

Approaching School Reform with an Ecocentric Perspective

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ABSTRACT

An ecocentric perspective which views the world as a complex living community is more closely aligned to the systems-based approaches underlying whole school change efforts than the machine metaphor-based modern worldview. The authors consider the parallels between an ecocentric view and whole school reform suggesting that such a view would increase the success of school reform. To begin fostering such a perspective in a school reform setting, an Ecocentric View Analysis Tool developed by the authors is described. The paper uses the tool to analyze school reform models designed by C& P session participants. Discussion around their individual analyses deepened the dialogue about school reform and tested the usefulness of the tool.

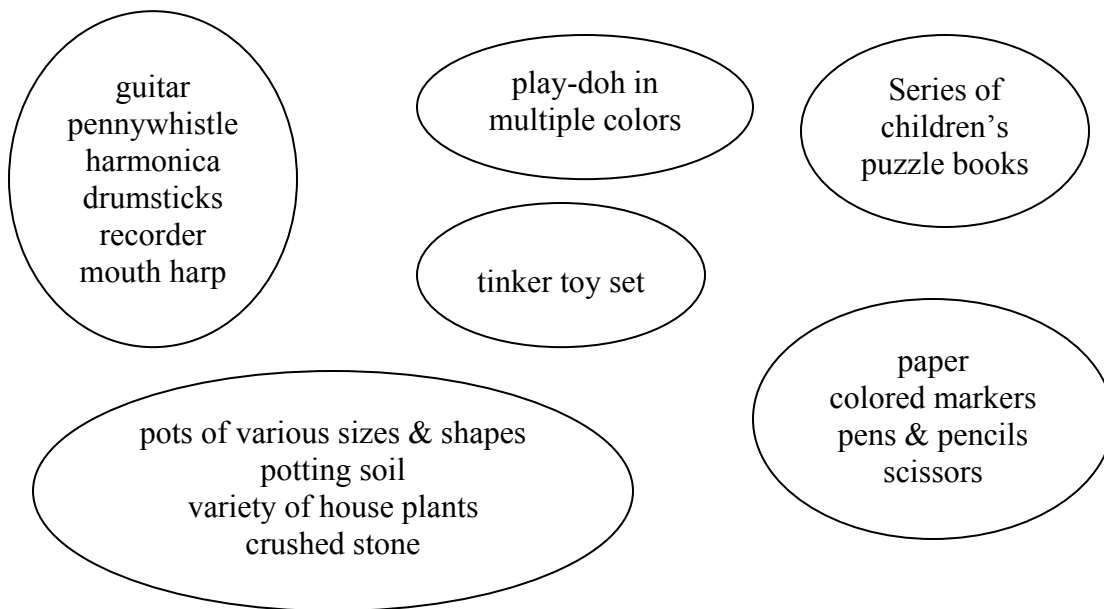
The Perils of Pauline Whiplash Community School Scenario

Imagine you are a well-respected veteran faculty member who has recently been appointed the new administrator at a school just designated as “failing.” Your State Department of Education has recently informed your Superintendent that the only option to maintain your school community (which you dearly love and can’t imagine leaving) is to submit a strong school reform plan. Unfortunately, the Superintendent’s vacation left the State’s notice ignored on his desk for more than a week. He has just now returned with a “healthy tan” and found the letter. You are the first person he thinks of to develop this critical reform proposal. It is now 4:45 and the plan must be in the mail for overnight express by 5:00 p.m. You have no time to write a complete plan and you know that a “picture” is worth a thousand words, so you decide to build a model that can serve as a metaphorical / analogical / paradigmatic view of your conception of the school reform plan. You cast your eyes around the room looking for materials to make the model. As a teacher that believed in students engaging with a variety of media, your office has numerous collections (piles) of materials. You spot the pile that would work perfectly and dash right to it and get to work, because the ten-minute clock is already ticking.

It was with this scenario that we began our conversation about approaching school reform from an ecocentric perspective in the shared space that we were given at the 2004 Curriculum & Pedagogy Conference. Through use of the story line about Whiplash Community School, we hoped to engage the session participants in helping us further our thinking about this perspective on school reform and about the value of a tool we had recently developed. Our purpose in this shared space was to engage our participants in dialogue as fully as possible in order to deepen the thinking and experience of all involved. First, however, did the new young administrator’s last minute creative ecocentric reform model save Pauline Whiplash School from closure by the State?

Pauline’s Story

Around the room the participants – and our fictional young administrator – found the following materials assembled in such a way as to provide a variety of mediums from which a model could be made to save the school:



Teams of C&P participants formed naturally around the set of materials that best fit their own beginning conceptions of school reform. All groups found their sets of materials to be limiting, so the sharing of materials became the session's icebreaker. In each group possibilities were suggested, revised, mulled over, ignored and/or developed. In the end the groups successfully completed their task rescuing Pauline Whiplash School from near demise. The three models of school reform in Figure 1 are evidence of their work.



The play-doh model

The model-makers employed the different colors as a representation of diversity, placed in a circle of working together, with multiple types of connections between (represented by the different types of cord criss-crossing the circle). The scissors in the picture represent the fact that the group actively changes connections. The tape represents resources for binding and repairing.

The tinker-toy model

The hallmark of this model was its representation of inter-relatedness. Inspired by the treehouse in Swiss Family Robinson, the interconnected pieces do not dominate the plant in the center, but are built up around it and through it. Its openness facilitates students getting out into the world. Diversity here is also represented by different color and shape.



The house plant model

The modelers are showing the balance they see in a reform effort. Balance between human-made and living. Size and scale show a balance appropriate to effective reform. Its organic nature fits with their conception of reform, while the plastic bag offers some protection to the growth of the effort.



Figure 1 The Models

For us, the session facilitators, the development of these models and the thinking that went into them primed the pump and made fertile the space for the incubation of our ideas about the potential of ecocentric school reform.

Facilitators' Story

An Egocentric Perspective

In the past five years, the intersection of our ecological, democratic, and social justice interests has led us to consider the limitations provided by the modern worldview as it impinges upon school reform. According to Eckersley (1992), that worldview has three main descriptors: 1) technological optimism, 2) atomism, and 3) anthropocentrism (51). Kealey (1990) suggests “egocentric” as a more useful label than the term “anthropocentric.” Noting that egocentrism supports a focus on the individual, Merchant (1992) contends that the modern worldview thus sees the human person as autonomous and singularly most important. We find that Kealey’s replacement nicely explicates the modern worldview, which we suggest is a central obstacle to real change in schools. This view assumes a process of change operating on a predictable and direct linear cause-effect relationship (technological optimism), a change mechanism that focuses on individual components (atomism), and the lack of a collective or shared goal (anthropocentrism—not only a focus just on humans—but in the school reform context an even more limited focus on “my subject” or “my classroom”).

This modern or Newtonian worldview developed from an understanding of science that became successful in its quest for knowledge by developing its inquiry as if it were examining a large machine. The underlying premise was that if we understood all the component parts and their interactions, we would not only understand how the world works, but also how to manipulate it to our own human benefit. The success of the modern scientific enterprise in understanding the world led to widespread adoption of that Newtonian worldview. Its influence on educational thinking resulted in the factory model of schooling we have today (Clinchy, 2000).

In the early part of the twentieth century, however, science came to a different understanding of how the world works — an understanding that did not match the machine metaphor. Systems thinking and chaos theory forced us to discard a simplistic cause-effect frame of reference (Senge et al., 2000) and to put aside the premise that the study of individual parts in isolation would lead to a complete understanding of how the whole works (Doll, 1993). The field/science of ecology was borne of this new way of thinking and continues to further our thinking about the world's complexity.

As science began to understand chaos theory and living systems theory, the lessons learned seemed applicable to human institutions in which multiple possible interactions between unpredictable beings mirror the situations being described in science through more complex theories. Applying decision-making models based in systems thinking, however, does not mesh well with the mechanical mindset that underlies the hierarchical design of most schools today. Staff members are expected to, or attempt to, implement a systems approach in a setting that cannot support it. Educators are hampered by a worldview based on the machine metaphor — hampered in understanding the systemic nature of the very institution/culture in which they live and work and in changing the system as required by systems thinking (Senge et al., 2000).

An Ecocentric Perspective

Callicott (1999) suggests that if we are to have a more holistic environmental ethic, we have to move away from the prevailing modern paradigm. As an alternative, an “ecocentric view” emerged originally from our readings in the field of ecological/environmental philosophy. Eekersly (1992) defined ecocentrism as an “ecologically informed philosophy of *internal relatedness* according to which all organisms are not simply interrelated with their environment but also *constituted* by those very environmental interrelationships” (49, italics in original).

Building on Eckersley's work and reviewing similar literature [see (Bowers, 2001; Callicott, 1999; Devall & Sessions, 1985; Leopold, 1949; Merchant, 1992; Naess, 1995; Whitehead, 1929)], and Kilbane (2004) propose the following qualities of that alternative ecocentric perspective.

An ecocentric perspective, thus, would bring to our worldview a focus on:

- ~ relationships and the interrelated nature of our complex world;
- ~ the whole and the fact that the parts synergistically interact within that whole;
- ~ multiple perspectives and the need to consider each perspective both individually and as a whole;
- ~ diversity and an honoring of that diversity so that fulfillment for all is reached.

While the field of education has begun to address the complexities of schooling and education by referring to its systemic wholeness and its immense complexity using the term "ecological," these recent moves only focus on some of the aspects required by a more complete ecocentric perspective and therefore, as noted by Martin (1994) limit our educational response.

An ecological or ecocentric view would help us address the complexities of schooling because we would begin to approach these intricacies in a more multifaceted way. For example, we might begin to realize that raising the reading achievement of students is about more than implementing a scripted, teacher-proof curriculum. (Or that real improvement is never as simple as that.) Goldenberg (2004) in his case study of a school trying to improve literacy supports this more nuanced ecological notion:

But the improvement in pacing cannot be seen as independent of the other changes mentioned – the earlier start in literacy learning during kindergarten; the more balanced, substantive approach to reading instruction in first grade; and systematic, regular efforts to involve children's homes and parents in their early literacy achievement. In fact, the dramatically changed picture of student progress in the reading program is best understood as the result of the several

factors identified working here in concert. ... Improved pacing was thus more than a vacuous exercise in turning textbook pages faster, and it was as much an effect of improved achievement as it was a cause. (35)

If the interest is in revitalizing the entire institution, multiple aspects must be addressed, and often simultaneously improved. Even those reform efforts that claim to be “whole school” or “holistic” are limited by the machine worldview. Many whole school reform efforts still engage practitioners in attending to pieces or single aspects of the school. Examination of and attention to the interactions of the pieces is missing in the dominant modern view. The possibilities that some interactions are more vital, or must be attended to first, or perhaps even in specific conjunction with others are rarely addressed under this paradigm.

School Reform and the Ecological Model

Lessons from the study of living systems and ecology have identified the characteristics of such complex systems as interdependence, (re)cycling, cooperation and partnership, flexibility to maintain balance, and diversity. These characteristics enable the self-organizing system to be self-bounded, self-generating, and self-perpetuating (Capra, 1996); so that it can preserve its goal of sustaining itself.

In the natural world when we think of examples of living systems, we think of forests, deserts, or ocean ecosystems and through the science of ecology, we have become more aware of their complexity. Schools as communities are no less complex than any of these natural communities. However, while in ecology we consider numerous possibilities based upon a probable multiplicity of interactions among the components of the natural community, our current approach to understanding a human institution like a school for the purpose of change still remains relatively simple and unnuanced (Fullan & Miles, 1992). We are, therefore, now challenged to approach the workings of human endeavors with the same complexity we approach

the natural world. Overcoming the modern worldview and its basic egocentrism forms the central part of our challenge when we approach more genuine school reform.

As we have read the literature on school reform, we have noticed similarities between its findings and what ecology and systems thinking have been telling us. The first and most obvious parallel is that whole or comprehensive school reform efforts must be intentionally holistic in outlook, if not approach. Rather than trying to identify and change individual pieces, as characteristic of past approaches based on the machine metaphor of reform, reformers today have realized that genuine reform is more than just adjusting some parts and avoiding the peril of touching more. The Goldenberg (2004) quote above aptly portrays the interconnectedness of the different facets of school life and demonstrates that this more holistic approach is required.

The New American Schools (NAS) in looking back at their work during the last decade has come to the realization that all parts of a reform intervention (professional development, instructional strategies, indicators of success, culture, community involvement) must work together to provide the coherence necessary to sustain change (Berends, Bodilly, & Kirby, 2002). ATLAS, one of the initiatives sponsored by NAS, was made up of four previously separate reform approaches coming together to pool knowledge. These partners built into ATLAS a multi-faceted and collaborative approach to their reform work (McDonald et al., 1999). This approach tries to address the complexity of schools and its interdependence of multiple factors that can confront attempts at reform. Acknowledging the slow success of whole school change efforts, Eisner (2004) and Schmoker (2004) both recently suggested that perhaps a one step at a time approach may be more productive. While these suggestions may signal a return to the machine metaphor, it is more likely their response simply advocates a way to more practically

deal with the complex nature of the system, as they both additionally insist that the individual steps must be coordinated tightly with a grand vision.

A coherent vision or unified goal is identified by all the reform authors referenced for this article as a key element of successful school change. This vision needs to be democratically developed and held in common by all the participants engaged in the work of a particular school's reform. This commonality of purpose and the intentional adherence of all chosen actions to this common purpose move the community closer to their goal. For Goldenberg (2004) this lack of a unified vision is one of the factors that he adds to Schmoker's (1999) list of problems that prevent success when trying to improve schools. The atomistic nature of the modern worldview where the focus is on the individual, not the collective, works against this coherence putting the reform effort in harm's way. In contrast, the necessary conception of all working together toward a common goal in school reform (Sarason, 2000) tightly mirrors the self-organizing conception of living systems theory in which all components are seen as working together to form a coherent whole. The sustainability of the whole requires that any goal be long-term and future-oriented. While systems thinking promotes the long view, the dominant modern worldview's predilection to presentism impedes developing a school culture where teachers share a common vision (Lortie, 1975).

The collaboration that develops from a common vision drives the development of synergy, just as it does in a living system. Collaboration, like the interdependence characteristic of living systems, depends on strong relationships. Fostering these relationships thus becomes an important part of a school reform effort. Senge et al's (2000) work on developing a learning organization focuses on fostering the development of strong relationships as does the National

Education Association's (NEA) school reform support initiative--KEYS (Hawley & Rollie, 2002).

Newmann (2002) claims that collaboration around the goal of intellectual quality for the students leads to balancing the common understandings that all students should have with meeting the diverse interests and needs of those same students. Diversity is a characteristic of school settings in the United States today and Newmann expects that a staff will need to value and exploit its own diversity to meet the challenge of its student body. Focusing on diversity as a necessary element of reform is promoted by the Coalition of Essential Schools (CES). The Coalition insists on multiple voices being part of all stages of the reform process (McDonald et al., 1999). Diversity is mandated in the self-governance aspect of new small schools (Meier, 2000) and in the vital incorporation of interdisciplinary approaches for the benefit of student and teacher learning (Newmann, 2002; Sarason, 2000; Schmoker, 1999).

The balance Newmann suggests between common knowledge and diverse interests must also be maintained for the diverse, and potentially opposing, needs of the various members of the school community. A commonly shared goal is an asset to this balancing process. As with the self-governing mechanisms of a living system that regulate to sustain the whole, maintaining the long-term sustainability of the intellectual center of the school community provides a balancing point for the educational system. The feedback mechanism currently working to regulate interests towards this goal is the collection of performance data. Schmoker (1999) has long been at the forefront of championing the cause of schools using data as the foundation for discussions about improvements to make. Sarason (2000) describes schools that are self-correcting and self-improving as making decisions about changes based on data results and as a consequence furthering progress toward the common vision. Meier (2000), Sizer (1996), Senge (2000), and

the NAS (Berends et al., 2002) all echo the importance of using data results. While there is not as clear an agreement as to what constitutes “results,” all are in agreement that results should come from an assortment of measures and be used as evidence for making decisions to further advancement toward the common goal.

For Clinchy (2000) the development of an assortment of diverse schools (each meeting the need of its own local community) is one solution to the “educationally challenged American school district” (1). We have learned in ecology that interference by humans managing an ecosystem without fully understanding the whole system can lead to disastrous results. Clinchy sees top down mandates, such as that of Goals 2000 that try to make all schools conform to a set standard, to be erroneous in approach, strangling the potential for needed diversity. Sarason (2000) agrees that top-down mandates destroy the feedback mechanism necessary for schools to be self-correcting, and therefore self-improving. In the afterward to a review of ATLAS and its work (McDonald et al., 1999), the four principals of the original partnership (Whitla, Comer, Gardner, Sizer) suggest that the work of school reform support providers is to find a niche where their particular expertise might be most useful. As with an ecological niche, each provider meets the varied needs of a diverse population of schools. For these reformers, a rich array of diverse schools makes sense on numerous levels.

Where an egocentric perspective would suggest that there is a one-size-fits all approach not only to teaching and learning, but also to reform, an ecocentric perspective would consider such mono-vision perilous and suggest an approach that is more organic, with each school community coming to its own conception of what an appropriate learning environment might be. The very sense of Dewey’s (Dewey, 1966) democratic communities or Senge’s (2000) learning organizations or Lieberman & Miller’s (2002) learning communities or DuFour & Eaker’s

(1998) professional learning communities resonates with the diversity, collaboration, and common vision discussed so far. The metaphor of an ecological community that sustains and grows works well here in the context of school environments, as that is the core purpose-- learning and growing--of all these communities. People's talents and skills in these communities are developed--taken from whatever starting point at which they are--and challenged and given experiences to generate change. This approach is in direct antithesis to a management orientation to school reform that tries to mandate uniform change and overcome resistance by fiat.

Growth, however, is still change. As with the ideal of life-long learning, growth of the community and its culture is on going. Culture, as it has been developed by the human mind, does not have a counterpart in our ecological metaphor. Yet, in human communities and their interconnected relationships, culture can have a powerful impact on the sustainability of the community. Because it remains unexamined, culture can prevent change. Tyack and Cuban (1995) termed culture the grammar of schooling and suggested that it was the main reason that transformational school reform efforts are not successfully sustained. Goldenberg (2004) in his case study of the life cycle of an innovative school noted that cultural influences in the larger community also played a part in effecting reform efforts. In general culture is the background of our lives and our schools and so often goes unnoticed until an outside perspective calls our attention to it.

New members to the community will bring new perspectives, potentially resulting in a change to the community through its feedback systems. However, commitment to a common goal can also result in a refusal to acknowledge other perspectives. This cultural situation can thus decrease the diversity that is important to systems (human or natural) (Naess, 1995). Thus

reform efforts need to add in a feedback mechanism that examines the culture – what assumptions underlie the current structure and climate of teaching and learning in the school community? Is there a bias based on my historical experience preventing me from understanding a change possibility? Critical friends (McDonald et al., 1999) and school reform networks (Meier, 2000) can assist schools in this endeavor to identify cultural influences in addition to offering support and ideas more generally.

The parallels described above led us to develop a way of looking at school reform that mirrored the ecocentric perspective. If an egocentric perspective underlies school reform that attempts to change individuals by mandates with a focus on structure, not culture, where one-size-fits-all and change is finite, then we see school reform within an ecocentric perspective as focusing on the whole and its intertwining relationships, valuing diversity and multiple perspectives, and on the need to constantly reform in response to cultural change. The table below compares the tendencies of reform with an egocentric perspective to that of reform guided by an ecocentric perspective. The four foci that organize the tendencies parallel the four characteristics of an ecocentric perspective.

A comparison of perspectives and tendencies on school reform	
Tendency for egocentric reform to focus on:	Tendency for ecocentric reform to focus on:
<i>Foci 1: Relationships and the interrelated nature of our complex world</i>	
short-term focus	long-term focus
focus on parts	focus on relationships
change is problematic	change is necessary
<i>Foci 2: The whole and the fact that the parts synergistically interact</i>	
one change at a time	simultaneous changes
hierarchical view of change	web-like view of change
change is finite	change is on-going
<i>Foci 3: Multiple perspectives and the need to consider them individually and as a whole</i>	
unaware of personal historical bias	bias held in abeyance
bowling over resistors	constructivist approach to all
underlying assumptions accepted	assumptions questioned
<i>Foci 4: Diversity and an honoring of that diversity so that fulfillment for all is reached</i>	
one single best method	valuing of all, but choosing one
approach of interference	approach of growth and development
value sameness	value diversity

The Ecocentric View Analysis Tool – Gauging ecocentric alignment

Changing a belief or a worldview is not an easy task. One of the challenges therefore is how to do so, if, as we argued, an ecocentric perspective would better fit a systemic school reform model. Our own experiences with changing or adjusting perspectives and beliefs has always involved people being engaged in an experience or process that causes them to confront their perspectives or beliefs over time. Our successful work in school reform using tools to get educators to look at school culture led us to consider the development of a tool that might begin the process of discussing an ecocentric perspective (or one's alignment with such a perspective).

Two primary considerations were incorporated into the development of this tool. First, the diversity of perspectives requires a tool that reflects a wide range of possibilities. In looking at the characteristics of effective school reform, the contrasting tendencies noted in the chart above emerged. For us, they identified opposite ends of a spectrum from which a continuum could be developed for the tool. Continuums for each facet made sense as our constructivist notion of development and learning inform us that people's notions are nuanced and always in flux.

The second consideration was to ease people into consideration of their personal perspectives. Our tool would focus on the school reform effort(s) undertaken by a school to begin the discussion of whether it aligned with an ecocentric systems perspective. Within that discussion people could begin to consider their own perspectives on the issues raised. Clearly, eventually some confronting needs to happen, but our concern was with supporting people to that point as opposed to scaring them off.

As we considered the physical layout of the continua, our interest in a graphical portrayal of the results led to the circular pattern seen in the Ecocentric View Analysis Tool in Figure 2.

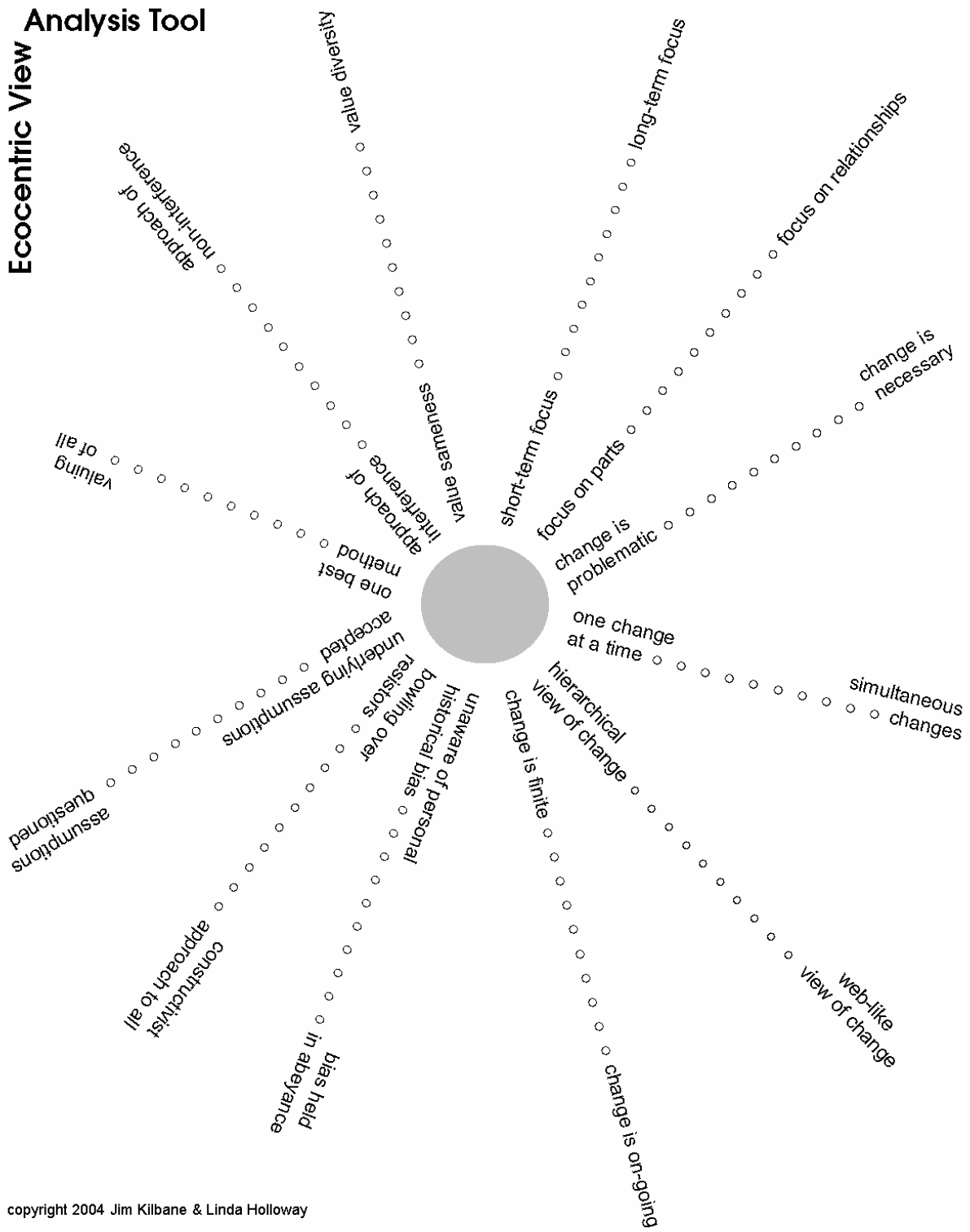


Figure 2 (Used with permission)

The Session's Story

Once Pauline was safe, and we had shared our story, we asked participants to help us evaluate the usefulness of the proposed Analysis Tool. Each group analyzed their own model with the tool. Once they had rated themselves on each of the twelve continua, we asked them to fold the paper in half lengthwise, and then in half widthwise, creating two creases intersecting in the center of the page and forming four quadrants. Each quadrant represented one of the four foci, with its corresponding continua.

Foci 1: "Relationships" is represented in the upper right quadrant

Foci 2: "Holism and synergy" is represented in the lower right quadrant

Foci 3: "Multiple perspectives" is represented in the lower left quadrant

Foci 4: "Diversity" is represented in the upper left quadrant

We also noted that the tool was designed so that the closer one's approach came to an ecocentric perspective the farther out towards the edge of the paper one's placement on the continua would be. Thus when the dots were connected, a more ecocentric perspective would produce a large circle representing a view of the whole.

Once these instructions were completed, the resulting discussion about placement on various continua and the meaning of some of the end points of the continua became the real tool. For example, on the continuum "short-term focus long-term focus" people often rated their model in the middle, noting why one had to have both. While our thinking had been that of "solely short-term focus" versus "having a long term goal in mind," its brevity on the tool enabled us to have a deeper conversation about the interaction and necessity of focusing on short-term goals that fit within a long-term objective. Our intent was not to provide an empirically validated instrument. The tool's usefulness was seen by us more in its ability to

create the conversations around intention and understanding of school reform. It is this deepening of conversations and experiences that we believe will then lead to changes in beliefs, worldviews, and perspectives.

At the same time, we wish the tool to be useful to its intended purpose. Our introduction of it at the C&P conference was a test, providing us with our initial feedback on its value. Feedback indicated that the tool was understandable and functional for assessing school reform models. It clearly generated the type of discussion we were looking for. This initial foray into use of the tool raised two points of concern. First, regards the ecocentrism of our participants. The models developed, and the resultant analysis showed high levels of consistency with an ecocentric view. We suspect that those who attended our session were already predisposed to such a view. If that is so, then the discriminatory ability of the tool has yet to be tested. Will a group of teachers with more diverse views be able to comprehend the continua well enough to accurately distinguish themselves, or will it be self-evident as to where the facilitator expects the placement to be, thus limiting the discussion of differing placements? We intend to use the tool in the near future with teachers involved in school reform efforts to gather more data on that question. Second, what context is most useful for this tool? We had participants build a model in lieu of coming to us with an articulated school reform plan that could be assessed by the tool. When we developed the tool its intended use was to analyze a plan that had been developed by a group of teachers. Clearly, it needs to be tested in that context, but this session raised a corresponding thought that perhaps having a school reform group build a model and try the tool on the model might be less threatening as an introduction to the idea of a more ecocentric view of school reform. Then as they developed their actual plan, the experience might lead to more

discussion and ultimately the production of a model that did contain more ecocentric thought and characteristics, thus showing more “success” with the tool’s viability.

While we believe it is clear that an ecocentric perspective better supports a systems approach to whole school change, the great challenge of how to facilitate people in changing their own perspectives remains. Moving someone from a worldview they have held for most of their lives--one that is interwoven with and has woven the very culture in which they operate--is no easy task. This potential for personal change, however, only adds one more layer to the challenge of school reform. If we are truly interested in transforming schools into socially just, democratic, and ecologically aware spaces, we must be interested in nurturing the growth of the entire system. Saving schools (and the people within those communities) from the fate that our Pauline Whiplash School narrowly escaped or perhaps from the even worse fate of being encased in the anonymity, sterility, and banality of a large, impersonal institution will not be for the faint of heart. Courageous heroes to the rescue, or more importantly steadfast supportive members of the community, will need tools and resources to delve into the moral conversations necessary to effectively transform schools and ultimately, perhaps, even themselves. The icebreaker scenario, the analytical tool, and the paradigm of the ecocentric perspective are offered here as just some of the potential means to help stimulate these crucial discussions essential to school reform.

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