

A Biological Approach to Leadership for Educational Change

Kevin Jenson
Macquarie University

September 2015

"When the rate of external change exceed the rate of internal change, it's bad for business" (Dan Cathy, 2009).

Change management is a recent phenomenon developed by consulting firms in the United States in the late 1980's and not fully adopted as a field of business until 2011 (Prosci, 2015). The growth of this industry mirrors growth in the volatility of the market during the same time period. Between 1985 and 2006 Standard and Poor's risk ratings changed from 41% low risk and 35% high risk to 13% low risk and 73% high risk (Colvin, 2006). Bill Ford of Ford Motor Company poignantly summarized the implications of this changing environment by saying, "The business model that sustained us for decades is no longer sufficient to sustain profitability." Unshielded from the impact of a demand-driven economy, educational institutions face a similar scenario, which requires them to redefine their understanding of change as a process.

Although it may be more widely recognized today, grappling with the implications of change is not a recent phenomenon. Ancient philosophers recognized the significant impact of change upon the identity of objects and individuals. Kirk (1951) used Plato's reference to Heraclitus to show the idea that all things are in a constant state of change. Heraclitus is the philosopher who is credited with saying "you cannot step into the same river twice." He was attempting to prove that despite its ever-changing nature, the river was still a river. Kumar (2003) showed that Buddhist thought holds strongly to this idea of impermanence, however without the requirements of a linear model. As Mortensen described (unpublished), within Buddhist philosophy, "identity over time does not exist." Variability within existence is inevitable and follows a cyclical pattern like the water

cycle. Similarly, as a condition of its existence, an organization or organism must remain in a constant state of change.

Charles Darwin attempted to apply this concept to biology through his observation of microevolution taking place within the Galapagos Finches. Though these birds shared a common ancestry with other finches, they had adapted to their various environments in ways that ensured their survival (Darwin, 2009).

Unfortunately, on a macro-scale this explanation becomes overly simplistic. At higher levels of change, “Un-predictability appears as an emergent property of systems that are predictable on a lower level” (Auyang, 1998). Likewise, Bennett (2010) cited several studies to show that “the link between environmental change and evolutionary change is weak – not what Darwinists might have predicted.” In fact, within complex ecosystems, he showed, the internal DNA of the organism may provide a more useful explanation of change than the external circumstances.

Borrowing from Bennett’s model, organizational change may depend more heavily on random chaos than on predictable variables of adaptation. Bennett provided three reasons for this: changes to one part of a system effects the other parts; the type of response is dependent upon initial conditions; and from the fractal perspective it is possible to trace a change backward but not to predict it forward because the model will be different. Fortunately, although “predicting chaos is hard, controlling chaos is easy” (Hubler, Foster, & Phelps, 2007). Thus, Colvin (2006) has recommended that organizations embrace the challenge of getting comfortable with chaotic growth.

Shona Brown, Google's senior vice president for business operations would agree. Her recommended style of leadership is "to avoid creating too much structure, but not to add too little either" (Lashinsky, 2006). Unlike the change management described in the first paragraph, this leadership style moves beyond simply trying to manage chaos to creating an environment that welcomes it as a means to positive change (Kotter, 2011).

Educational organizations that wish to survive in the competitive world of technology must cultivate the ability to thrive in unpredictable environments. Mossberg recommended the chaos theory of management for educational institutions as early as 1993. Cummings, Phillips, Tilbrook, and Lowe in 2005 supported a response to external change based on empowering individuals in the middle of the organization. Others hearken back to the biological research on the importance of DNA in the process of change.

The DNA of the organization can be found in the individuals and the organizational identity (mission) rather than structural models (Karp & Helg, 2008). By embracing the inevitability of change and building a strong network of human relationships and organizational identity (the DNA), one can effectively lead and manage the non-linear, chaotic adaptation and change required for the ongoing existence and success of elearning in the educational organization.

References

- Auyang, S. (1998). How science comprehends chaos. Talk at Harvard University.
Retrieved from <http://www.creatingtechnology.org/papers/chaos.pdf>
- Bennett, K. (2010). The Chaos Theory of Evolution. *New Scientist* 2782. Retrieved
from <https://www.newscientist.com/article/mg20827821.000-the-chaos-theory-of-evolution/>
- Cathy, D. (2009). Presentation to Cedarville University. Personal notes.
- Colvin, G. (2006). Managing in Chaos. *Fortune Magazine* 154(7). Retrieved from
http://archive.fortune.com/magazines/fortune/fortune_archive/2006/10/02/8387417/index.htm
- Cummings, R., Phillips, R., Tilbrook, R., & Lowe, K. (2005). Middle-out approaches to reform of university teaching and learning: champions striding between the top-down and bottom-up approaches. *The International Review of Research in Open and Distributed Learning*, 6(1).
- Darwin, C. (2009). *The origin of species by means of natural selection: or, the preservation of favored races in the struggle for life*. W. F. Bynum (Ed.). AL Burt.
- Hübler, A. W., Foster, G. C., & Phelps, K. C. (2007). Managing chaos: Thinking out of the box. *Complexity*, 12(3), 10-13. Retrieved from <http://server17.how-why.com/blog/ManagingChaos.pdf>
- Karp, T., & Helg, T. I. (2008). From change management to change leadership: Embracing chaotic change in public service organizations. *Journal of change management*, 8(1), 85-96.

Kirk, G. S. (1951). Natural change in Heraclitus. *Mind*, 35-42.

Kotter, J. (2011). Change Management vs. Change Leadership. *Forbes Magazine*.

Retrieved from

<http://www.forbes.com/sites/johnkotter/2011/07/12/change-management-vs-change-leadership-whats-the-difference/>

Kumar, S. M. (2003). An introduction to Buddhism for the cognitive-behavioral therapist. *Cognitive and Behavioral Practice*, 9(1), 40-43.

Lashinsky, A. (2006). Chaos by Design. *Fortune Magazine* 154(7). Retrieved from

http://archive.fortune.com/magazines/fortune/fortune_archive/2006/10/02/toc.html

Mortensen, C. (unpublished). Change and Inconsistency, *The Stanford Encyclopedia of Philosophy* (Fall 2015 Edition), Edward N. Zalta (ed.), forthcoming URL:
<http://plato.stanford.edu/archives/fall2015/entries/change>.

Mossberg, B. (1993). Chaos on Campus: A Prescription for Global Leadership. *Educational record*, 74(4), 49-55.

Prosci (2015). Change Management History. [web page] Retrieved from

<http://www.prosci.com/change-management/change-management-history/>