Teacher Stories, Principal Vision and

the One Hundredth Monkey:

Quantum Change in School Improvement

By:

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In Memoriam

Edward Lorenz

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**Teacher Stories, Principal Vision and the One Hundredth Monkey:
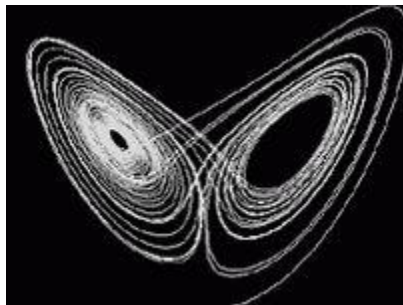Quantum Change in School Improvement**

Downtown Toronto shimmers darkly from the front page of the Toronto Sunday Star, March 30, 2008. It is the day after Earth Hour, and the city's core is eerily beautiful, and very different from its usually well-lit night-time glow. Other major cities all over the world took eager part in this year's Earth Hour, in stark contrast to the meager participation for this same environmental initiative only just last year. As one letter writer enthuses on this year's Earth Hour success: "Every snowball begins with a bit of snow that gathers momentum, and so it is with people. If our overindulged population can see that token efforts can make a difference, the idea has a chance of growing" (Mackie, 2008).

Shift the lens accordingly from the cause of the environment to that of the realm of public school improvement. It is not the stark life-or-death cause inherent in our planet's health, although the pressing need to provide the best education possible to our world's children is universally acknowledged. In Ontario, and elsewhere, the desire to educate our children more effectively is resulting in major efforts to overhaul the way in which our public schools operate. Current efforts appear at times to be ineffectual and faltering. How can the current inspirational Earth Hour commitment be replicated through the imagination and hard work of our educators, to turn that little "bit of snow that gathers momentum" into the same Earth Hour type of phenomenon that will create a public education breakthrough change?

Kenneth Leithwood's address to the Symposium on School Leadership in Edmonton on February 22, 2008, notes that in the public school system there "is growing

competition from the private sector for student 'clients'", including charter schools. One implication and challenge in response to this trend, he says, is to "get in the game" as "public monopolies on children's schooling will soon be a thing of the past" (p. 2). How do public schools then, all of them, get successfully "in the game"? This is, of course, the political million-dollar question for public education, the answer to which has been arrestingly elusive, as a complete answer in itself appears to lie within a frustratingly complex, yet intriguingly patterned, cornucopia of interconnected strategies.

.In his Edmonton address, Leithwood points out seven key comprehensive trends with "significant implications and challenges" for school leaders, these "to be found within many public educational systems at the present time" (p. 1). One of these trends he bluntly describes as "surfing the 'edge of chaos' in the search for productive practice" (p. 3). Institutional expert Margaret Wheatley (2005) describes chaos as "a state that always feels terrible" (p. 86), yet she insists that "the growth, the creativity, the opening up, the energy improves only if we hold ourselves at the edge of chaos" (p. 44). According to Anne Bishop (2005), institutions (which public schools are) are systems that are entities (p. 83), and Bishop refers to Wheatley's key conclusion that "organizational change follows the rules of fractal geometry" (p. 100). This conclusion "refers to the power of the guiding principles to hold together a large, complex system [such as a school] as 'the strange attractor of meaning' "(cited in Bishop, 2005, p. 100). It is based upon the enigmatic three-dimensional figure eight pattern discovered by Edward Lorenz a model created from the constant repetition of non-linear equations, and depicting order within chaos (Appendix A). "The strange attractor as a feature of organizations," says Bishop, brings "us back to the issue of free will and structural roles:"

> How do institutional structures affect our behaviour even though
> we are free? The strange attractor of the institutional entity's
> movement through chaos and order is one possible explanation . . .

As David Peat describes the action of a strange attractor: 'it does not pull and trap things in a mechanical way; rather it exerts a more subtle influence so that the system weaves and dances around it, always relatively free, yet never escaping from its influence.'

(Bishop, 2005, p. 100)

Bishop describes the process of regarding institutions in this way as "thinking structurally" (p. 54), as opposed to taking the more traditional "individualistic or liberal view of social change (p. 88). We must remember, Bishop cautions, "that change in an institutional entity does not follow the logic of a machine but the dynamics of an organic entity" (p. 154).

Malcolm Richmon (2006) appears to reflect this viewpoint in his query: "Can scholars even direct administrative action effectively, never even mind that administrators will subsequently direct the action of school personnel effectively in meeting predetermined goals" (p.19)? Richmon elaborates: "attempts to dole out improvement strategies in morsels of administrative wisdom are epistemologically improbable" (p.19). He consequently applauds those scholars "who have made considerable efforts to resuscitate epistemological interests in educational administration" (p. 21). In reference to Allison and Ellett (2003), who proffer a so-called "Cultured Folk" framework into social reality, Richmon acknowledges a theory that appears to authenticate Anne Bishop's urgings to think structurally, and her further contention that, in order to do so, "involves reading, discussion and reflection" (Bishop, p. 155). "The cultured folk frame," claim Allison and Ellett, "gives access to shared (intersubjective) understandings . . . which provides for the objective study of meanings and values, organizations (schools) and persons (administrators and those administered to)" (p. 24). Furthermore, state the authors, "we hold that persons are formed, fashioned, constructed, through an array of interactive, dynamic processes" (p. 20). The cultured folk account views "organizations

as being created, sustained . . . by and through . . . culturally (in)formed collaborative actions" (p. 6). With their cultured folk framework, Allison and Ellett's epistemological transmogrification away from the New or Theory Movement concepts could conceivably be symbolized as a change from the view of educational administration as the monotonously synchronized ticking of the mechanistic clock to the glittering ever-changing light darts of a crystal chandelier. Human collaboration does not produce mechanistically evolved solutions, but is one main key to organizational success.

Richmon welcomes such "addressing [of] epistemological concerns" as in the cultured folk approach, which provides "for better, more reflexibly defensible knowledge claims" (p. 21), or else "we are left with the same tired premise: the principal does . . . and the school improves. The fundamentals of administration are reduced to pulling levers and turning knobs" (p. 21). "How much time and resources," ponders Wheatley (2005), "have been wasted trying to force schools and people to change according to an imposed plan and process" (p. 107)? Fullan (2003) gives a classic example:

> England brought about large-scale improvement in literacy and
> numeracy in 20,000 primary schools in the 1997-2002 period.
> School leaders played a key role in these impressive accomplishments,
> yet, in this same period, the morale of teachers and principals
> did not improve due to a number of complex factors: the overall
> pace of change, work overload, lack of ownership of the strategy,
> and so on . . .
>
> (Fullan, p. 27)

Organizations are not machines, and neither are people. Yet "because participative processes can overwhelm us with the complexity of human interactions, many leaders grasp instead for quickly derived solutions from small groups that are then pronounced to the whole organization" (Wheatley, 2005, p. 89-90). Wheatley amusingly describes how

making sure that the lifeless automatons (i.e. people!) in such mechanistically conceived

organizations are all "clanking along in the same direction" can be "especially exhausting"

organization's intelligence" (p. 43):

> Once we stop treating organizations and people as machines and
> move to the paradigm of living systems, organizational change
> is not a problem. Using this worldview, it is possible to create
> organizations rich in people who are capable of adapting as
> needed, who are alert to changes in their environment, who are
> able to innovate strategically.
>
> <div align="right">(Wheatley, p. 76)</div>

It is no doubt in line with such thinking that Richmon, Allison and Ellett are urgently calling

for a dramatic reconsideration of educational administration's epistemological viewpoints.

In the context of the principal as school leader, however, Fullan (2003) cautions

that

> there is little recognition of the depth of change in the principal's
> role that will be required. Policymakers do not seem to realize that
> the principal as booster of achievement scores is a dangerously
> delimited conception of what the principal needs to do for schools to
> be a force in societal progress.
>
> <div align="right">(2003, p. 41)</div>

Indeed, what is needed, suggests Richmon, is for principals to benefit from "fostering their

own intellectual faculties to appreciate the socio-cultural nature of meaning, rather than to

embrace a single, inconstant manifestation of it."

> While it may be possible . . . to capture the ephemeral socio-cultural
> spirit of a school or school district, what ends might that serve if we
> expect that very spirit to transform itself in uncertain ways . . . ? If social
> knowledge is dynamic, then school leaders must attend to social function
> cerebrally rather than by the application of a contrived set of
> administrative behaviours which dubiously purport to bring about
> particular organizational ends.
>
> <div align="right">(2006, p. 20)</div>

Kenneth Leithwoood, Michael Fullan and other leadership scholars have researched

intensively in order to distill what ostensibly might be determined to be effective "cerebral"

methods by which principals might capture this "emphemeral socio-cultural spirit of a

school or district", as mentioned by Richmon above. Leithwood, Jantzi & Steinbach (1999) observe that "as time changes, what works for leaders changes also" (p. 3). It is important to note that all these scholars consider a richly nurtured collaborative culture as key to principals' success in enhancing school improvement. The work of Hallinger, Leithwood and Murphy (1993), indeed, as Allison (1996) describes it, "constitutes an important theoretical departure from established assumptions on this topic" (p. 7). In their six-component framework for the problem solving processes of transformational leader principals, Hallinger et al. were pioneers in their inclusion of personal values and uncertainty into a cognitive science orientation or perspective of transformational leadership. In Hallinger et al.'s model, "problem spaces formed by administrators to represent other than rapidly resolved situations will be constantly subject to refreshment and revision in the light of changing circumstances and unanticipated developments" (Allison, p. 10). Certainly, these educational scholars seem to be taking the "edge of chaos" aspect of school organizations into account in their research. Also very important, in their "goal" component, of the six components, is the principal's aim "to arrive at the best solution the group can produce" and to "more often establish staff development as a goal for group problem solving" (Leithwood et al., 1999, p. 103). In a later study, Leithwood, Mascall, Strauss, Sacks, Memon and Yashkina (2007) conclude that the York Region District School Board demonstrates "a probable example of 'best practice' at the present time " of distributed leadership, and they note "the critical part found to be played by formal school leaders" (or principals) in developing it. The director of education of the YRDSB himself expresses his purpose to "take the ego out of the system" by creating "forms of collaborative work that would make the most of staff members collective capacities" (p. 62).

Is there now a possible inkling apparent that Richmon's gloomy description of "the principal does . . . and the school improves" has more recently become a less and less accurate vision of YRDSB's views of a good principal's role? In fact, Fullan (2003) not only concurs wholeheartedly that "we must invest in leaders developing leaders . . . intraorganizational leadership development" (pp. 75-6), he queries adamantly "what has to be done to help create and sustain in numbers school principals who are this good" (p. 8). Just as Leithwood et al. (2007) emphasize the critical part played by school principals in the development of collaborative school cultures, so, too, does Fullan who states bluntly that "it is no longer acceptable or doable to expect great leaders to evolve in numbers in organizations that do not cultivate them" (p. xiv):

> . . . we must reconceptualize the role of school leader and give principals
> more resources and capacity to do their jobs (in legislation and policy
> documents) redefining the role of principal devolving greater authority
> to the principal.
>   (Fullan, 2003, p. 73)

Fullan notes with zeal that "leaders learning in context and fostering leaders at many levels is the core strategy of this decade" (p. 79), and he describes with optimism the example of Britain's NCSL (National College for School Leadership) as " a coordinated major example of this new direction" (p. 79). Ontario is also currently taking steps to move in this "new direction" in its own principal training.

By skillfully fostering relationships and collaborative efforts among teachers, the principal becomes a vital factor in promoting more self-organization among teachers generally. In acquiring the capability to help teachers move along the path to self-organization, principals will find it less and less necessary to effect system changes by imposition. Thus, a critical task for the principal is to develop within the school sufficient time, ways and resources for their teachers to connect with each other on a frequent basis. For, as Wheatley (2005) predicts, "any organization [including schools] that

distances itself from its employees and refuses to cultivate meaningful relationships with them is destined to fail" (p. 124). Fullan (2003) states that "the school principal . . . is the key person in developing relational trust . . . and in fostering a culture of trusted relationships" (p. 42). "People do not need intricate directions, time lines, plans and organization charts", but they "need a great deal from their leaders. They need information, access to one another, resources, trust and follow-through" (Wheatley, 2005, p. 70).

In other words, a culture of informal organization or self-organization must be in place, spearheaded effectively by principals who are in the most opportune position to make them happen. Lambert (cited in Davies, 2005, p. 109) claims "a state of high leadership capacity" evolves from these informal yet consistent relationships, which she describes as "characterized by questions of practice, reflection, inquiry, dialogue and action:

> Unless we prepare learners and leaders through constructivist approaches, they will not develop the personal schema and metaphors that are necessary to understand and act upon issues of practice.
>
> (cited in Davies, p. 109)

The "personal schema" described here is reminiscent of Leithwood et al.'s description of the characteristics of the principal as transformational leader. Teachers who can develop such skills through regular collegial interaction will do much to enhance school leadership capacity generally. "It is important that the process used for bringing people together not be formal," says Wheatley (2005, p. 120). "In survey after survey, workers report that most of what they learn about their job, they learn from informal conversations" (p. 150). Engaging in meaningful conversations appears to be vital in improving school improvement, and in effectively changing our school organizations from the inside out.

People become more engaged with each other when they can tell their own stories; to want to do so is human nature.

In his famous speech last month on the U. S. presidential Democratic candidate campaign trail, Barack Obama resoundingly pronounces:

> I believe deeply that we cannot solve the challenges of our time unless we solve them together . . . we may have different stories, but we hold common hopes . . . we all want to move in the same direction.
>
> (cited in Ibbitson, 2008)

Obama's words apply just as well to the challenges of school improvement. This vision of a better future is encompassed in Fullan's heartfelt description of the moral imperative in every successful school. He believes that "relational trust" (2003, p. 42) in schools ("which principals play a key role in developing and sustaining" p. 64) is key to creating "a moral resource for school improvement" (p. 42). Fullan's description of the moral imperative for all principals in schools could easily stand as the ultimate purpose of mission in any school:

> moral purpose of the highest order is having a system where all students learn, the gap between high and low performance is greatly reduced, and what people learn enables them to be successful citizens and workers in a morally based knowledge society
>
> (2003, p. 28)

This is a purpose all teachers and principals presumably, inherently share, and "it is crucial to keep organizational purpose and values in the spotlight" (Wheatley, 2005, p. 119). Sharing a common organizational purpose is what gives our professional conversations and relationships meaning, and is the underlying reason for continuing to meet. "[V]alues come to life not through speeches and plaques, but as we hear the stories of other employees who embody these values" (p. 119). "In a chaotic world, organizational identity needs to be the most stable aspect of the endeavour" (p. 38). It is

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for this reason that I attribute the moral purpose of public schooling as the "strange attractor" (as described by Bishop earlier) for school organizations in my concept map (Appendix A).

The aforementioned approach to the expectations for principals and teachers corresponds appropriately, in my view, to the cultured folk frame theory in education as espoused by Allison and Ellett (2003), whereby there are "shared (intersubjective) understandings" providing "for the objective study of meanings and values, organizations (schools) and persons (administrators and those administered to)" (p. 24). Richmon's lament of administration being reduced "to pulling levers and turning knobs" would not then be an issue when, in contrast, principals choose, rather, to facilitate relationships and growth among their schools' informal leaders. There are fine examples documented in certain elementary public schools in YRDSB alone where the combination of trusting relationships through a skillful, facilitating principal have helped reculture the school to "the 50% or deeper level" yellow 38 One case study by Mascall, Fullan & Rolheiser (cited in Fullan, 2003) describes one principal in York Region who

> worked diligently for a 5-year period to build a collaborative culture among teachers – a culture that focused on instructional improvements and student achievement in literacy
> (p. 38)

How can great numbers of schools succeed in achieving this tantalizingly imminent breakthrough standard? Fullan insists "for the moral imperative of the school system to mean anything, we need to consider how the vast majority of schools can become transformed" (p. 45). The startling good news is that perhaps it is not as overwhelming a task as it seems. "Before chaos theory, scientists believed they could ignore small influences because they would have correspondingly small effects" (Bishop, 2005,

p. 178). Not so, one discovers. Applying the insight of the so-called Butterfly Effect

discovered by Edward Lorenz to institutions, which include schools, Wheatley (2005,

p. 179) says:

> It is not the law of large numbers, of favorable averages, that creates
> change, but the presence of a lone fluctuation that gets amplified by
> the system . . . where a small disturbance is fed back on itself, changing
> and growing, exponential effects can result . . . changes in small places
> in small places created large system change through the wholeness
> that has united them all along.

It is enough to ignite a palpable excitement into the tired bones of even the most jaded

educator! Maybe our public school system is salvageable over the long term after all . . .

and it may not even take as long as we think. In terms of applying the Butterfly Effect of

the quantum nature of change to the change required for authentic and widespread

school improvement, I am particularly riveted by the example described by Bishop in her

recounting of the true story of the one-hundredth monkey. Bishop cites a biological

research project by Ken Keyes Jr. (1984) whereby one young Japanese monkey named

Imo learned to solve the problem of a sand-covered sweet potato by washing it first in a

nearby stream. She taught this trick to her playmates, as well as to her mother, and

> between 1952 and 1958, all the young monkeys learned to wash
> the sandy sweet potatoes to make them even more palatable.
> Only the adults who imitated their children learned this social
> improvement. Other adults kept eating the dirty sweet potatoes.

One day, though, there was a breakthrough change. When the sun rose, there were, say,

approximately 99 monkeys washing their potatoes. "Let's further suppose," says Keyes,

"that later that morning, the hundredth monkey learned to wash potatoes."

> Then it happened! By that evening, almost everyone in the tribe was
> washing sweet potatoes before eating them. The added energy of this
> hundredth monkey somehow created an ideological breakthrough . . .
> Although the exact number may vary, the Hundredth Monkey Phenomenon
> means that when only a limited number of people know of a new way,
> it may remain the conscious property of these people. But there is a
> point at which if only one person tunes in to a new awareness, a field

is strengthened so that this awareness is picked up by almost everyone.
(Bishop, 2005, p. 180)

"If only one person tunes in to a new awareness . . . ", and the awareness is *something the whole group finds they really like doing*, then this awareness has the propensity to spread like wildfire. In the case of the monkeys, something as minor as washing potatoes had the effect, nonetheless, of improving the monkeys' overall life satisfaction. Such, I contend, is the case for phenomenal school improvement. Cultivated relationships, inherently natural to and desired by all humankind, nurtured by us teachers in our chosen profession, develop into routinely shared stories, and end up being something we realize we would rather not live without. It is inspiring!

In conclusion, I reflect that regularly nourished relationships can be easily be established among teachers in every school in every town everywhere, if our will to partake in them can be ignited from the justification of the cause, i.e. Fullan's moral imperative. Furthermore, just as the monkeys have access to that vital stream in which they can wash their potatoes, so the skilled principal gives access through time, information and resources to his or her teachers, and they in turn can develop their relationships and share their stories together. It is this mediating skill, in addition to the good principal's facility in bringing to light his or her own school's mission of moral purpose that will, in the end, create ideal conditions for a genuine change in the capacity of schools (Appendix A). The powerful spiral of the quantum nature of change, as applied in regard to school institutions makes a shimmering hope for exponential improvement and ultimate breakthrough possible. It truly seems to me that a yearning desire for genuine public school improvement is as prevalent as to be readily compared to the universal wish for environmental change symbolized by the Earth Hour phenomenon described in this paper's introduction. If we educators keep up hope by asserting our will

and shunning despair, public schools could inevitably catapult to the degree of desired change from which there will be no looking back. Our job is to stay the course, keep the faith, and give the process time. If we can do this, I am convinced, we will not be disappointed.

References

Allison, D. (1996). *Problem processing and the principalship: Theoretical foundations and the expertise issue*. Revision of paper presented at the April 8-12, 1996, annual meeting of the American Educational Research Association, New York, N. Y.

Allison, D. & Ellett, F. (2003). *Inquiry in the cultured folk frame: A more coherent alternative*. Paper prepared for the May, 2003, annual conference of the Canadian Association for the Study of Educational Administration, Halifax, Nova Scotia.

Bishop, A. (2005). *Beyond token change: Breaking the cycle of oppression in institutions*. Black Point, Nova Scotia: Fernwood Publishing.

Davies, B. (2005). *The essentials of school leadership*. Thousand Oaks, CA: Sage Publications.

Fullan, M. (2003). *The moral imperative of school leadership*. Thousand Oaks, CA: Sage Publications.

Ibbitson, J. (2008, March 19). A powerful testament, an enormous risk. *The Globe and Mail*, p. A19.

Leithwood, K. (2008). *Emerging trends and challenges for school leaders: Implications for*

recruitment, preparation and ongoing development. Summary of Address at the

February 22, 2008 Symposium on School Leadership, Edmonton, Alberta.

Leithwood, K., Mascall, B., Strauss, T., Sacks, R., Memon, N. & Yashkina, A. (2007).

Distributing leadership to make schools smarter: Taking the ego out of the system.

Leadership and Policy in Schools, 6, 37-67.

Leithwood, K., Jantzi, D. & Steinbach R. (1999). *Changing leadership for changing*

Times. Buckingham, U. K: Open University Press.

Mackie, L. (2008, March 31). Our Earth Hour. *The Globe and Mail*, p. A12.

Oleniuk, L. (2008, March 30). Earth hour 2008. Sunday Star, photograph overleaf.

Richmon, M. J. (2006). *Phorsaking filosophy for the sake of school improvement: What*

could go wrong? Paper presented to the Leadership Study Forum of the York

Region District School Board, Newmarket, Ontario.

Wheatley, M. (2005). *Finding our way: Leadership for an uncertain time.* San Francisco,
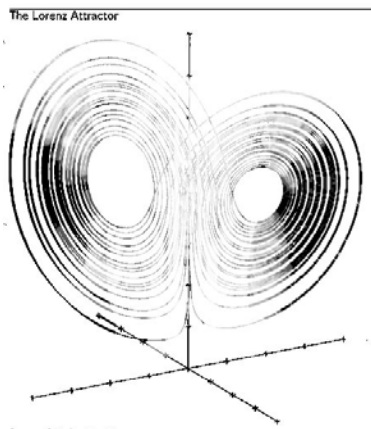
CA: Berrett-Koehler.
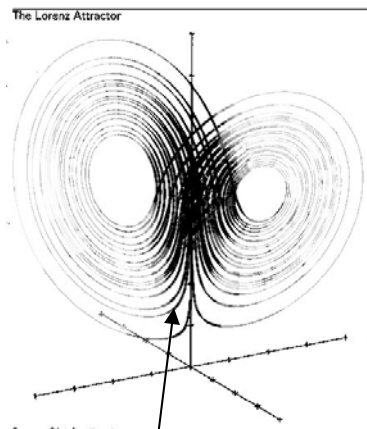
Lorenz Attractor Model of Improved Schools

(Note: The "strange attractor" is the area in centre of the two Lorenz models below, and symbolizes **moral purpose** in schools, according to Fullan's definition. The attractor is darkened, i.e. greater, in the improved schools model.)

Average Schools Moral Purpose

The Lorenz Attractor

Average Educator Commitment

Improved Schools Moral Purpose

The Lorenz Attractor

Improved Educator Commitment

Average
School
Capacity

Average
Principal
Training

TRUST

Average
Teacher
Relationships

Average
Resources -
time, money,
expertise

Improved
School
Capacity

Improved
Principal
Training

TRUST

Improved
Teacher
Relationships

Improved
Resources –
time, money,
expertise