts at personal and organizational transformation-whether it means becoming a radical or being an advocate of supposedly radical crusades (e.g., reengineering)- more often involves sophisticated extensions and amendments to existing theories. Pouring old wine into new bottles quickly runs its course. What we need now are not more ideas, more knowledge, more theories, more tools, more information, more two-by-two organizational models, or more Websites, but a fundamentally new perspective, a perspective which is not constructed from within the rules of the existing order. What if we viewed problems and dysfunctional patterns from a more dynamic spatial-temporal perspective? This is not so much a call for yet another veritable paradigm shift (which often amounts to a simple adoption of new rhetoric and fashionable conceptual verbiage), but a clearing away of all the familiar conceptual underbrush so we can truly think anew, and see our situation with fresh eyes.

Change, Progress and Linear Time: Limits on Transformative Knowledge

Our most primary experience is the experience of change. Most people are sick of hearing about how the environment is now turbulent, and how we need to adapt and manage change. Such moral exhortations are grist for the mill for Dilbert cartoons. But one thing is clear: change is a universal constant. However, a fundamental assumptionone which often is never questioned- is that the "I," or at least the feeling that there is an "I," is at the center of all experience- the recipient of the ever-changing impressions and perceptions of consciousness. And as such, this human !-consciousness attempts to maintain its identity and continuity (over time), of at least some relative semblance of changelessness, while attempting to come to terms with its "own experience" of unceasing change.

But how is this mental gymnastic feat accomplished? In two ways. First, human experience is conceived as unfolding within a particular temporal framework. Time, in the ordinary sense, is the universal experience of change transformed by the human-I consciousness into an abstract concept. Time is reduced to an abstract concept when it is used and viewed as a convenient "container" or index for marking the position of changing events (by locating them on a past-present-future temporal grid). Time is relegated to a background factor, reduced to mere points on a line, to a handy device for keeping track of event sequences.

Second, space is perceived as external "place" for objects and sets of experiences in order to differentiate the human-I consciousness from the "external world." What is other is "out there," or "outside" of myself. Space is also reduced to an abstract medium- an empty container for objects. In this sense, our conventional concept of space is an abstraction of the experience of relationship, just as the concept of time is an abstraction of the experience of change. And as relationships are also subject to change, these space-time events are also made into abstraction, conceptualized as a "process." Change processes typically refer to a series of events which repeatedly are known to occur, or which occur in a particular rhythm, pattern, or sequence.

The field of organization development has concerned itself with "change processes," yet very little theorizing has been devoted to understanding how such change processes are enfolded within a particular space-time dimension or spatial-temporal framework. Within our ordinary linear temporal framework, change is thought of in terms of a sequence of events transitioning through time. Even empirical "laws" are bound to observations that occur within a temporal framework, where it is assumed that events unfold in linear sequence. Indeed, this sequential ordering and unfolding of events is taken to be evidence of a completely fixed and objective time. Time within this framework is accepted as an absolute given. The ability to construct scientific predictions, that is, the ability to say that one event will follow the next, however, does not address the question of why time changes and a next moment occurs (Tulku, 1977, p.119).

This way of knowing always places the self at the center of experience, with time relegated to the background. The self is felt to be an independent agent that acts in time, as it attempts to live out its life beginning at birth and ending at death. The identity of the self makes sense of its place and location in time through the construction of an ongoing narrative. Indeed, human awareness is usually exclusively attentive to the narratives the self enacts as a way of making sense of its experience in time. This way of knowing our experience has much similarity to how we watch movies in a theatre. In the movie theatre, we quickly become entranced and mesmerized by the unfolding drama on the screen, forgetting that what we are really viewing is but a display of flickering images. Similarly, in the theatre of space and time, our ordinary way of knowing is habituated to following the melodramatic narratives of our own lives projected by the stories we tell. Because this way of knowing always places ourselves at the center of our stories (for the self makes the claim that it is the leading actor and main character), it is understandable how easily we are entranced by our daily narratives about events happening in time.

In this connection, current theories of organizational change and human experience are bound to a particular understanding of time. Our realm of experience happens within linear time, where events unfold in a predictable sequential order, moving inexorably forward from the past, to the present, and into the future. We tend to view and act as if linear time is absolute, as the only reality, the only possibility for human consciousness. While we are aware of "psychological time," the time of the "real world" is taken to be objective and fixed. From within a linear temporal perspective, explicit goals, strategies, plans (the "future state") are defined, and then a course of action is initiated deliberately to attain them. When those goals are reached, organizations are successful; when they aren't, new tactics are applied. Similarly, with linear time, our usual orientation involves moving along the line of time, trying to attain personal satisfaction or fulfillment in the future. While we "occupy" or find ourselves located in "the present," serial-order time keeps moving, with what seems to be an inexorable, compelling momentum. In this sense, change is happening "all the time," and "transitoriness" is a universal human experience.

Resistance to Change or Resistance to Time?

If change is happening all the time, then why all the fuss over "managing change?" If change is inevitable, why does the literature put so much emphasis on managing "resistance to change"? I contend that such resistance is not resistance to change, but resistance to time, or resistance to phenomena. In order to understand this, we need to explore our assumptions about time more deeply. Let's start with Lewin's model of change, a transition which involves unfreezing-moving-refreezing- a social system. Often cited as the foundation of OD interventions, it is a good example of a model that subscribes to a linear view of time. When organizations recognize that change is needed, it usually means transforming and transcending the cognitive routines, behavioral patterns, and standard practices- structures of repetition- that people have grown habituated to and complacent with, over time. The normal organizational change paradigm works with ordinary event sequences, accepting the linear structure of time as a given. This conventional approach to change attempts to unfreeze the patterning of certain outmoded or dysfunctional event sequences within the linear order. But this linear approach to change may actually confirm the very limits that it attempts to overcome.

A linear change process guarantees that time will unfold in ordinary ways. The assumption is that in order to effect change, human beings/social systems have to obtain or achieve some desirable state that exists in the near or distant future. The transformative knowledge or intelligence that we need is seen to be lacking in the present, or that we are limited or confined by our past experience or conditioning (the legacy of history culture, past traumas, etc.). But this seeming absence of knowledge in the present may only be a faithful expression of our commitment to a linear temporal order.

How so? Theories of change are predicated on the assumption that "objective time" presents the flow and sequence of events in a fixed way. The unidirectionality of time's linear flow- moving from the past, to the present, and into the future- proceeds forward along what seemingly appears as an unbroken continuity of points along a straight line. Events are partitioned, or divided into either past memories or future hopes, expectations, fears and wishes. This perspective positions us in the fleeting present moment, as if we were independent agents, as "bystanders" or observers of time's sequential flow. What we call "reality" is located in the ephemeral, momentary "present," which is also continuously changing as the "next moment" arrives. Positioned as bystanders, time is felt as an external force-something that we cannot effectively control or master. While we depend on time for structuring and making sense of our experience, we are also threatened by time's power to erode away our tentative position and structures. Given our insecure position and superficial knowledge of time, we attempt to establish control and order by directing our knowledge to control over the external world through technological means. Knowledge is then conditioned and constructed by the structures of this temporal order.

With this temporal order established, our identities and structures are oriented toward maintaining a sense of continuity or permanence in a physical and social environment characterized by continuous phenomenal change and transition. Time always seems to have the upper hand, as our attempts to "exist" and maintain a sense of permanence are ultimately undermined by the momentum of time. Indeed, our personal death, the decline of organizations, and even the dissolution of civilizations throughout history are an ultimate reminder that our identities and social structures are not immune to the ravages of time.

Our attempts to cope with the momentum and unpredictable rhythms of time actually create further alienation from time's dynamic. Below I describe three common orientations, responses, or role patterns for dealing with the momentum of linear time at the personal and organizational level, namely a: 1) Victim of Time (VOT); 2) Short of Time (SOT); and Waste of Time (WOT) orientations.

The Victim of Time (VOT) Orientation. One response to dealing with time is simply to ignore its passage and dynamism. The dominant emotions associated with this orientation are that of arrogance and willful ignorance. Those who adopt this orientation engage in various forms of self-deception, thinking they are immune to time's dynamism. On a personal level, this ignorance of time occurs by engaging in various distractions or hedonistic pleasure seeking. This orientation is also narcissistic in character, as the psychic energy is focused on trying to constantly provide pleasure, ego gratification and confirmation to the selfimage (grab all the gusto you can). When unexpected events occur, one feels victimized by time or fate (it wasn't in the plans). For a person with this orientation, the realization that they too will have to face death usually comes as a surprise. It creeps up on the VOT personality quite suddenly, since they have denied the reality of death all their life. On an organizational level, the VOT orientation plays itself out as managers and employees grow overly confident and arrogant with regards to their own success and achievements. These organizations also engage in collective forms of self-deception as they begin to believe in their own PR, and become victims of what Tushman and O'Reilly (1997) refer to as the "success syndrome." Over time, the organization rigidities and coalesces around a particular identity, making it difficult for its members to let go of dominant technologies or services, and reinvent itself. When senior executives finally recognize that they are falling behind the technological innovation cycle in the marketplace, it is often too late to initiate a successful discontinuous organizational change effort. The organization suddenly goes into decline, or out of existence.

The Short of Time (SOT) Orientation. Another response to time's dynamic is that of grasping, or seeking to pin time down, to exert a strong control orientation. Those that engage linear time in this way, however, always feel short of time. Because time keeps moving relentlessly forward, they never feel that they have enough time. These are the impatient, restless, stressed out "Type A's," who is always rushing forward, yet never feel fulfilled or satisfied. The grasping quality manifests in their belief that fulfillment is to be found at some other moment in the future. Those with a SOT orientation are compulsively fixated on achieving satisfaction by trying to control events around them. The dominant emotions for people who adopt this orientation are that of anger and resentment. These people are those that tend to lash out when time does not cooperate with their intentions and plans. Looking back at their lives, they often feel resentful that they never had the time to enjoy life. It is a sad irony that their attempts to exert more control over time often make them feel more "out-of-control." On an organizational level, the SOT orientation is enacted in the hyperactive, action-driven, goal-oriented culture-high tech companies in Silicon Valley are a good example. Members of these hyper-time organizations are always "on-the-go," and claim that they never have time to reflect on where they are going (they are too busy moving forward to meet the next project deadline). Many professionals in these organizations are extremely high achievers and quite successful, but they often complain that they don't have a life outside of work. Many experience family problems, divorce, or psychosomatic forms of illness due to high stress and burnout. It is difficult for executives in these organizations to develop a reflective, learning orientation. Mistakes and errors are recurring in SOT organizations. There is a lot of frenetic activity in SOT organizations, but such activity is scattered and fragmented; employees do not feel they are in control of their personal and organizational destiny.

The Waste-of-Time (WOT) Orientation. Rather than ignoring or grasping time, one can also put time at a distance by squandering it and wasting energy. With this orientation, the dominant emotions are that of aversion, frustration, and apathy. People that adopt a WOT orientation never fully engage with life or work. These people waste their time by failing to focus or concentrate, and by avoiding situations that may challenge their self-image. They often complain how they are often sluggish, stuck in ruts, or "sick and tired" of various routines, tasks, or their personal affairs. Rather than engaging time, they indulge in telling stories and fantasies about what they will accomplish someday, or why they cannot accomplish what they set out to do. Such people with a WOT orientation always have an excuse for why they could not achieve their plans or goals, or keep their commitments. Always putting things off to the future, these people seek to build comfortable little nests where they can hide from time's dynamic flow. Organizations that suffer from a WOT orientation also lack focus, commitment, and an action orientation. Go to a meeting in a WOT organization and people will engage in a lot on talk and chit chat, but never seem able to get down to business, to take decisive action, and to stay focused on a goal for the long haul. These organizations seem to lack vitality With an aversion to engaging with time's dynamic, employees are content with "biding their time," surfing on the Internet, chit-chatting excessively around the water cooler and corridors, and waiting for the clock to hit five.

Whether on a personal or organizational level, our ordinary ways of relating to time often make us feel that we are never "on time," or "in time." We can never face fully up to change, we hold back, feel fragmented, and lack fluidity and flexibility. It is as though there is a fundamental disharmony or friction at work; one way or another, our timing always seems to be off. We either ignore time (where did all the time go?), we grasp after time, but still never seem to have enough of it, or we think we have all the time in the world only to discover time has run out.

Clearly, there can be no sequence of activities, and thus no processes, without time. Change-actual, perceptible, incremental or discontinuous - not only implies time; it is time in operation. Yet change process theories view time merely as an abstraction or index. Theorists and practitioners have largely ignored investigating the fundamental structuring dynamic of time itself. As a result, time remains a "hidden factor" which limits the efficacy of change theories, as well as the ability to put them into practice.

Avante-Garde Change Theories in Vogue and Their Temporal Limits

Time as a hidden factor can be seen in the field of organizational change, where many new theories and techniques are being tried. Below is just a brief sampling of such theories and techniques, in terms of how such approaches are embedded within conventional temporal structures.

Visioning, Search Conferencing, and Scenario Planning

The tripartite past-present-future structure is an unquestioned assumption in current theories of organizational change and development, as well as in our phenomenological experience of lived time. Whether the process involves creating shared visions (Senge, 1990), using search conferences for strategic planning (Emery & Purser, 1996), or imagining future scenarios (Schwartz, 1996; Van Der Heijden, 1996), we assume that change will come by moving "from" where we are now, "to" some other desired state in the future. From our position "now," we envision or imagine what may lie ahead, in the future. But by envisioning the future in this manner, we are actually projecting forward past structures. In our attempts to create a more desirable future, we actually are projecting our expectations from the past or present into the future. While the particular content of the scenarios may be different, we still assume that the future unfolds from the past, and that future events are an extension (in time) of present circumstances. According to our common sense notions of linear time, we assume the future, which we locate as "up ahead," is a destination that we will eventually arrive at (in time). But the feeling of movement, or sense of directionality in linear time may actually have very little to do with the future. For we could say that the "real future," is always indeterminate; that it never really "arrives." In a sense, what we actually encounter in what we think of as the future is actually the playing out of a pre-recorded future, the repetition of past-like structures. From the outset, our knowledge of the future is conditioned by the past. Our visions of the future are convoluted reenactments, or "re-recordings" of the past. This is why- despite our attempts to fundamentally change our situation- we often keep recreating familiar routines and repeating habituated patterns. Creativity and fresh innovative thinking is an exception and rare occurrence. If this is the case, it seems futile then to try to effect change by initiating further temporal series- that is, by subscribing to a linear time framework, attempting to traverse a path toward the future from the past, moving forward in the usual manner. As most of our methods are bound to the conventional temporal order, our efforts at profound personal and organizational transformation are continually defeated and undermined by a temporal sameness.

Postmodern Theory and Social Constructionism

Postmodern theory and social constructionism have had some influence on organization theory and management practice, highlighting the importance of language and discourse to shape organizational reality (Boje, Gephart, & Thatchenkery, 1996). For deconstructive postmodernists, the world we inhabit is seen to be largely an interaction of constructs, built out of words, thoughts and language games, rather than being composed of fundamental things and substances. What is real is the outcome of social constructions. In a hyper-media world, reality is manufactured illusion, a fabrication of images. As a culture, especially through the influence of visual media (TV, Internet, Video), we have come to readily accept reality as fabrication. However, in organizational life, postmodern insights and awareness of socially constructed truths rarely have a deep transformative effect in terms of changing our behavior or reactions to events, which may pose a threat, or challenge to our personal or professional identity. When our selfimage is at stake or threatened, no matter how sophisticated our intellectual interpretations are about reality (e.g., death of the self), our emotional reactions are often primitive and defensive. While we may intellectually accept the notion that our self is merely a construct- when push comes to shove- we behave as self-centered individuals with a fundamental self to defend and protect. Our intellectual theory may tell us that we should view our circumstances and beliefs not as fundamental and absolute, but as mere social constructions, which, at least in theory should be flexible and open to change. But the real truth of the situation is that we do not take such suggestions seriously in practice, nor do we embody them in the conduct of our own lives.

Soul and Spirituality

There has been a recent flurry of popular management books under the rubric of bringing "spirit" or "soul" into the workplace (e.g., Stirring the Soul in the Workplace, Jesus as CEO). This genre of books, whose authors are for the most part aging baby boomers, does suggest that this generation may be yearning for a return to their 60's values and ideals. As a progressive niche movement, its advocates call for balancing worldly concerns with attention to the depths of the inner life. Such movements attempt to foster a more inward inquiry, but such notions as "spirit" and "soul" have religious connotations and evangelical overtones. Bringing "soul" or "spirit" into the workplace-especially if it is a mandated training program-could be seen by those in the mainstream as an invasion of privacy. These transformation efforts run the danger of degenerating into New Age moralizing or Judeo-Christian dogma. In either case, such notions as "soul" and "spirit" still perpetuate a dichotomy between "higher and lower," "inside and outside," "objective and subjective," "sacred and profane." Achieving balance within these models means building bridges between different life domains, or juggling the ratio of life energy that we devote to various domains. This approach however doesn't directly inquire into what gives rise to the boundaries between inner and outer, between sacred and profane, between higher and lower. Instead, the soul and spirituality movements are still operating themselves within the domain of belief systems. We have to choose between, or make a value choice, as to which belief system we want to adopt (and inevitably defend). Rather than making such boundaries and beliefs transparent to inquiry, we end up simply adopting new words, new rhetoric, new beliefs, new concepts, new values. What may start out as a genuine and sincere inquiry, eventually gets bogged down and lost in the thicket of conceptuality.

Dialogue, Mental Models and Inquiry

After the publication of The Fifth Discipline (Senge, 1990), a great deal of interest was generated in such practices as David Bohm's approach to dialogue (Böhm, 1997), as a means of using inquiry to examine the "mental models" and deeper assumptions that shape and structure our experience. My observations of many practitioners who have latched on to the practice of Bohm's dialogue have not really gone far enough. In many instances, "dialogue practitioners" have taken Bohm's insights and theoretical orientation toward wholeness (which dialogue is but one facet) and have technologized the practice of dialogue. I know of one prominent practitioner who now offers a seven-step training workshop on dialogue for aspiring "dialogue facilitators" (although Böhm never recommended or advised that the facilitator role be so formalized). Worse, the workshop participants don't even go through the process of entering into a dialogue, which may take many successive meetings with a group over a period of weeks, months, or even years.

This is yet another example of how what was once a vital form of active and open inquiry, is reduced to a model, tool or method, which is then slavishly followed.

But the issue here goes much deeper than the commodification of knowledge. If one looks deeper into Bohm's work, one will see that attempts to use models to effect change, actually inhibit fundamental change. Most dialogue practitioners believe that the practice of dialogue culminates in surfacing, suspending and examining mental models or assumptions. But for Böhm, this was just the beginning, not the end, nor the "goal" of dialogue. In fact, dialogue, at least as I understand Böhm, has no goal or destination whatsoever. It is the complete suspension of the usual temporal and goal-orientation in a dialogue setting that allows human consciousness to have an opportunity to inquire directly into the underlying structures of human experience. According to Lee Nichols (1998) who was a co-founder of Bohm's dialogue seminars at Ojai, and editor of Bohm's recent books, most dialogue initiatives (especially those in the corporate world) terminate at the point of surfacing assumptions and mental models. Böhm maintained that the surfacing of assumptions was just clearing the way for inquiry to go deeper, to develop more a direct and embodied insight into the nature of thought. To do this, he suggested that we develop an experimental form of thinking, what he referred to as proprioception. Surfacing and suspending assumptions is only a preliminary practice for allowing the mind to observe itself. When we suspend an assumption or surface a mental model, we sort of hold it in front of us to look at. For example, rather than getting angry at an event, we suspend the anger, both in terms of not reacting outwardly by expressing it, but also by not reacting inwardly either with our usual inner dialogues about how we have been wronged or insulted. But suspending assumptions and looking at mental models places them at a distance, "out there," so we can examine them. Böhm noted that dialogue required proprioception, an ability to not just "think about the anger," but "to think the anger," that is, to embody the anger in way without acting it out or holding it in or suppressing. This is not an intellectual exercise, as all sorts of powerful emotions and feelings will be triggered in the course of the experiment. What at first is seen during the suspending phase as an emotion with a label "I am angry," moves more deeply into the felt sensations of the body, sensing the physiological changes in heartbeat, breathing, temperature, thoughts, images and so on. By practicing proprioception, Böhm maintained we could open up the fundamental structure of duality between subject and object, and that a deep and embodied knowing might come into play which was more whole, more aware of itself. This notion goes way beyond conventional and corporatized approaches to dialogue where the goal is achieved when members make the claim "we are having a good dialogue now, because now I understand and appreciate your assumptions, and now you understand and appreciate mine." This interpretation sounds remarkably similar to the old Gestalt prayer. The latter scenario is not only very different from what Böhm had in mind, it also is a sanitized and disembodied effort at dialogue. For Böhm, one could not appreciate or engage in dialogue until one came to terms with the body, and all of its physiological responses and reactions. Most of what passes for dialogue in corporations is rather tame in comparison to the dialogue sessions that occurred over the years at Ojai with Böhm (Nichols, 1998).

Turning dialogue into yet another "change management" or OD technique simply perpetuates the linear model of change. Our usual orientation in time always seeks a model or technique, we always want to know the exact sequence of steps that will get us from point A to point B. But this adherence to models and techniques keeps our ego fixed within a linear temporal structure. Yet if our "goal" is change the way we change, to really challenge the fundamental structures of reality and open up to a deeper time, a more expansive vision, and a more holistic knowledge, then we will also have to suspend techniques too. It is not enough to suspend and examine mental models, replacing old models with new ones. Rather, we need to examine and question our dependence on the model that knowledge of knowledge itself depends on acceptance or rejection of mental models. Our current model of knowing (based on the acceptance of mental models) is subject to the rhythm of linear time. Using models to inquire into models only keeps our inquiry within a selfsealing linear time loop. Models function within pre-established spatial-temporal boundaries, allowing for only certain kinds of events or certain kinds of sequences to unfold. Events that fall outside the boundaries of established models, for example, parapsychological phenomena such as telepathy or clairvoyance, are considered "unlawful," or "unreal." We project new models forward, but in our projecting, we model the new on what has come before (we have no choice since time moves from the past to the future within a linear framework). If new insights emerge, we try to make sense of what they mean by interpreting them through an existing model, or we formulate a new model to explain what was once a fresh and vital insight. We may make claims that we are breaking new ground, establishing a "new paradigm, or engaging in transformational change, but our journey and inquiry unfolds according to a well established dynamic.

Dialogue is limited so long as it conforms to a fundamental model that establishes models as the only valid way to generate new knowledge (Tulku, 1990, p. 130). To proceed in a more direct fashion, we need to surface not only our mental models, but to inquire more directly into our very dependence on models as a way of knowing (without resorting to a model to guide the inquiry). We could use various labels for this "approach"- creative inquiry, active inquiry, and meditation- but the point is this mode of inquiry cannot be prescribed in advance. There are no pre-established steps that can be followed in a manner that is befitting of most consulting, training efforts, and change management techniques. For this reason, most people in the corporate world, and most practitioners for that matter, will not be comfortable with a mode of inquiry that makes no promises in advance, and lacks a well defined sequence of actions. Not only would it be "hard to sell," most people want to know the payoff, the utility of such an approach, "the deliverables" if you will, before they will make such a psychic investment. But this "what-will-I-get-outit" orientation is the very orientation that would be challenged with such a more direct form of inquiry. Transformation of our way of knowing, thinking and being is very different than following prescriptions, applying tools and technologies for pre-established ends.

Transformation and the Embodiment of Knowledge

One of the major problems in the field of organizational development and change is that there is little inquiry into how our embodied assumptions of space and time influence our way of knowing and being in the world. The field of OD offers a plethora of ideas and techniques intended to help people and organizations change and adapt, but these theories and techniques assume that space and time are invariable dimensions. If this assumption could be challenged, many fruitful avenues of inquiry could be opened up, possibly allowing a more immediate embodiment of profound personal and organizational change of the deepest sort.

For real transformation to occur, insight must move from the realm of theory and abstractions to actual embodiment. However, this is not an antiintellectual argument, or an invitation to simply trust one's experience, but a call for an incisive, penetrating analytical and experiential questioning of embodied assumptions- the structures of our language, thought, and dimensionality in space and time. In contrast, conventional knowledge is usually limited to the manipulation of belief systems, constructs, and accumulation of data, which takes our structures of language, thought and spatial-temporal dimensionality for granted. Within such a framework, knowledge is reduced to a language recycling game- a mere exchange of lifeless concepts, words, ideas, and images. While we seek out new approaches, faithfully execute the most advanced techniques, espouse new beliefs, and parrot new ideas (e.g., chaos theory), we still feel ourselves to be operating and moving within the closed system of ordinary space and time, thinking the same thoughts, enacting the same patterns, making the same resolutions and promises. New concepts, new theories, new techniques, even new paradigms, fail to infuse our being or affect our humanity at a deep level.

Although the generation of information is speeding up, the process of our thinking remains fundamentally the same. Even our image of the human mind is now compared to a computer, a sophisticated container for storing and processing bits of information. We think primarily through a linear sequence of discrete acts of attention. Since our attention is focused on acquiring information, our awareness of space and time as factors in our experience is minimal. Further, our mode of knowing accepts as a given the distance between subject and object; indeed, the distance between our desire and the object of our desire is seen as a barrier that has to be overcome. Space and time then are seen as barriers in this scheme, as obstacles to achieving our desires (Tulku, 1997, p. 153). As information in society is projected forward, our knowing capacity is preoccupied with keeping track of a stream of ideas, concepts and images as they rapidly advance and proliferate at rates faster than our ability to "stay current" and "on-top-of-things." But time is always moving too fast for us to take hold of knowledge. With our awareness focused primarily on the surface structure of time, we are entranced by our own narratives and stories that tell us that we always falling behind, or needing to get ahead, of time's momentum. In the face of a knowledge generation speed up, the human mind experiences a sense of overload, disequilibrium, and feelings of helplessness.

Always on the edge of disorder, we feel compelled of having to play catch up, rushing here and there, going from and to, scurrying around in a space-time compression chamber. Entranced by and entrained to (dazed and confused?) the compression of events that unfold rapidly in linear time, we are literally unable to account for or stay abreast to what is happening. Carried along the jagged waves of turbulence, we lack vision; we cannot see where we are headed. We are "caught up" in the flow of linear time to a degree never seen before in human history. In response to spatial-temporal turbulence, we attempt to create safe havens for our fragile egos by laying claims to ownership of knowledge. We adopt a highly individualistic and self-orientation, reducing knowledge to a possession, a commodity which individuals own. Knowledge becomes intellectual property. This trend is quite evident. Many academics become self-aggrandizing advocates and dogmatic proponents of their pet theories. Greedy consultants place - symbols on their tools and techniques which are often simply repackaged ideas adopted from the past. Managers keep their knowledge close to their vest for fear that someone else might get ahead of them on the corporate ladder. When we view knowledge merely as a possession, we erect boundaries and limits on knowledge, blocking its ability to grow, inspire, and take on new forms. This narrows our vision even further, and soon we end up settling for more of the same. Where is the energy for change? Where is the creativity? What happened to our capacity for imagination?

One of the root problems of the modern mind is that it has become estranged and alienated from its space-time nature. As Tarthang Tulku (1977) points out, human beings are space-time beings. Tulku (1993) provides an interesting metaphor that it is as if we have come to live inside a bubble. Totally hypnotized by the contents and momentum of our own thoughts, we have turned away from questioning how the whole underlying mechanism is constructed and perpetuated. So caught up in trying to effect change and resolve our problems from within the bubble world, we find that we have little power for commanding our own destiny or of receiving fulfillment and nourishment from our being in time. As each of us lives our lives inside our own self-contained bubbles, they seem to bounce around erratically, randomly, and chaotically- and eventually our sense of meaning fades in time, while our feeling of being victimized increases. As we grow older, as we become more "comfortable" in our organizational roles and careers, we come to know and act in limited ways. While the stories we churn out and the labels for our experience may change, our change and development journey follows a familiar and well- trodden path. We never quite feel fulfilled, never quite whole.

Inside bubble worlds, our vision is limited. But here, again, questions can be posed by questioning the nature of limits. Tarthang Tulku (1993) puts it this way:

The patterns we embody in our action and our being gain power over us only because we "know them to be true. But what is the source of that knowing? It seems we accept the way things are because we imagine that they can not be otherwise. The lack of vision we experience- even the impotence of insight to effect change- indicate this hidden power of imagination in operation. Can we imaginatively embody this insight? (p. 8)

Revisioning Vision

A new way of understanding change can be developed, not by operating within the existing temporal order, but by understanding time at a deeper level. Organizations not only need shared visions (which are often just static words and concepts about a desired future in linear time), but people who can transform their limits on ordinary knowledge and become true visionaries. People must be able to "live the vision," "embody the vision," and "enact the vision," in daily life.

Therefore we should open up, and revision our way of thinking about vision. Vision implies a panoramic perspective, an ability to see the future with clarity and imagination, and an energetic relationship with the power of time to create a sense of possibility. This approach also must go beyond the simplistic idea that change and problem solving will be achieved by retreating to a neutral place that transcends ordinary time. Rather, this "approach" to change amounts to embodying a liberating vision that reveals how we may loosen or "unfreeze" limiting conditions without affirming the substantiality of the linear temporal framework. In other words, fundamental, transformative change could occur by changing linear temporal momentum- not by plotting new directions, scenarios, or courses of action within the order- but by unfreezing the constricting structures of the order itself. This is exactly what occurs when profound insights, breakthrough ideas, or unexplainable synchronicities occur. What we usually consider to be extraordinary or exceptional creativity- the realm of genius- is rare and infrequent because such acts of creativity appear to transcend the ordinary temporal structures. We often describe the genius as someone who was "ahead of their time," or that their illuminating flashes of insight appear to come out of nowhere.

Rather than accepting transformative events and peak experiences as rare and infrequent occurrences, we can learn to awaken our connection to a deeper and more dynamic time, and make improvisation a way of life. To the degree we attempt to keep time at a distance (whether by ignoring, controlling, or by avoiding it), we also distance ourselves from the source of creativity. Ultimately, this means learning to embody a new vision of time, one that would see no difference between ordinary time and the deeper time that was expressed above. In this sense, transformation is not an accurate word because there is no movement in ordinary time, no going "from" one state "to" another. Rather, the higher order change of this nature is more in likeness to an alchemical transmutation, in others words, a truly new vision of reality. Techniques, step-by-step methods, and tools unquestioningly and unknowingly perpetuate the linear view of time and the limits associated with it. Transformation of our thinking, and our very being, must go beyond a slavish adherence to implementing and applying tools and techniques for utilitarian purposes. Rather than applying a tool, technique, or method (which rely on movement and transition through a linear series of temporal events), this approach has no path to traverse, no goal to arrive at in some distant future. Instead, there is only the sense of immediacy, of a dwelling or deepening within. We discover this deeper time and broader perspective then, not by going, not by moving "from" somewhere "to" somewhere else, but by allowing the vision to grow and open within itself. We learn to enter or "sink into" the rhythms that are (metaphorically) "beneath" the surface structure of time's linear directionality. This approach to change and transformation is beyond action and inaction, what we might call it abiding within, or non-action. In Christian terms, it may be akin to sacrifice (making sacred). Or it may be likened to what the Buddhists refer to as dharmata, unspoiled by either acceptance or rejection, it is perceived as spontaneously present nature.

Yet, even so, this approach does not set up a dualism or arbitrary opposition between ordinary linear time and Multi-Dimensional time. It is more a matter of relaxing into a way of knowing which doesn't depend upon ordinary movement, which proceeds by moving from one position to another (from lower to higher, from here to there, from now to then). Rather than attempting to exchange or replace existing paradigms, mental models, or schémas for "new" ones (which is the modality of conventional transformational methods), this approach amounts to more of a relaxation all conceptual structures, allowing for a different and less temporally fixed way of knowing to emerge. In other words, what is unfrozen is not a series of event sequences within the ordinary temporal order, but our perceptual dependence and habitual knowing of the order. This may sound like a paradox, but it is not. It is simply the recognition that in the midst of change and turbulence there is spontaneously present, unchanging, and unbounded freedom that human beings have direct and immediate access to.

Normally we view events as flowing through time, where events (and our knowing self as the owner of our experience) are in the foreground, whereas time is in the background. We use time to measure out events (e.g., this event belongs to the past, this event passed by quickly, this event has not happened yet, etc). But a different vision of time may allow us to view events and time as inseparable. Events are not merely flowing through time (as some abstract medium), but they are time. Events and time are "given together." If this is the case, the whole linear temporal order may itself be just one possible order, one possible way that the temporal universe can display events or manifest reality. The essence of time may be a dynamic unity, where there are no rigid distinctions or partitions between past, present and future. The rigid structures of the linear temporal order may be only one possible way of seeing, one possible way of being in time.

We could make the analogy that the essence of time is more like harmonious, rhythmic chaos. The rhythm is not random, nor is it orderly, but it has the capacity for manifesting different orders. Time- creative time- is "beyond" order, since any sense of human order is only one possible way that time can present or order events. Thus, time itself can never be truly measured, for any measurement device already presupposes certain temporal conventions. Linear time then could be thought as a creative mechanism of a greater time. From a Great Time perspective, events may not at all appear as flowing in a sequential linear order. The temporal partitions between past-present-and-future may be the expression of a particular rhythm, one way that Time can play We can imagine this by considering Time as an infinite whole, which can present the linear temporal order as a creative appearance, but without confirming the momentum or temporal partitions between past-present-and-future as having any substance. Tulku (1995, p. 163) asks us to think of the unity of time as multi-dimensional, or even "de-dimensional," as being like a sphere, where pasts-presents-and-futures co-mingle and rhythmically interact, no longer rigidly divided by linear temporal sequencing. The linear temporal order that we know is one way of slicing through the sphere. With this new vision, we can begin to see and feel how the wholeness or unity of Time allows creative manifestation, for dimensioning into linearity. Yet even within the linear order, we never truly depart from the unity of time's wholeness; the distinctions we make and the boundaries we draw emerge from wholeness and remain within wholeness.

Transformational knowledge emerges as we learn to embody the wholeness of time, awakening knowledge that can see through the order of linear temporality. Our awareness of time changes; we live not on the turbulent waves of its surface, bouncing from point-to-point, but from within its silent depths. Yet we also can see the structure of the linear temporal order- the turbulent waves on the surface- are inseparable from the depths.

Creative Inquiry and Imagination as Vehicles for Transformative Change

We are so accustomed to the assumption that change involves the initiation of a "process" that unfolds through time that any alternative is almost immediately retrofitted into a conventional change process model. At this point, we may be growing uneasy. If we are not to turn toward techniques, new interventions, or new models, how will we be able to effect transformative change? How can we begin? What is our point of access? Even these questions reflect the linear temporal assumptions. Perhaps the simplest response to entering is to ask questions, to look directly into our ordinary structures of space, time and knowledge. As these come into focus, it may then become possible to see how the structures of space and time in our conventional realm are set up in advance, which in turn allows us to see how we set ourselves up for limited choices and confining patterns.

The path to knowledge, the path to transformation may be found in exercising a creative inquiry and strengthening our powers of imagination. The interventions and research methods are close at hand-we can turn directly to our human capacities for asking questions, imagination, and speculation. Wherever and however we start is ok, since concepts having to do with places of origin and destination are topics of the inquiry. There are no pre-established sequential set of linear steps that we have to follow, for doing so would prevent us from questioning the very structures which prevent us from exercising our creative powers of inquiry and imagination. For all the talk about vision in the organizational development and management literature, it seems that little attention is given to imagination. This seems odd, for vision implies the ability to imagine what could be otherwise, a capacity for full seeing. While we may still imagine more "desirable futures," we do so by knowing and tapping the creative energy of time's future more directly. We engage the future by not projecting our expectations forward, since such projections are bound to past assumptions, past habits, and the momentum of the linear order. Rather than projecting forward from the past and into the future, we allow the indeterminate, "non-arriving" dynamic of the future to dance new possibilities into being. Since the future never really truly "arrives" (if it did it would be the past), the future offers infinite arid immeasurable opportunities. Indeed, the future energy of time is unbounded. Thus, instead of planning and plotting our way to the future, we allow our consciousness to improvise and dance from within the energy of the immediate future, feeling its energy as being "present" "here." Using our undivided (undivided across the partitions of linear time) conscious attention, we can actually invite the future into our being, allowing creative possibilities to manifest.

As we begin to thaw and unfreeze the temporal limits on knowledge that we have so faithfully constructed without awareness, we realize a newfound source of vision and creative imagination. New possibilities begin to emerge and spring into being almost effortlessly As Tulku (1995, p. 81) states, "Some who have seen this dynamic at work have called it love or truth; others have spoken instead of wisdom or beauty or blessing. It does not matter. Labels do not confine knowledge, nor do words bring it to a halt."

What is the purpose of this paper? Is all that was expressed only theory, more words on paper, more concepts to add to the stockpile of academic knowledge? Or can we begin to activate an inquiry into change that allows and encourages fundamental questions about human consciousness in space and time to be asked? Can we bring more awareness of time to change in our theories and practices? If we can engage in such an active and free inquiry, we may find our way home into the still point within, into nuclear time, into Being as presence. Transformative knowledge is beyond what can be put into words; it is, as Tarthang Tulku Rinpoche (1997) puts it, "...without ownership, universally available, joy, love, and beauty radiate throughout time and space. We do not have to go somewhere else to find them, for the secret dimension of the sacred is here. Inquiry and inspiration lead us down the path, and wonderment unlocks the door. We enter a field of boundless fascination, of measureless creativity. We breathe the air of freedom, and know in our hearts the delight of awakening to full embodiment" (p. 237).

Show Time

Abstract

[TranslateAbstract](http://search.proquest.com/abicomplete/docview/231226525/73041484BA0748FAPQ/7?accountid=33337#center)

The rugged 12-yd. mixer is designed for fast set up, high performance and simple maintenance, the manufacturer contends. The single pivot tilt point with a full 60 tilt and double-speed drum return reduces cycle times resulting in increased production. The single pivot point also enables quick alignment of the drum for dust collection. The tilt-up mixer's standard configuration includes 12 mixing blades and four capacity blades. Blade wearing edges are reversible for long life.

Full Text

* [TranslateFull text](http://search.proquest.com/abicomplete/docview/231226525/73041484BA0748FAPQ/7?accountid=33337#center)

With 2,100-plus exhibitors covering more than 1.85 million net square feet of indoor and outdoor Las Vegas Convention Center space, ConExpo-Con/Agg 2005 continues to be the largest exposition for the construction and construction materials industries in the Western Hemisphere.

More than 100,000 industry professionals from over 120 countries are expected at the March 15-19 event to look for new ideas and products, face-to-face meetings with suppliers, expert education and training, and networking. For the second time, the International Exposition for Power Transmission (IFPE) will be held in conjunction with ConExpo.

This year's event continues to include a Concrete Central area in the convention center's South Hall (see Overview Map below), which was introduced at the 2002 ConExpo show. The area will again concentrate concrete production and construction equipment exhibitors.

SEMINAR PROGRAM

The education sessions include more than 115 informative seminars grouped in 12 industry-specific tracks: aggregates; asphalt; construction project management; equipment maintenance: management; equipment maintenance: operations; environmental regulations; management; personal development; recycling; safety; utility construction; and, of course, concrete. The sessions are presented by industry professionals and many of the subjects are repeated over the program to accommodate busy schedules.

The concrete seminars cover such topics as:

Concrete Mixes of the Future

Production & Marketing of Colorful Concrete

How to Use Supplementary Cementing Materials in Concrete

Value Added Applications of Cement-based Materials in the Residential Marketplace

Sustainable Development & LEED

Using Self-Consolidating Concrete for Profit & Performance Improvement

EQUIPMENT & PRODUCTS

What follows in this ConExpo-Con/Agg Show Report are selected highlights of equipment and services geared toward the concrete industry. Booth Numbers given as available at press time. Consult the below map and chart for exact booth locations.

BOOTH LOCATIONS

Silver Lots 1 & 2: S-500 to S-799

Silver Lot 3: S-800 to S-899

Central Hall: C-4000 to C-7999

Lobby: L-3000 to L-3900

North Hall Ballroom Exhibitors: B-3624 to B-3787

Blue Lot: B-900 to B-999

Gold Lot: G-100 to G-499

North Hall: N-1000 to N-2999

South Hall: 1st Level - S-8000 to S-12500

South Hall: 2nd Level - IFPE: S-12839 to S-15449

South Hall: 2nd Level - CECA: S-15600 to S-18300

A set back for Mack?

With an eye to this year's World of Concrete (Jan.18-21) and ConExpo-Con/Agg, Mack Trucks unveiled the Granite Axle Back in mid-January. The truck is the latest model in the company's four-year-old Granite series and is poised to replace the Mack DM series.

The new truck is especially engineered for some states and Canadian provinces where laws governing roadway use are such that having the front axle set back makes it possible to legally carry more payload. The axle back position also results in a shorter overall wheelbase, making it easier to maneuver around tight job sites.

This newest addition to the Mack lineup combines what company officials note are all of the advantages of the current Granite model - a large, strong, comfortable cab with plenty of leg and belly room; best-in-class visibility; ergonomically-designed electronic dash; and advanced electronics - with a new exterior featuring distinctive flexible fender extensions; sleek halogen headlamps; stylized mirrors; and a Mack "M" grille. A variety of front bumper types includes flush, extended, and stylized in either painted steel or chrome. A 27-in. front extension version provides protection for a front-mounted PTO. The stylized option is designed in sections, which eliminates the need to replace the entire bumper if only part of it is damaged.

Granite Axle Back's wide range of frame rail thicknesses and crossmember options make it possible to optimally configure the vehicle as a straight truck or tractor for almost any application, including mixer and dump. Company officials credit the Granite Axle Back's reduced maintenance costs to engineering from the ground up. Air lines and the electrical harness are easily accessed. All air valves - including the relay valve, ABS modulators and spring brake valves - are centrally and conveniently located, product engineers note. Air and electrical lines are properly supported and protected in brackets specially designed to reduce fraying. All fittings feature reusable quick connects. Central Tire Inflation is a factory-installed option as well. CTI allows drivers to adjust tire pressure "on the fly" from inside the truck to improve traction. The vehicle can also be equipped with perimeter work lights and an air hose to blow debris out of the cab.

The new model features a re-engineered BodyLink system, with two quick connect electrical connectors along the left hand frame rail that allow a bodybuilder to wire into the truck's electrical system more efficiently. The design enhances quality and reliability by reducing or eliminating undesirable splicing, circuit loading or other electrical system problems, product engineers contend.

The Axle Back bears on a new chassis called Cornerstone. The wide range of Cornerstone constant-height frame rail options, 300 mm tall and ranging in thickness from 7 mm to 11.1 mm, are all made from high-strength, low-alloy steel that's quenched and tempered to a minimum of 120,000 p.s.i. Rail reinforcement liners are also available.

At the front the truck, rails are flared up to enable an larger radiator. To reduce driver fatigue, the company uses a new engine mounting system that decreases noise and vibration. A rubber cushioning system cradles the engine and promotes longer operating life. And a whisper-quiet fan, controlled by the V-MAC electronics system, turns on and off precisely when needed to save fuel and keep dust kick-up to a minimum. Booth S-8905

International builds out 7000 Series

The 7700 delivers what International Truck and Engine Corp. officials note is a combination of beauty and power. It joins the company's line of severe service vehicles and provides many of the standard features and benefits available with the two-year-old 7600 models, plus new options that specifically target bridge formula mixer, super dump and block hauler applications.

Full production of the three new 7700 models began last month. They include set-forward front axle 42 and 64 models, as well as the 7700 setback axle 64 model. The chrome features of the 7700 create a dominating image for drivers, product engineers contend, and instill confident command of the road. A new front taper leaf spring system affords a smoother ride, loaded or unloaded.

To optimize payload weight, International is delivering a new solution with the 7700 design. Two of the new models feature a new front bumper-to-axle setting of 29.1 in. and frame system that optimizes payload weights for states that follow bridge formula limits. Another example of the new features includes an improvement in body mounting. The location of components on a chassis is critical when mounting various bodies such as mixers and multiple lift axle trucks, according to product engineers. The 7700, they add, offers new clean CA chassis packaging options that create a faster, more economical and easier process for mounting truck bodies.

The vehicle's frame system includes a single 12-in. frame that is 400 lb. lighter than many double 10-in. frames and allows customers to haul greater payloads. The 7700's standard engine is a 305-hp Cummins ISM with an 1,150-lb.-ft. torque rating. The Eaton Fuller 10-speed overdrive transmission also is standard. Power options include upgrades to a 470-hp Caterpillar or Cummins engine.

Other 7700 features and benefits International officials note include:

The chrome grille - resistant to road debris, cracking and breaking - is attached by six easily removable bolts for quick replacement if damaged.

Standard powder base coating on certain bumpers, mirrors, battery boxes and fuel tanks to minimize chipping and corrosion.

The multi-piece hood and headlight assembly makes repairs easier because, if damaged, only one piece needs to be replaced.

Large front windshield for a better view of the road.

The standard base coat/clear coat paint process seals the truck's color coat from the environment and protects the base coat paint.

The hood easily tilts and is made of a sheet molded compound that is less expensive to repair than the fiberglass hood offered by other OEMs.

Dual-power steering on axles over 16k lb. and wheel cut up to 50 allow for improved maneuverability and reduces turning effort for more control on soft dirt or sand surfaces.

The Fit and Finish door features a cab exhauster to let the air out so the door is tight and noise is significantly reduced for a quieter cab.

The standard cab space provides more storage, including two overhead compartments and side-door storage areas. Additional compass, wind and temperature gauges can be added.

The steering wheel includes mounted controls such as cruise control.

The 7700 also features the latest in truck electronics. It includes the Diamond Logic self-diagnosing system that electronically checks truck status. When the key is turned to the "on" position, error codes will appear if there is a problem to let the technician know of the precise electrical fault. There are more than 517 fault codes that are diagnosed through the Diamond Logic system. Booth S-11617

Hagan plant joins marine ranks

At ConExpo-Con/Agg, Vince Hagan Co. is exhibiting a line of transit and central mixed batch plants and related environmental equipment. The company offers standard and custom batch plants, including the one shown here for Dorsett Bros. Concrete Supply Inc., Pasadena, Texas.

To service a Interstate 45 Galveston Causeway Project contract for Evansville, Ind.-based Traylor Bros., Dorsett ordered a portable HT-12400C-65 plant with 10-yd. horizontal shaft mixer. Engineered for barge mounting, the plant has 400 bbl cement storage; 65-ton aggregate bin; truss frame-mounted central dust collector; and 36-in. batch belt. In a typical setting, it could produce up to 300 yd./hour. The output for Dorsett has varied because of logistics, as aggregate, cement and water are supplied by separate barges. The plant is projected to supply 225,000 yd. of material for twin, 74-ft. wide, 1.5-mile bridges that will replace a 40-year-old causeway.

Dorsett's plan for a barge-mounted batch plant has enabled many marine pours and opened up scheduling that would otherwise have been limited to night-time operations and mixer-truck deliveries from the existing causeway. Plant construction took two months, including the placement of a modified excavator with a 2.5-yard hydraulic clam bucket and a 550-volt 1000 amp generator. Admixture tanks and a water chiller for temperature-controlled concrete were also installed.

Utilizing extensive experience and TxDOT guidelines, Dorsett staff has designed 12 different concrete mixes for the project, varying between 1,500 and 6,000 psi compressive strength. Most are high performance mixes that have high contents of conventional fly ash and Micron [superscript]3 , a premium ash from Boral Material Technologies, to protect the structures from the highly corrosive environment. Certain seal mixes have included steel fibers dosed at 50 lbs./yd. When the marine-based batch plant is occupied, Dorsett's nearby land plant supplies concrete for construction from the trestle, larger seal and footing pours and augments some marine work. A Dorsett employee coordinates concrete deliveries with Traylor's pumps and placing boom each day.

Supplied directly from the batch plant, two Schwing trailer pumps provide a homogeneous mix to the KVM 39 separate placing boom through 25 feet of pipe from the pump to the base of the pedestal, then 60 feet up the pedestal to the boom. The 39-meter boom with counterweight can be adjusted to three separate heights.

Traylor Bros. crews have begun work on the main span segmental portion of the bridge. The pier tables, or "starter segments" at piers 37 and 38 are being completed, and with 320 drilled shafts completed on the northbound bridge, girder setting, deck work and roadway segment casting began in October. The project is scheduled for completion in 2008. Booths S-720 (VH); S-832 (Schwing)

SOLOMON COLORS CHIPS IN FINAL TOUCHES TO DECORATIVE FLOOR

Company plans to exhibit a full line of pigments and dispensing equipment for ready mixed concrete, along with stains for decorative flatwork such as those used at the Rail Golf Course (right) in Springfield, Ill. Owners of the course, host of the State Farm LPGA tournament, wanted to have a building erected to protect golfers from inclement weather during outings. As owners of multiple golf courses, they have realized economy and success with the use of large tents.

The goal for the Springfield location was to produce a finished floor that could be covered with a matching piece of indoor/outdoor carpet when the dance floor was not needed. In March 2004, KML Architectural Concrete of Girard, Ill., began placing a 100-ft. 40-ft., 4-in.-thick slab. It was designed using a six-sack mix and poured over 8-in. of compactible fill to rise out of the flood plain. Info Corner of Springfield provided the concrete for the floor. Solomon's Concrete Stain was specified, warranting a cement-rich mix.

After the floor had cured for 60 days, concrete artists began to lay out the design on the 324-sq.-ft. "canvas." Because the floor had been poured on two different days and power trowel finished, there were two different gray colors. Adjustments were made on the application of the stains to create a marbled look using a blotting technique on the wet stain. The final product creates a unique impact for all types of course events. Booth S-9145

Besser Co.

The manufacturer will display its M-12E batch plant, and other production equipment and components. The booth will showcase the updated version of the M-12E portable plant, which sports a streamlined design and employs new technology to reduce maintenance and improve performance. It features an aggregate batcher with a CPMB rating of 12 yd., plus bin of 1-in. steel plate construction with six individual pneumatic cylinder-equipped gates. Additionally, the capacities of the cement silo and auxiliary silo have been increased to provide product flexibility. Booth S-636

C&W Manufacturing & Sales

This environmental systems manufacturer is unveiling the newest addition to its product line - the Round Easy-Clean Central Dust Collector. The unit features expandable filtration capacity from 5,000 to 8,000 cfm, and high-volume capacity for cleaning combined with a reported filtration efficiency of 99.99 percent. The dust collector also has all service points at ground level (except for filter media) and a space-saving footprint. Standard features include: tool-less exchange of filter media, spun-bound polyester filter media, vertical wide-pleated cartridges and 10-gauge heavy-duty steel construction.

C&W also recently introduced a new line of expandable, low-profile round silo collectors, called "O" Collectors. This new compact unit features pop in-out tool-less filter media exchange without the need to remove blowpipes. The lightweight "O" Collectors stand 46 in. tall and available in both polyethylene and steel. It is possible to upgrade or expand a silo's filtration capacity to meet increasing batch plant output by expanding the number of cartridges without having to replace the unit. Booth S-710A

Cemen Tech Inc.

A new feature for the company's volumetric mixer line is said to reduce maintenance and prolong service life. After years of research with U.S. military participation, the Max Life Mixer Bearing System was developed to withstand the abuse a concrete mixer receives in all environments. This sealed, low-maintenance system will add years of life to the new lower mixer bearing, company engineers contend. Booth S-9027

Durafiber, Inc.

UltraFiber 500 is a custom-modified cellulose polymer for concrete reinforcing, which is alkali resistant and provides what product developers note are advantages like superior finishing and excellent crack reduction. UltraFiber 500 meets code evaluations and is patented. The product is manufactured from one of the strongest cellulose fibers available and has more than 700 million crack-fighting fibers per pound, which disperse evenly throughout a concrete mix. This facilitates their ability to intersect micro-cracks as they may form, disperse the tensile stress, and reduce macro-cracking.

Each 5mm 6mm UltraFiber 500 chip contains over 33,000 fibers, which readily disperse into individual fibers when mixed with concrete. The product's unique chip form enables it to be automatically conveyed and metered for accurate and reliable loading into the mixer. Booth S-9227

Hydromix Inc.

Company's 3000 slurry mixer is geared for new or retrofit transit mixed plant installations. The pipe-like vessel is placed below a cement weigh batcher to provide for slurry dispensing onto aggregates as they are charging mixer trucks. The 3000 unit's mixing action, capable of running cement and fly ash at rates exceeding 50 lbs./second, produces a continuous and positive flow of consistently super-hydrated slurry at a wide range of water/cement ratios. The unit is equipped to operate in a dry mode as well, or can be bypassed at limited production times.

Cement and fly ash are metered through the 3000 by varying the speed of the feed screw to guarantee a consistent target rate resulting in a uniform water/cement ratio. High pressure water is injected into the cementitious powders as they pass through the blend tube and are mixed into slurry before being forcibly discharged onto the aggregate flow. This process eliminates dust in batches where the slurry water/cement ratio is at or above 0.12. The 3000 unit's operation is displayed on a main screen for batch operators; sub screens are available for setting and checking system parameters, including nozzles, cement and water flow trends, and admixtures. Booth S-11711

GivenHansco

The company now offers the a complete payroll software system developed specifically for the construction materials industry, CompuCrete Payroll. Many of the requirements of payroll processing in this industry are unique. Employees can have several different job duties in a day or week, which calls for different pay rates and worker's compensation classifications. The possible combinations of employee's compensation, labor contract considerations and many payroll deductions can make a single employee's check complex. CompuCrete Payroll handles all of these requirements and more such as, direct deposit to and from multiple bank accounts. Payroll tax tracking and reporting are thorough and user friendly, company programmers note. As with all GivenHansco products, CompuCrete Payroll fully integrates with CompuCrete General Ledger.

To complement the vast CompuCrete Payroll system the company has added a new line of time keeping products that seamlessly integrate with the system. Sentry Time Management tracks all employee activity from clock-in to clock-out. The system gathers data and tracks all accruals and exceptions such as tardiness, absenteeism, or abuse of break or meal periods. Sentry Time Management sends hours, attendance, and job task data directly to CompuCrete Payroll. This saves employers time by doing away with timecard preparation, collection, filing, and storage, programmers note, while helping reduce overall tardiness, eliminate unauthorized, and restrict unnecessary overtime. When coupled with CompuCrete Payroll, Sentry can eliminate the need to keep separate records for vacation, sick, or compensation time accruals. Another added business process enhancement is the ability to interface to the GivenHansco Dispatch One dispatch system. Sentry Time Management can report driver clock-in times directly to Dispatch One to show who is available to load. Booth S-17819

Kenworth Truck

The company plans to exhibit T800 and W900S, each suited to mixer and dump applications, at Con/Expo-Con/Agg. The W900S with its 28-inch bumper setting is a popular solution for mixer and other applications that need to meet federal bridge formula regulations. The T800 Extended Day Cab, which provides more leg and head room and additional storage space, suits standard mixers. Kenworth also gives customers the option to spec Allison automatic transmissions on these models. Booth S-8937

Badger Meter, Inc.

Product developers describe the company's Measure Rite Truck Meter as an accurate, durable and field-calibrated flow meter that is designed specifically for concrete truck applications. Primarily used to measure the amount of additional water that is added to the load at the job site, the flow meter features a front-panel resettable totalizer and can dispense a preset batch amount. Booth S-9553

Caterpillar

The manufacturer will present more than 50 machines and nine Cat engines at several locations throughout the exhibition areas. Among new models will be the 930G wheel loader with VersaLink loader linkage, which combines integrated toolcarrier versatility and the speed, forces and strength of traditional Z-Bar linkages. A high-lift version is available for high-dump applications. It increases dump height by more than 17 percent versus the standard version.

The linkage allows for increased breakout forces and increases bucket fill factors. The new design gives the operator unobstructed visibility to critical areas such as the bucket corners and fork tips for more productive material and pallet handling. The new 930G is powered by an electronically controlled CAt 3056E Direct Injection turbocharged (DIT) engine with air-to-air after cooling (ATAAC). The engine is rated at 149 net hp and meets EPA Tier 2 exhaust emissions requirements It also has a 37 percent torque rise. Booth N-2009; G-130; S-15617; S-15827

Goodyear Tire & Rubber

A commercial tire technology that repairs tire punctures when they occur will be on display. The DuraSeal technology features a built-in sealant that allows truck drivers to continue operating after a tire is punctured. The system allows the tire to remain in service until it is retreaded.

DuraSeal tires are said to last six times longer than conventional medium truck tires before removal for repair, according to Goodyear tests. The new technology uses a gel-like, solvent-free compound built into the inner liner of the tire. It is designed to consistently and instantly seal punctures up to in. in the tread area. DuraSeal is currently available on the company's new G287 MSA mixed-service commercial truck tire, and will soon be offered on the G288 MSA tire. The Unisteel G288 tire replaces the G286, the company's workhorse tire for many vocational fleets. Compared to the G286, the G288 offers high-mileage tread compound that provides as much as 30 percent more miles to removal. A wide footprint and 19 percent increase tread volume delivers long tread life. A new severe service tread compound and improved robust belt package deliver 18 percent better resistance to cutting, chipping and tearing. The tire's open lug design provides countless tread edges for grip, providing better off-road and wet traction. A proprietary pitch sequence in the tread design reduces tire noise. In testing, the G288 noise levels are reduced by 3.0 dB. Booth N-2207

Cardinal Scale

Company's model EPR low-profile pitless truck scales suit batch plants and concrete production facilities. The heavy-duty units are available in either concrete or steel decks, permanent or portable, and with capacities ranging from 30 to 135 tons. They are legal-for-trade up to and including 14 ft. wide. Booth C-6665

Liebherr Construction Equipment

This company's wheel loader series is represented by the L 544 and includes the introduction of the L 524 to the American market. The L 524 is the smallest of the wheel loaders presented at the exhibit with a weight of 22,266 lb., a 2.6-cu.-yd. bucket and a 110-hp engine.

The L 544 weighs 33,740 lb., is equipped with a 3.93-cu.-yd. bucket and a 165-hp engine. The L 544 comes equipped as standard with the "2plus2" driveline. This continuously variable drive technology is based on transmission with two hydraulic motors of different sizes direct attached to it, each with a separate clutch. Since at least one of the hydraulic motors is in operation alternately when the vehicle is accelerated and braked, a continuous power flow is assured. Booths S-573A & G-374

RexCon LLC

Company will highlight its 12-yd. Tilt-Up Mixer at this year's show. The tilt mixer is a key feature of the company's central mix product line, including the Model S Porto Paver, the LoGo 12CM Central Mix Batch Plant, the LoGo 12P Central Mix Paving Plant, the Rex-Batch 150, and the Rex Wet/Dry.

The rugged 12-yd. mixer is designed for fast set up, high performance and simple maintenance, the manufacturer contends. The single pivot tilt point with a full 60 tilt and double-speed drum return reduces cycle times resulting in increased production. The single pivot point also enables quick alignment of the drum for dust collection. The tilt-up mixer's standard configuration includes 12 mixing blades and four capacity blades. Blade wearing edges are reversible for long life. The mixing drum is lined with abrasion-resistant, segmented replaceable liners. Poly liners for drum and blades are optional. Both edge and main rollers can be replaced without removing the drum. A removable nose cone permits easy servicing of drum and blades. The covered drum track and sprocket minimizes concrete build up. The tilt mixer only requires 1,800 psi of operating pressure and includes a manual override control. Booth S-540A

Grace Construction Products

Company will preview and demonstrate three new products at its booth: a total solution for self consolidating concrete (SCC) for ready mixed; the "Changing the Color of Concrete" program; and Strux 90/40 synthetic macro fiber reinforcement for slab-on-ground applications. It will hold live demonstrations of mixing and placing SCC concrete, with and without integral color, throughout the show. Booth S-9727

Schwing America Inc.

Schwing will display two KVM 39 separate placing booms at its outdoor ConExpo-Con/Agg booth. The company will also showcase several concrete pumps including the longest boom-equipped pump in North America, and the new S 31 EZ, with low, 18-ft 8-in. unfolding height and a telescopic first section. The new S 41 SX, the longest boom on three axles with the added benefit of curved X-Style outriggers also will debut along with the Series II truck mixers with the lowest center of gravity for added stability in conventional and booster configurations. Booth S-8005 & S-832

Sysdyne

The company's Batching System is a fully automated concrete production and discharging control package with manual back up. The design of the the batching system, batching computer, and other Sysdyne products incorporate many features that have come to be considered industry standards, company programmers note. Features such as full materials tracking, customized truck loading rates, auto batching and discharging control, automatic job scheduling, and credit-limit checking are included in the standard system.

Other features and functions include:

Batches up to four cements; six aggregates; six liquid admixtures; and two metered waters.

Operates in full automatic or manual mode.

Inventories and tracks all cements, aggregates, admixtures and water with on screen and print report and two levels of password protection on inventory and other data.

Choices for each weighed material with either static or dynamic freefall compensation based on the on-going flow rate, load size, past flow characteristics and batcher size.

On-the-fly adjustments to control the charging rate for each truck throughout the truck-charge cycle.

Other options available are interfacing to dynamic moisture probes; interfacing to dispatching systems; seamless system expansion and upgradability; control for multiple central mixers; and accounting interfacing. Booth S-9552

RoMix Inc.

The just-released Clear-Crete Water Emulsion is a new cure and seal compound that gives concrete finishing a new face. CCWE is a multi-purpose, ready-to-use, non-DOT-regulated, VOC-compliant product. It reportedly has high exterior weather ability resistance, as it forms an efficient moisture barrier; produces dense hard concrete; and will not attract airborne dust, dirt or grime. The product is an evolution of the company's previous Clear-Crete formulations and an alternative to flammable and toxic formulations. This version has a thermoplastic, all-acrylic curing, sealing and quick-hardening compound. Booth S-11129

Terex Roadbuilding

The Standard 3-Axle Rear Discharge Mixer features a heavy-duty 3 / 16 -in. AR 400 Brinell steel drum that better resists aggregate abrasion and extends service life. The mixer also comes standard with a 150-gal., SAE-certified, 120-psi water tank for faster clean up than with 55-psi water tanks.

With available 10-, 10.5-, 11-, 12-, and 13-yd. drums, the mixer meets virtually any producer's needs for payload capacities and weight restrictions. Aluminum rear fenders are rust resistant and lightweight, giving operator more payload capacity. The drum mixer features a four-point attachment with spring-loaded pedestal mounts, allowing the mixer mounting brackets to flex when driving over irregular terrain for longer frame service life.

The in-cab controls cover drum start-stop; mixing direction and speed; discharge chute raise/lower and position lock; air-flip hopper; working lights; and air flip hopper position warning lights. An umbilical-cord remote located at the rear of the mixer controls many of the same drum functions. The air-flip hopper enables producer's to faster discharge low-slump concrete used in applications like curb and gutter work. An enhanced angle on the rear fold-down ladder delivers safer access for cleaning out the hopper.

In addition to featuring the mixer truck line, Terex Roadbuilding will unveil the SF2003, a new paver marking this company's re-entry in the curb and gutter market. In the 1970s, Terex Roadbuilding predecessor CMI Corp. introduced the CMI SF-175; the new paver is designed to deliver the performance of Terex/CMI-brand mainline concrete slipform pavers.

The three-track SF2003 curb and gutter and small-utility slipform paver features an agile, low-profile design suited for confined jobsites on both urban and highway projects. A narrow transport width enables the unit to be transported without disassembly, saving contractors time and money. A low center of gravity deliver sturdy, safe operation on uneven terrain. Booth S-540

Simem America

The company recently announced what is said to be the world's highest-production mobile mixing plant: the Super MobyMix 17, which is fully mobile and requires no foundations. A 17-yd. fluid-zone twin-shaft mixer provides more than 750-yd./hour mixing output and can be adapted to receive batched materials from as many as four batching plants for large-scale paving and civil work. The system is generally mixing 12-yd. batches, and can be adapted to any existing transit or central mixed paving plant. The Super MobyMix series of mixing plants range from 1 yd. to 17 yd. per cycle, mixing all types of concrete from RCC to SCC. Booth S-678

Air Cargo Report

Abstract

[TranslateAbstract](http://search.proquest.com/abicomplete/docview/195238008/263B68C373124F01PQ/12?accountid=33337#center)

\* Mercury Air Cargo (PCX) has been awarded two additional cargo contracts by Bahamas Air and Pacific International at Miami International Airport (MIA). Bahamas Air has five passenger flights daily and three weekly freighter flights between Miami and Ft. Lauderdale and Nassau and Freeport in the Bahamas. Panama-based Pacific International will use Mercury as its cargo handler for its fights from Guatemala, and San Jose, Costa Rica.

\* Lufthansa Cargo is offering customers a 21 percent savings through February on freight charges from the U.S and Canada to selected European countries. The special deal applies to all general cargo market and spot rates but does not apply to freight charges included in guaranteed capacity and special rate agreements. The reduced rates can be applied to Lufthansa's line of time-definite products. In a prepared statement, Lufthansa said the special rates are an effort for the carrier to "maintain its leadership position in competitive air cargo pricing leading up to the 21st century."

Full Text

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Lufthansa, 516/296-9675

\* Officially, El Toro is still a Marine Corps Air Station. The California military base is scheduled to close July 1999, and already three major cargo carriers are standing poised to begin operations there. Airborne, FedEx and UPS submitted preliminary project information to Orange County officials working with the local redevelopment authority overseeing the El Toro transition from a military to a commercial airport. Each of the three carriers has proposed a maximum of two flights daily for an average of 12 operations per day. The carriers, using Stage Three aircraft, would follow flight tracks used by the military to ensure that noise is kept to a minimum.

Orange county officials see the interest of these three major players as a clear indication that the airport could support a successful air cargo operation. They are recommending that an interim plan for scheduled flights be implemented prior to the July closing of El Toro. Such a plan could demonstrate to the community surrounding El Toro that commercial operations can be safe and quiet, and be a boon to the local economy. A final decision on the proposal could come in April.

El Toro Redevelopment Authority, 714/834- 5376

\* UPS introduced round trip air freight service to San Jose, Costa Rica five days a week. The flights are being added to accommodate the company's 16 percent growth rate over the past year. Costa Rica is described by UPS officials as the "Silicon Valley" of Central America, with companies such as Motorola de Controamerica, Lucent Technologies and AT&T Servicios de Comunicacion. The high tech companies are placing a greater demand for door-to door express service to and from Costa Rica, according to UPS vice president Robert Elizondo. UPS launched the new service Jan. 19 between Miami International Airport and Aeropuerto Juan Santamaria in San Jose.

\* GATX Logistics and Lockheed Martin Postal Systems have formed a new company, Paxis LLC, to provide shipping services via the U.S. Postal Service for residential delivery. The new venture will enable traditional shippers as well as an increasing number of customers who order on the internet to take advantage of the USPS postage rate discounts. In addition to the USPS rates and delivery service, Paxis offers internet tracking, along with logistics services, and management of freight, fulfillment and returns. GATX estimates the market for ground parcel consolidation and distribution at nearly $4 billion, with growth projected up to $6 billion in five years.

GATX, 312/621-6493; Lockheed, 607/751-2598

\* UPS will expand its branded operations to 21 cities in China through a newly-forged partnership with Sinotrans. The two companies have had an agent partnership agreement since 1988. UPS currently serves 108 cities through this joint venture with Beijing, representa