3rd Draft (lst written2/25/92) Randy Schenkat 7/94-- edited 4/98

THE PERSPECTIVE FROM MOUNTAIN PEAKS-PSYCHOLOGICAL DIMENSIONS OF QUALITY: THEIR IMPLICATIONS FOR WINONA, MINNESOTA IN 1992

> I want to talk about another kind of high country now in the world of thought, which in someways, for me at least, seems to parallel or produce feelings similar to this, and call it the high country of the mind. If all of human knowledge , everything that's known, is believed to be enormous hierarchical structure, then the high country of the mind is found at the uppermost reaches of this structure in the most general and the most abstract considerations of all.
>
> Few people travel here. In the high country of the mind one has to become adjusted to the thinner air of uncertainty.....Many trails through these high ranges have been made and forgotten since the beginning of time.Persig-1974

The prospects of declining economic futures have prompted several Winona companies to embrace the Quality Transformation as a means to avert these conditions. Diane Ritter(1992), a national consultant on TQM, recently noted a differing audience reaction to presentations between American and European groups. Americans typically want to know more about the "how tos" while she maintains the Europeans want to know more about the "whys" of quality principles. This seems to suggest that the Quality Movement like most other ideas for change can be applied at varying levels from very superfical to deep understanding. This paper will examine the psychological dimensions of quality. Its purpose is to raise issues the Winona Council for Quality may care to consider as it seeks the transformation in Winona.

At its deepest level, the Quality transformation is related to full human development. Bronfenbrenner(1979) notes that the principal environmental variables influencing the development of an individual are the degree of complexity of 'molar activities' in which the individual is involved, and the extent to which a favorable 'balance of power' exists in a person's social relationships. In the workplace, these variables are determined for each worker by an organization's division of labor and social relations of work respectively. Relating the Quality Transformation to human development and human potential is based on three observations of the deep structure of quality.

Quality is about: 1) Systems Thinking
2) Learning
3) Trust in People and People Trusting in Themselves

The paragraph following - verbally describes the Diagram which was in lst draft--- it integrates these three observations which are principally based on the work of: Deming, Scherkenbach, Basseches, Argyris,Persig,Harvey,Hunt and Schroder, Perry, and Senge. The core of the model is based on the five elements of the Fifth Discipline: systems thinking, mental models, personal mastery, team learning, and shared vision.

[description of diagram- it starts with a box on left side of paper labeled SYSTEMS THINKING-- it contains these elements: extended process, integrate competing ideas, describe whole system, coordinate relationships in system, change is constant, events in process, changing nature of knowledge, previous solutions= today's problems, engage in double loop

learning. This box points to a box on right labelled MENTAL MODELS included in it are such things as: systems thinking, and beliefs such as: people are trustworthy or dishonest, we are people, so must be better way, truth is being discovered or held by experts, etc. as examples of mental models. This box leads to two boxes to right of it... PERSONAL MASTERY including: clarity on what's important, seeking a clear understanding of reality and TEAM LEARNING including : collegial regard, suspending assumptions, dialogue before discussion. The two boxes have lines comin g out which go to one box on their right labelled. SHARED VISION-- constancy of purpose.

At the heart of Diagram 1 is Mental Models which are another way to describe the paradigms that filter how we perceive and think. We all use mental models; however Senge would suggest they are most useful and/or less debilitating when we are aware of them. Systems Thinking is a Mental Model because it is a way of thinking in which a person sees patterns and the the connectedness of the whole. Deming would call this awareness understanding the extended process. Basseches(1984) in his work on dialectical thinking(see BASSECHES Appendix AT END) which seems to be a very complete explanation of Systems Thinking has given many details which add description to this concept. A systems thinker, for instance, is able to integrate two competing ideas into a new synthesis, can describe the whole of a system, can coordinate the relationship of systems, and understands that change is the constant and events are the movement of a process. System thinkers have sense of the changing nature of knowledge and its construction and hence an appreciation of the need for flexibility, can state, understand and give examples of the concept that previous solutions often become today's problems, and can as described by Argyris(1980) engage in double loop learning which is a continually examination and reflection on one's own learning.

Diagram 2[see DESCRIPTION IN NEXT PARAGRAPH] is a Mental Model of how the cognitive and personality theorists Perry and Harvey, Hunt and Schroder represent different patterns of adults' mental models. It is apparent that Level 4 is most like Systems Thinking.

DIAGRAM TWO Four Cognitive Positions
System 1 Different Surveys between 35-55% of college educated
-Black and White thinking -right/wrong answers(knowledge is abosolute)
- difficulty generating alternatives - prefers structured chain of command
-the teacher is expert

System 2 Different Surveys between 5-15% of college educated
-negative against rules - resist control - still hard to see another point of view

System 3 Different Surveys between 15 -25% of college educated
-see how points of view relate -a people person, so task usually slip
-all opinions are equally valid

System 4 Different Surveys between 4-7% of college educated
-can accomodate change - highly integrate information processing systems
-good balance of task and personal orientation - sees the big picture in learning(teacher has

expertise)

Mental Models are also made up of beliefs and knowledge. For instance other systems thinking is: we could believe we are on a constant search for truth or it is held by experts. Or, more directly related to the quality movement and continuous improvement, we are people therefore there is always a better way. We could also believe that people are trustworthy or dishonest.

Systems thinking and Mental Models have a direct bearing on Personal Mastery which Senge describes as the process of an individual continually clarifying what's important to them and attempting to see current reality more clearly. Without the lens of Mental Models one would have little awareness of wanting to understand reality more clearly. Without Systems Thinking there would be little sense of process and continual change which is at the heart of Personal Mastery.

Systems Thinking and Mental Models have a direct bearing on Team Learning which involves mastering of the practices of dialogue and discussion. Team learning is necessary for today's complex problems which generally can only be solved through systems thinking. However, often teams or more appropriately committees get mired in a range of personal and organizational needs which keep solutions from being less-than optimal. Often the missing ingredient is dialogue which is a free flow of meaning between people. In addition to total collegial regard for participants, the work with Mental Models is key as participants must suspend their assumptions- that is to learn to view them as assumptions and not fact.

Finally these four features, systems thinking, mental models, personal mastery, and team learning become the tools for individuals in an organization to both form and attain a shared vision . This shared vision is very similar to the constancy of purpose and the new philosophy that must guide an organization on the quality journey. The first diagram begins to show that that there are many psychological aspects that must be present within the leaders and co-workers in an organization. It also begins to help us realize the hollowness of the surface approach to quality without attending to these features. Vision cannot be imposed, but rather must be built on the other four features. Or, it is impossible to have systems thinking unless one is aware of mental models.

As we think of the tasks called for in the Quality Transformation, it can be seen that the psychological aspects(Systems Thinking, Learning, and Trust in People and People Trusting in Themselves) are important. First we will consider; Quality is about systems thinking. Scherkenbach(1991) states that one of the biggest frustrations is getting people to recognize that everything is a process. There is a common tendency to see things as having a separate existence especially after they have been labeled(for example , the organization chart) although they are in motion and changing(Basseches, I984). Furthermore, the organization is the interdependent network of the processes and not the organization chart. This takes a high degree of systems thinking to appreciate. If you do not see things in process, it is hard to appreciate other concepts that Schenkenbach describes such as," the more we know about uncertainty or the limitation of data, the more useful they become for us as we act on them" or" every decision is made under conditions of uncertainty; change occurs continually over time and space". Also, Deming's ideas such as: "there is no such thing as a fact concerning empirical observation " or "a statement devoid of predication conveys no knowledge", are difficult to understand.

There seems to be little evidence of true systems thinking occurring. Diagram 2[see above] contains data gathered on the distribution of of Level 1-4 Thinkers.

Research done at the University of Minnesota, described graduating seniors as: showing little evolution of alternative views on any issue, tending to treat all opinions as equally good, tending to hold opinions based largely on whims or unsubstantiated belief, and hesitating to take a stand based on evidence and reasoning. Parker(1979-80) concludes that, "these results correspond to a growing body of evidence that higher forms of intellectual development are not as common in undergraduates, even seniors, as most professors assume".

Basseches(1984) describes the implication of this type of development(not being systems thinkers) for managers. "Even among managers, it appears that management is often practiced using a pre-established set of systemized procedures (learned either form one's company or in business school), making management mainly a matter of applying a given system, rather than critically reflecting on systems".

As we contemplate the implications of these findings, they almost seem an expected result as we reflect on a culture that consistently engages in:
1) short term thinking-in and out of recessions from the monthly unemployment figures, 2) quick sound byte coverage with a KISS(keep it simple stupid)mentality, and 3) stereotype thinking with good and bad guys- blaming Japan for our economic woes without looking at the big picture. They also result as a function of the current learning paradigm which we turn to next.

Quality is about learning. Senge cites an astute observation from Royal Dutch/Shell, "the ability to learn faster that your competitors may be the only sustainable competitive advantage". This learning isn't the accumulation and remembering of the knowledge of experts which is the mode of most schools'(from pre-school to university) inert curriculum. Rather it is: the seeing of patterns to solve problems, the synthesizing of disparate information, and the identification of problems and the construction of their solutions.

The irony of today is that we get almost universal agreement the the second type of learning (problem finding/solving) is the more important, but we continue to persist in the first type of learning(the accumulation of inert knowledge). Argryris(1980) explains this phenomenon in general as he describe our capacity to have wide discrepancies been our espoused theories(what we say we are doing) and theories in action(what we actually do). We don't engage in the double loop learning to ascertain if we are in fact accomplishing this second type of learning. Relating it to the Deming PDSA cycle, we seldom seem to Study and Act. When we are confronted with the fact that there is a discrepancy between our espoused theory and our theory in action, according to Argyris it is likely we will engage in defensive routines. Perhaps this is why Dr. Deming asserts (196-S) that wisdom or the correspondence of words and action is rare.

Because most formal learning experiences center on remembering the knowledge of experts, there is little opportunity to develop the learning talents that are at the heart of quality companies. These talents are not beyond our reach; in fact, they are the fun and natural part of learning. But because learning stayed at the remembering level, we have often been restricted from this fun. For most of us our schooling experiences have been similiar to Goodlad's (1983) observations at the K-12 level or Arons'(1985) at the college level. Goodlad, " found consistent

attention to basic facts and skills which did not appear to be developing the ability to think rationally, the ability to use evaluate, and accumulate knowledge, and a desire for further learning". At the college level, Arons saw a similar pattern, "we professors proceed through these materials at a pace that precludes effective learning for understanding and they(students) acquire the misapprehension that knowledge resides in memorized assertions, esoteric technical terminology, and regurgitation of received facts.

This Catch 22, we think we are doing it but we aren't, is a formidable challenge today. This relates to the final observation on trust in people.

Quality is about Trust in People and People Trusting in Themselves.

Trust in people is different from the predominant Tayloristic mentality of needing to control and direct people. Scherkenbach(1991) states it well,"You can make anyone do anything...but you've only accomplished the letter of the law. You can make people seek reward and avoid punishment, but this is not enough to prosper in the new economic age. People must want to do the things that you need to have done".

People trusting in themselves is at the core of transformation. Basseches(1984) states, "for efforts at self management to be successful, workers need to develop concepts of themselves as competent and capable of initiative". Exemplifying team learning, he further comments, "they must be able to consider perspectives of their coworkers with different roles in the organization, and to reconcile differences among these perspectives in making decisions, They must also be able to consider the needs of the organization as a whole and to reconcile them with the needs of individual workers".

Basseches (1984) adroitly warns us of the cognitive challenges underlying co-workers trusting in themselves. "Workers who have had their cognitive structures shaped by years of work experience in, and socialization for, traditional hierarchical organizations and relationships(where they were asked to follow manager's orders) are then asked to participate in managing their own work. But their cognitive structures lead them (a) to look for order or work norms that they can follow, as well as opportunities to rest from required work; (b) to assume that they lack the expertise necessary to think about management decisions, and that if something needs to be done someone else will make sure that they do it; and (c) to depend on either conformity or disobedience behaviors rather than taking constructive initiatives. Under these circumstances, the demands of democratic decision making often are more than the organization can handle, and without adequate preparation of the workers." This is exemplified through a metaphor heard from a national teachers union official(Walsh, 1988) regarding teacher empowerment. "It is as if the canary cage is open but the bird does not choose to fly out".

This trust in self is certainly built or destroyed in the workplace. However, Deming, in his forces of destruction concept certainly see earlier molders of this crucial capacity. Current paradigms of grading and ranking do much to foster a lack trust in self for most students. Further, a very teacher directed learning environment does little to build trust in self. Finally, the type of low level learning that individuals are exposed to from pre-school through college does little to foster the cognitive capacity which seems to underlie a true trusting in self in an empowered work environment. Self esteem is probably not build on sound performance in low level learning. All that is developed there is a performance dependent esteem.

Issues for future dialogue:

What does a community do, when a leadership group senses a creative tension between old paradigm that has limited people and an emerging paradigm which has the potential to release people for creativity and meaning in the workplace and through their life spaces?

What is the role of education is making this paradigm shift? At an adult level? At a Pre-school through College level? What would help schools convert to TQM and to set the foundations for graduates embodying the cognitive capacities and predispositions necessary for TQM to succeed in a profound way in Winona?

Is it useful to consider the local transformation in a series of stages? Basseches (1984) states, "whereas the legal structure would be democratic from the start, the actual patterns of participation in management would approach equality through a series of stages as the process continued. each new stage of organizational development would promote further progress in individual development, which would in turn make further organizational development possible.

Is there a need for coordination with other compatible social institutions in order for workplace democratization to succeed as Basseches points out?. What does that mean for Winona? How do we build an awareness? How can media take a deeper look at issues in this community in reporting news? Perhaps this has to come from showcasing decision making done from a systems context, alerting the media to other alternatives in reporting multifaceted events, and encouraging the readership to ask for deeper, comprehensive coverage on issues.

What should be leadership's' role in this transformation? According to Basseches, those involved in the workplace democratization movement will need to be able to recognize the tensions and contradictions in existing workplaces and to recognize the possibilities for resolving these contradictions through the transformation of organizational structures to more democratic forms. However, they will also need to recognize that such change must occur gradually through a ..process in which changes in individuals lead to changes in organizations, which in turn lead to further changes in individuals. They will need to to recognize (a) that because the existing work ecology forms an integrated system, changing individual organizations is likely to bring them into conflict with other organizations, and (b) that the tensions resulting from such conflicts must be lived through, in fact nurtured, to facilitate the broader changes (such as establishing networks of democratic organizations) which are necessary for the overall movement to create a democratic ecology of work to succeed eventually.

It seems that mountain climbing into the peaks is the key to quality. Our job as a Council could be to build the capacity for mass expeditions into these peaks. These expeditions will produce many profitable financial and personal results for local organizations and individuals.

-END-

Basseches Appendix---

Understanding Basseches' framework give us a useful schemata at the broadest level-- a world view in which many organizational issues can be understood. These issues include : meaning making, individual and group learning in context of learning organization, and problem solving.

Basseches says, " I view the dialectical perspective as comprising a family of world-outlooks, of views of the nature of existence(ontology) and knowledge(epistemology). These world-outlooks, while differing from each other in many respects , share a family resemblance based on three features--common emphases on change, on wholeness, and on internal relations". He sets out a framework that breaks dialectal thinking down into 24 component schemata--specific types of move-in-thought which dialectical thinkers tend to make. These 24 patterned moves -in-thought can be readily identified in an individual's explanations, analyses, or arguments.

Basseches builds on Piaget's Formal Operations which he represents as thinking within closed structures of operations regulated by laws which thought obeys. In formal operational thought, an underlying(closed) system organizes a logic of propositions into a coherent whole. It enables the thinker to deal with various propositions and their necessary interrelationships systematically. The closed system model is not adequate for problems requiring analysis of(a) multiple systems and their relationships to each other, nor (b) open systems which undergo radical transformation.

In contrast, he sees dialectical thinking challenging the boundary conditions of formal thought in closed systems and sees it as dealing with what lies beyond those boundaries. He states, " the dialectical schemata regulate thought by providing means by which thinkers can consistently or"regularly" free themselves from blind obedience to laws and forms that limit the scope of thought. Use of dialectical schemata results in creative activities of thinking determining the use of structures, rather than leaving thought determined by demands for statis that the structures impose." In fact, dialectic refers to the developmental transformation of systems over time. Also, in dialectical thinking a logic of systems in organized into a coherent whole. It enables the thinker to deal with various systems, and their relationships to each other over time.

To make this abstraction more real, I will now offer 9 of the 24 schemata that make up Basseches' overall schemata of dialectical thinking. Imagine these 9 examples-4 focusing on how we view events in life and 5 on how we think about knowledge--as interrelated filters in the template that can help us make make meaning of life if they are used to understand experience.

4 Schemata on Viewing Events in Life

Schemata 8 Understanding of events or situations as moments of a process. .
There is no equilibrium . See things in historical explanation; events are moments in background of ongoing motion and change.

Schemata 16 Location of contradictions or sources of disequilibrium within a system or between a system and external forces or elements which are antithetical to the system's structure.. This schemata places value on contradiction and disequilibrium. Hegal says it is the source of all motion and vitality; it is essential for process of change and transformation. Based in a belief that every system is limited in
its ability to maintain stability. .. Once this position of having to deal with problems is valued and not resisted, there is much opportunity.

Schemata 17 Understanding the resolution of disequilibrium or contradiction in terms of a notion of transformation in developmental direction.. A form is understood to have a higher level of equilibrium when it is more inclusive, and more differentiated and integrated. So developmental transformations are

moves from less to more inclusion. Synthesis is valued as it adds to complexity.

Schemata 18 Relating value to movement in developmental direction and/or stability through developmental movement.. This schemata is present when subject explicitly states valuing of process of development. Disequilibrium is valued over any particular for of equilibrium since it provides the source of transformation.

5 Schemata on Knowing

Schemata 6 Affirmation of the practical or active character of knowledge.. We are conscious of our abstractions which we see as only maps to help us make sense of the chaos. We have a sense of knowledge construction and don't view knowledge as imposed on the knower. Understand earlier schemata of the workings of Thesis- Antithesis- Synthesis.

Schemata 13 Criticism of multiplicity, subjectivism, and pluralism..this pre-dialectical thinking views the individual person as the ultimate source of data while this model suggests perceptions can be changed by an intersubjective process of bringing conceptual models to bear. Multiplicity supports anyone has a right to their own opinion and because they are subjectively determined can't be influenced by interaction .

Schemata 11 Contextual Relativism.. Relating ideas to context--(the whole) and understand the nature of knowledge so can locate ideas in context. Deal with points of view, interpretations, frames of reference, values systems. Individual judgment systems interact and modify self in course of dialectic while moving to more inclusive, differentiated and integrated judgment system. Appreciation of these Schemata values this type of change.

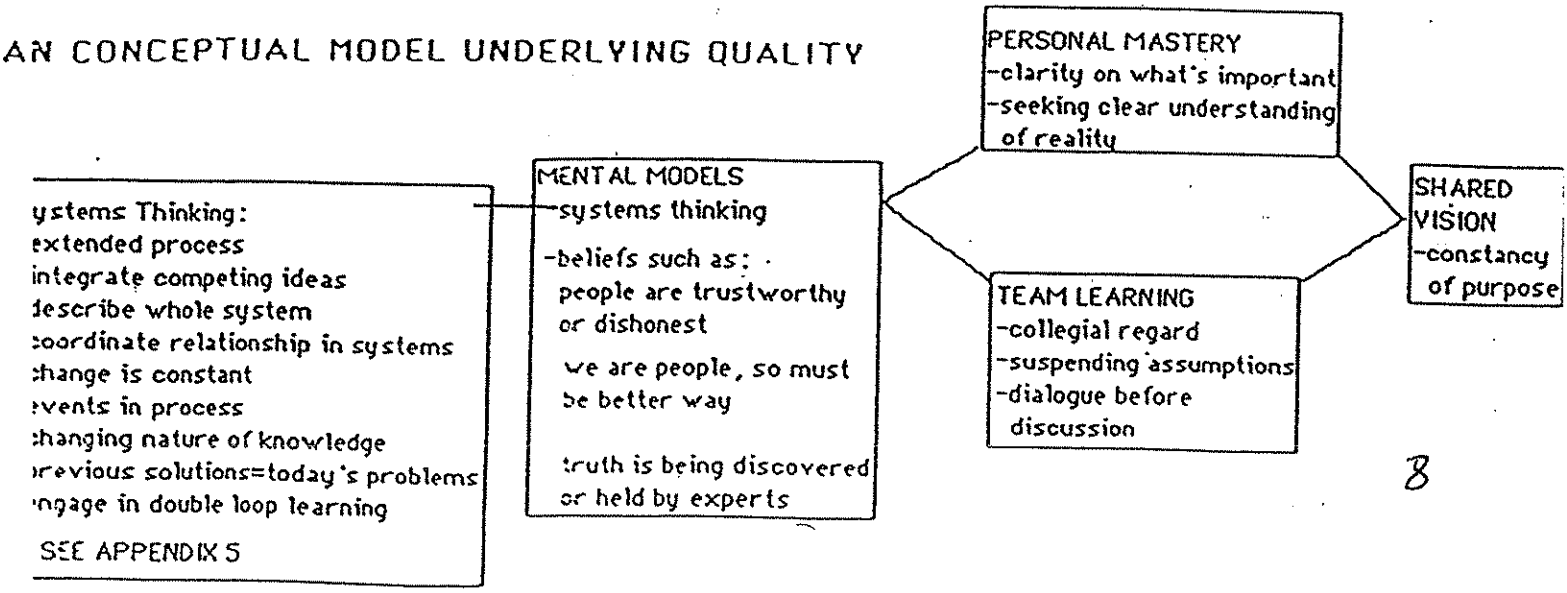
Schemata 10 Description of whole in structural, functional, or equilibrational terms.
This schemata considers the ability of a person to describe the whole system in relation to the three areas. In structure is the capacity to delineate shape, form, pattern, organization , framework or structure. Function refers to how elements support, compliment, function or maintains. Equilibration assess the stability of the whole in regards to fit, harmony, regulation, order, smooth functioning.

Schemata 21 Description of self-transforming systems..Varied kinds of PAGE 3 systems(organisms, social organizations, cognitive structures,) have been described in this fashion.

In summary, Basseches schemata seem to be concrete representations of the filters in an overarching world view schemata-called Dialectical Thinking. This template has much bearing on an organization's capacity to thrive in changing times.

DIAGRAM 1

AN CONCEPTUAL MODEL UNDERLYING QUALITY



#2

FIGURE 5.1
Four Cognitive Models, Reflecting Views About Teaching and Learning

System 1

- Black/white vs. shades of gray
- *(Right/wrong answers—knowledge is absolute)*
- Difficulty generating alternatives
- Prefers structured chain of command
- *The teacher is expert*

System 2

- Negative against rules
- Resists control
- Still hard to see another point of view

System 3

- Sees how points of view relate
- A people person, so tasks usually slip
- *All opinions are equally valid*

System 4

- Can accommodate change
- Highly integrated information-processing systems
- Negotiates with others to work out abstract problems
- Good balance of task and personal orientations
- *Sees the big picture in learning (teacher has expertise)*

Note: Items in italic apply particularly to customary teacher outlooks for each system.

Source: Schenkat, R. (1987). "The New Corporate Mind—Empowering Students, Teachers, and Administrators to Develop and Use It." Paper presented at the Annual Conference of the Association for Supervision and Curriculum Development, New Orleans.

#3

FIGURE 5.2
Conceptual Positions of Liberal Arts Majors and Teachers

	System 1	System 2	System 3	System 4
Liberal Arts Majors	35%	15%	20%	7%
Preservice Teachers	45%	5%	25%	5%
Inservice Teachers	55%	—	15%	4%

Note: Totals do not equal 100% because of some category overlap. Harvey, Hunt, and Schroder (1961) also found most administrators in System 1, with few in System 4.

#4

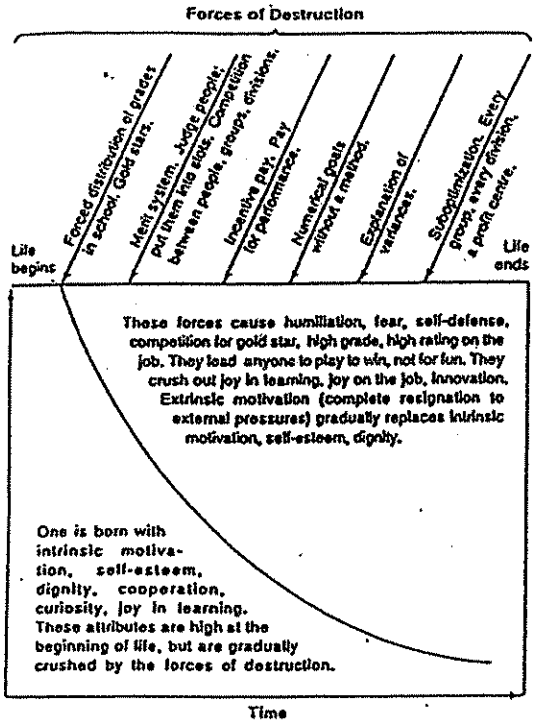


Fig. 10. The forces along the top rob people, and the nation, of innovation and applied science. We must replace these forces with management that will restore the power of the individual.

#5

Table 1. The Dialectical Schemata Framework

A Motion-oriented schemata

1 Thesis-antithesis-synthesis movement in thought
2 Affirmation of the primacy of motion
3 Recognition and description of thesis-antithesis-synthesis movement
4 Recognition of correlativity of a thing and its other
5 Recognition of ongoing interaction as a source of movement
6 Affirmation of the practical or active character of knowledge
7 Avoidance or exposure of objectification, hypostatization, and reification
8 Understanding events or situations as moments (of development) of a process

B Form-oriented schemata

9 Location of an element or phenomenon within the whole(s) of which it is a part
10 Description of a whole (system, form) in structural, functional, or equilibrational terms
11 Assumption of contextual relativism

C Relationship-oriented schemata

12 Assertion of the existence of relations, the limits of separation or the value of relatedness
13 Criticism of multiplicity, subjectivism, and pluralism
14 Description of a two-way reciprocal relationship
15 Assertion of internal relations

D Meta-formal schemata

16 Location (or description of the process of emergence) of contradictions or sources of disequilibrium within a system (form) or between a system (form) and external forces or elements which are antithetical to the system's (form's) structure
17 Understanding the resolution of disequilibrium or contradiction in terms of a notion of transformation in developmental direction
18 Relating value to (a) movement in developmental direction and/or (b) stability through developmental movement
19 Evaluative comparison of forms (systems)
20 Attention to problems of coordinating systems (forms) in relation
21 Description of open self-transforming systems
22 Description of qualitative change as a result of quantitative change within a form
23 Criticism of formalism based on the interdependence of form and content
24 Multiplication of perspectives as a concreteness-preserving approach to inclusiveness

Source. From Basseches, 1980, p. 408.