

# Emerging Worldviews

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WE HAVE ENTERED AN ERA OF GLOBAL CONNECTIVITY in which networks predominate and our interdependence determines the direction and consequences of our actions. This interdependence requires human organisations and systems (HOS) – the independent public and private institutions of our culture, such as our schools, businesses, financial systems, and governments – to function as ecosystems do. While we are all familiar with these organisations and systems, we are

*Change agents continue to struggle with outmoded models, tools, and techniques – ones that were sufficient in slower and simpler times, but that are counter-productive when complex adaptation is the only viable survival strategy.*

*– Edwin Olson and Glenda Eoyang  
Facilitating Organisational Change*

not so familiar with the connections that hold them together, and this will be vital in this new era.

No longer can our systems operate as independent machines following the linear laws of Newtonian physics because in reality they are networked *communities* – complex, emergent, and nonlinear. This realisation reveals what environmentalist-author Paul Hawken calls a “design problem” in our current systems: assumptions about how our institutions of society and commerce best function have become outdated and need to be transformed. To do this requires that we rethink our paradigm of change – because change is what we obviously are facing at this critical point in human history.

### Facing adaptive strain

Until recently, the world has experienced rapid but turbulent technology-driven growth – the outcome of a worldview that has designed HOS to be highly efficient machines of production and commerce that convert human and natural resources into products and services. Mechanistic organisations function well during periods of relative stability and limitless resources, but they become dysfunctional in highly networked and interdependent environments with limited resources. Rigid, slow, and wasteful, today’s mechanistic organisations, and the systems they spawn,

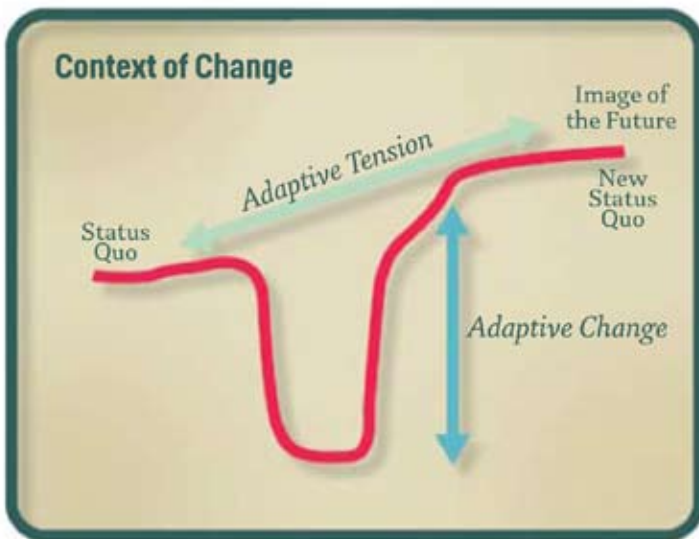


FIGURE 1. A VISUAL METAPHOR OF CHANGE IN HUMAN AND ORGANISATIONAL SYSTEM (HOS): ADAPTIVE TENSION, PRODUCED BY DESTABILIZING EVENTS, GENERATES THE NEED FOR A NEW STATUS QUO THROUGH A PROCESS OF ADAPTIVE CHANGE.

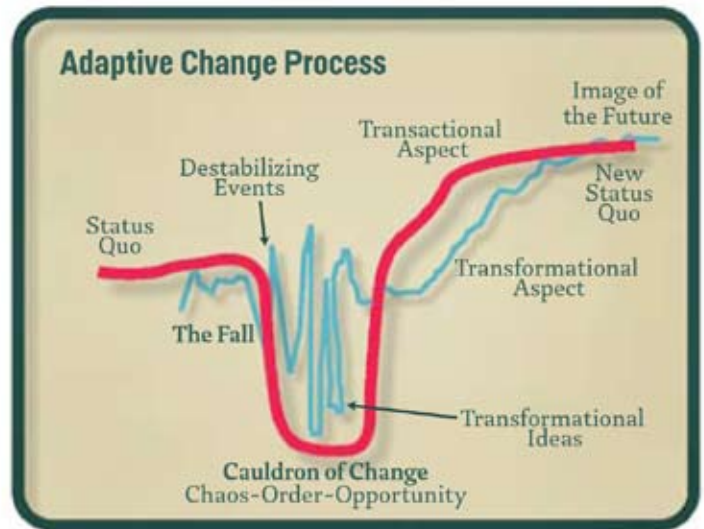


FIGURE 2. THE PROCESS OF ADAPTIVE CHANGE CONTAINS TWO COMPONENTS: THE PSYCHOLOGICAL TRAJECTORY OF TRANSFORMATIONAL CHANGE (IN BLUE) AND THE PROCEDURAL OR STRUCTURAL TRAJECTORY OF TRANSACTIONAL CHANGE (IN RED).

FOR BOTH, DESTABILIZING INTERNAL AND/OR EXTERNAL EVENTS GENERATE ADAPTIVE STRAIN AND MOVE THE SYSTEM AWAY FROM THE EXISTING STATUS QUO, INTRODUCING A PERIOD OF TURBULENCE AND DISENGAGEMENT. THIS CREATES A CONTAINER, OR CAULDRON, IN WHICH THE SYSTEM CAN SELF-ORGANIZE BY PRODUCING INNOVATIVE IDEAS THAT GENERATE PSYCHOLOGICAL/IDEOLOGICAL AND STRUCTURAL/FUNCTIONAL CHANGE. NEW PATTERNS OF ACTION, BEHAVIOUR, AND THOUGHT EMERGE AS THE SYSTEM REINTEGRATES BACK INTO THE LARGER ECOSPHERE.

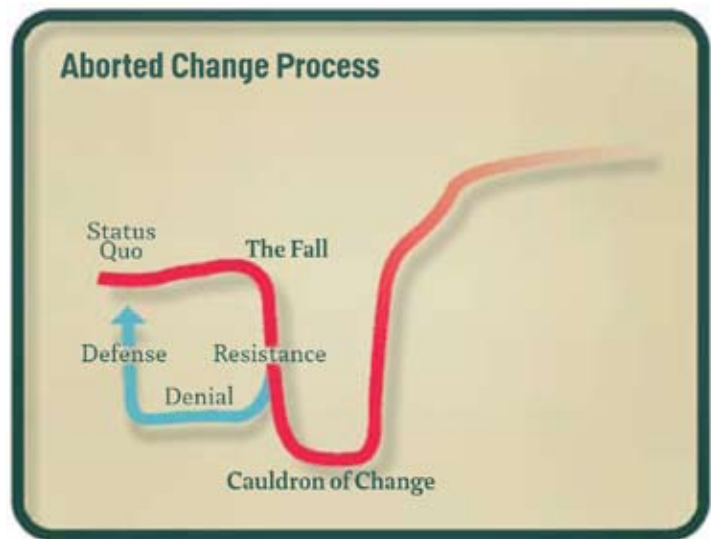


FIGURE 3. ABORTED CHANGE IN HOS IS OFTEN THE RESULT OF A PSYCHOLOGICAL PATTERN DURING THE FALL WHEN PARTICIPANTS ARE UNABLE TO DISCONNECT FROM THE EXISTING STATUS QUO AND RETURN TO IT THROUGH A CYCLE OF RESIST-DENY-DEFEND.

produce continuous waves of regional and even global destabilization. Consider the negative fallout from an antiquated U.S. automobile industry, or a justice system that favors incarceration over rehabilitation, or an educational policy based on old models of teaching and learning. Out of necessity, our worldview is shifting beyond the principles of “industrial ecology” popularized in a 1989 *Scientific American* article by Robert Frosch and Nicholas E. Gallopoulos and toward an “ecology of human systems,” defined as a global web of *unique and inseparable* cultural, commercial, and environmental ecosystems that co-create an interdependent ecosphere.

Unfortunately, faced with the need for widespread institutional change, we resist – either consciously or unconsciously – and prefer to wait until destabilizing external forces beyond our control impose change upon us. We hold tight to the existing status quo, continually reinforcing what isn’t working. In so doing, we ignore a level of organisational and systemic dysfunction that sickens the earth and produces human disengagement, cynicism, loss of trust, and, ultimately, resource and ecological depletion and a world on the brink of destruction. Resolving this global dilemma requires us to leave behind a mechanistic paradigm of change which assumes that change is a painful action of last resort, always externally imposed rather than systemically generated and only necessary when social, economic, or business systems start breaking down.

As outdated models are ripped off the moorings of their mechanistic worldview, a model of change that generates hope *and* opportunity is beginning to emerge (see Figure 1). It has the potential to empower us to meet today’s global challenges and improve human well-being, organisational longevity, and resource sustainability. We can use this model, which mimics nature’s ability to harness the creative tension between an existing status quo and an emerging future, to redesign our social and commercial systems in a way that allows all participants of the human ecosphere to contribute and prosper.

Based on a worldview in which HOS operate more like our bodies or a prairie ecosystem than a well-designed machine, a multidisciplinary paradigm of adaptive change in sync with the processes of the natural world has developed at the intersection of physics, complexity theory, biology, psychology, ecology, neuroscience,

## MECHANISTIC ORGANISATIONS FUNCTION WELL DURING PERIODS OF RELATIVE STABILITY AND LIMITLESS RESOURCES, BUT THEY BECOME DYSFUNCTIONAL IN HIGHLY NETWORKED AND INTERDEPENDENT ENVIRONMENTS WITH LIMITED RESOURCES.

and cosmology. Many thought leaders are authoring this new story of change. Margaret Wheatley, Fritjof Capra, and Peter Senge have described its leadership and processes. Daniel Quinn, Paul Davies, and the late Gregory Bateson have brought a cultural and cosmological perspective. Paul Hawken and Janine Benyus are its ecologists. Ray Anderson and Thomas Friedman contribute to the business side. Kevin Kelly is one of its leading technocrats. Through their work, we now understand that “adaptive strain” (in engineering and physics, this refers to the tension within structures and/or functions that result from destabilizing events) is inherent in the interactions between human systems and their environments and that this tension is resolved through a natural process of “adaptive change.” Unlike in nature, however, the magnitude of adaptive strain in HOS depends upon (1) the presence or the absence of a clear vision for the future, and (2) the conscious recognition that change is necessary for survival.

### From strain to change

Nature is a living system that uses adaptive strain to sense, test, and adapt to a constantly changing environment in order to maintain and co-evolve a healthy, self-sustaining ecosystem. A commonly cited example is the Blue Tit, a bird that adapted to the introduction of foil tops on milk bottles that were previously uncapped. The adaptive strain that the birds experienced arose from the loss of access to a nutrient-rich food, milk. The adaptive change was that they figured out how to get past the foil, producing a wave of species-specific learning that quickly spread across the English countryside and caused the “bird–milk bottle system” to evolve. The “adaptive clue” that initiated and maintained change was the observation of birds that knew how to open the new caps (the “modelers”) by the birds that did not (the “imitators”). As more birds learned this skill, the adaptive strain gave way to



a new status quo, and the system returned to a state of relative equilibrium.

Two aspects of the adaptive change process are critical when considering HOS. First, the “transactional” aspect of adaptive change – the tangible processes and outcomes of change – are what we are most familiar with. For each Blue Tit, the transactional aspect of change involved watching another bird successfully open a milk-bottle cap and then learning the process itself. For organisations of commerce, the transactional aspect of change might be to understand and respond to events in the marketplace in order to remain competitive. For schools, the transactional aspect of change might involve monitoring local demographics to determine staffing needs. And so on.

Second, the “transformational” aspect of adaptive change refers to the emotional, psychological, and spiritual effects that change has on individuals. Although these are often disruptive, they also contain the seeds of successful adaptation. In my own experience, transformation is what makes adaptive change successful because, in the words of consultant-author William Bridges, “To feel as though everything is ‘up in the air’ . . . is enduring if it means something – if it is part of a movement toward a desired end.” Combining both the transactional and transformational aspects of

adaptive change creates a model that we can apply to any HOS.

## Adaptive change: the evolution of ecospheres

Before the onset of any adaptive change, all living systems exist in a dynamic steady state that we call equilibrium or status quo. This state is maintained by an invisible network of connections and interdependencies between the system and its environment, producing small unnoticed course corrections and creating resiliency. When internal and/or external destabilizing events occur, these same connections produce adaptive strain. Initially, destabilization temporarily disconnects the system from its environment, opening a gap between the existing status quo and some unknown future state. This often precipitates the fear and resistance that result from feelings of disorientation, uncertainty, ambiguity, and the sense of loss we commonly associate with periods of change. This set of responses is called “the fall.”

The “cauldron of change” marks the bottom of the fall, where creativity and innovation become available to the system, wrestling order from chaos and providing a wealth of options for resolving the adaptive strain. Remaining in a state of chaos or disconnection long enough for innovation to emerge is critical to successful passage through this stage. Forcing resolution too early or imposing control when uncertainty and ambiguity still exist can abort the change process and return the system to its previous status quo. This is also the point at which effective leadership is most critical. For example, during the 2008 U.S. presidential

**THE MAGNITUDE OF ADAPTIVE STRAIN IN HOS DEPENDS UPON (1) THE PRESENCE OR THE ABSENCE OF A CLEAR VISION FOR THE FUTURE, AND (2) THE CONSCIOUS RECOGNITION THAT CHANGE IS NECESSARY FOR SURVIVAL.**

election, because of Barack Obama's calm presence, both wary and first-time voters stayed in the cauldron instead of retreating to the old status quo of apathy, despair, or cynicism.

During this stage, uncertainty and diversity are amplified, sustaining the jagged psychological highs and lows that began during the fall. These are resolved when transformational ideas – such as market insights that generate a new business strategy or the discovery of new occupational needs that motivate the redesign of a school's curriculum – create a platform from which the system can learn its way “back to the future.” As connections and networks are re-established, interdependencies throughout the ecosphere become richer and more complex. In this way, the future status quo emerges from within adaptive change (see Figure 2).

Adaptive change also generates organisational learning in such areas as greater collaboration, full engagement, and trust. Over time, the characteristics of ensuing cycles of adaptive change (the shape of the cauldron) are altered in three important ways:

- *The magnitude of destabilizing events are reduced as the system becomes more sensitive to its environment.*
- *The steepness and depth of the fall decreases as participants become more adept and innovative.*
- *The road back becomes easier as the system learns how to integrate transformational ideas into existing structures and/or functions.*

When this happens, adaptive change becomes a “core competency” of the institution, and it begins to move in sync with its ecosphere, behaving like an organism instead of a machine.

## Examples of adaptive change

Although we think of change as operating primarily on a large scale, nature teaches us that every interaction creates a microcosm of change. Change your mind, change your opinion, make a decision, set a goal, plan a strategy: all of these processes follow a pattern of adaptive change and are precipitated by adaptive strain. The first example below captures both an individual and collective change process; the second illustrates when such a process isn't successfully completed.



## Successful adaptive change

Mary was brought in from outside to lead a team of highly diverse marketers to launch a product in a company where “leader as expert” is the dominant business model. The project was initially successful, but the dynamic between Mary (the expert) and her high-performing team began to create stress and compromise productivity. The company wanted to keep Mary and so provided her with six months of executive coaching. Her goal was to increase her team's trust, collaboration, and performance by changing her leadership style.

Mary's yearly review flagging this problem provided the destabilizing event of her change journey. Her fall into the cauldron of change began when she realized that her leadership style was contributing to a dysfunctional team dynamic. This also defined the challenges of adaptive strain within her “personal system” – for example, challenges to her confidence and self-esteem. Her cauldron of change contained established behaviours that needed to be eliminated, new behaviours that were necessary for a different leadership style, increased risk tolerance as others took on more decision-making responsibility, and greater comfort with uncertainty, which comes with loosening control. Completing her fall in two months, she spent three months in the cauldron of change, gaining self-awareness and self-reflection through coaching. She spent another two months integrating her new leadership style on the road back. Shortly after her successful change journey, she was promoted to lead a global marketing team.

Similarly, Mary's team, co-creators of the existing status quo, began to experience adaptive strain when her evolving leadership style began to influence team dynamics. This was especially evident when a significant external event impacted their company's brand after the launch. Two months into her change process, Mary, rather than taking control herself, instructed the team to manage the impacts. This moved the team into its own cauldron of change, which contained budget cuts, project revisions and cancellations, and outside pressure from senior management and market specialists. As the team met these challenges, Mary saw that her new leadership style was positively affecting them – an example of how the process of adaptive change has a ripple effect throughout an ecosystem. Aware that

Mary would likely be promoted, the team began their road back by consciously strengthening their levels of internal trust and collaboration, thereby co-creating a new status quo that did not depend on Mary's leadership.

### Aborted adaptive change

Adaptive change is not always successful. For example, a mid-sized U.S. school system obtained the consulting services of a well-known non-profit organisation in order to eliminate bullying from within the district. After a year of meetings and workshops, teachers and administrators, stuck in a cycle of resistance-denial-defence, had not completed the fall. Each time there was a chance to disconnect from the existing status quo – necessary to enter the cauldron of change – they retreated to the safety of past beliefs and behaviours, including helplessness and disengagement. In an attempt to tip the system and push it into the cauldron of change, the consultants tried to convince the superintendent of the school district to champion the effort. His refusal to do so resulted in the discontinuation of the project.

Upon reflection, the consultants felt that the absence of district-level leadership was the primary cause of the change cycle's failure. Without a clear vision of a bully-free future, teachers and administrators could not imagine that the bullying behaviours could change. The consultants could see that the district's system was stuck in a state of cyclical aborted change, unable to creatively engage the adaptive strain within the system and thus unable to complete the adaptive change necessary to achieve a new, bully-free status quo.

### Challenges and tools

The challenges of facilitating adaptive change in human organisations and systems are largely due to the remains of a mechanistic change paradigm, which include the following:

- ▶ a desire for the system to remain in the status quo
- ▶ an inability to trust the collective to successfully navigate the needed change
- ▶ a dislike and distrust of ambiguity, uncertainty, and loss of control even when prediction and certainty

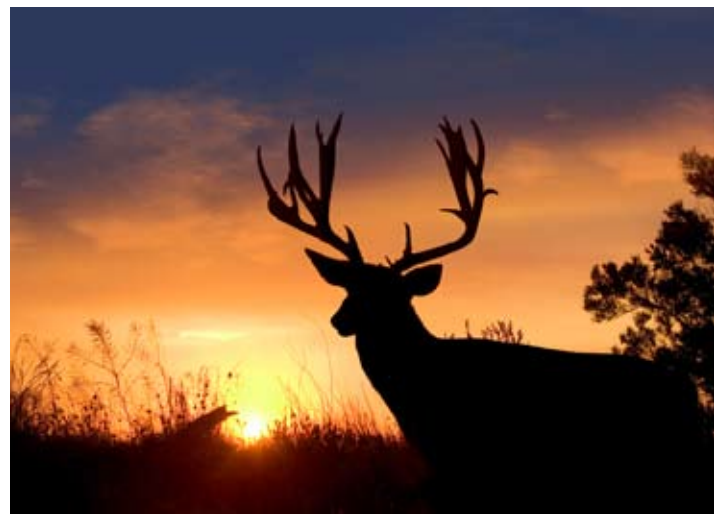
fail time and time again

- ▶ a discomfort with nonlinear emergent processes, which fluidly cocreate with the environment
- ▶ a tendency to fall back on linear cause-and-effect thinking

Similarly, the following three key leverage points support a successful journey through adaptive change:

- ▶ the use of collective conversations to produce clear, compelling, and shared visions for the future
- ▶ the ability to tap the collective intelligence of the system and use its diversity, imagination, and creativity to resolve the adaptive strain
- ▶ a leadership that builds relationships of trust, commitment, and collaboration

To ensure the long-term survival of all living beings and our planet, HOS must quickly learn and apply attributes of the co-evolutionary change process that operates within nature: interconnectedness, limitation, and the law of consequences. The adaptive change model presented in this article addresses those needs. It also draws from the familiar path of Joseph Campbell's "hero's journey" – and nothing less than heroism is required of humanity at this point in history. To effectively change the way we affect the natural and human world, we must adopt a paradigm of change that can be applied universally – by individuals, public and private organisations, and leaders of economic, social, and political systems. The beauty of the adaptive change model is its simplicity. Nature has tested



its effectiveness for centuries. Its strength is that it allows the psychological turmoil of human change yet still provides a logical path for HOS to navigate the obstacles and to achieve a new equilibrium. ♦

“The Adaptive Organisation” by Carol Mase, MA, DVM, MSc, appeared in *Shift: At the Frontiers of Consciousness* (No. 22, Spring 2009, pp. 26-31), the quarterly publication of the Institute of Noetic Sciences (IONS), and is reprinted with permission of IONS (Websites: [www.noetic.org](http://www.noetic.org) and [www.shiftinaction.com](http://www.shiftinaction.com)), all rights reserved. Copyright 2009.

