

Holonomy: Paradox and Promise¹

Arthur L. Costa, Ed. D., Kalaheo, Hawaii and Laura Lipton, Ed. D., Yorktown, New York

As we develop soul in our work we need to recognize our dual identity: we are both individuals and members of a group. Indeed, finding the soul of work involves the balance and integration of apparent opposites, such as head and heart, intellect and intuition, and self and group. This process is not so much based on the “shoulds” but upon “what is.” It is my belief that as we attend to the soul of work we will find we feel more complete.

- Paulson, 1995

Current organizational theory posits that there are strong parallels between natural systems and social systems. This connection suggests that organizations have much to learn from such disciplines as evolutionary biology and quantum physics which employ systems theory. One tenet of systems thinking, both for natural systems and for organizations, is the propensity of the individual elements in the system to maintain their integrity, while also influencing and being influenced by the larger system. This part/whole dichotomy has been described by Arthur Koestler (1972) as holonomy. Holonomy combines the Creek roots: holes meaning whole, and on meaning part. Holonomy conveys the notion that an entity is both an autonomous unit and a member of a larger whole simultaneously. This concept implies a combination of opposites—being both a part and a whole; functioning autonomously while working interdependently. A holonomous system captures the promise of stability, growth and learning. However, because all life forces are simultaneously independent and interdependent, self-assertive and integrative, whole unto themselves yet always a part of systems larger than themselves—holonomy also presents a paradox.

This article presents holonomy, the paradox and the promise, as the fountainhead of continuous human growth and intellectual development. Its purpose is to identify and describe both the dynamic tensions inherent in the paradox, as well as the systemic resources necessary for its resolution.

Levels of Autonomy Within the System

We will present educational practice as a system wherein multiple levels of an organization can mediate and be mediated towards their continual becoming as holonomous entities.

The Autonomous Individual

Like holonomy, autonomy also comes from the Greek: *auto*, meaning “self” and *nemein*, meaning “to hold sway” Autonomous individuals set personal goals and are self-directing, self-monitoring, self-analyzing, self-evaluating and self-modifying. They are in a constant state of experiencing and experimenting, learning from each new situation. Autonomous human beings are self-referencing, drawing on their own unique systems, experiences, strengths and origins towards continuous growth. This growth includes the capacity to transcend original patterns.



THE
AUTONOMOUS
INDIVIDUAL

In autonomous, assertive individuals, growth emanates from within, as a tree does from a seed.

¹ The evolution of this chapter is a result of deliberation over time by the authors and the Go-director, Bob Garmston, and Senior Associates of the Institute for Intelligent Behavior: Bin Baker, John Dyer, Peg Luidens, Marilyn Tabor, Bruce Wellman and Diane Zimmerman. For their insights and assistance we are deeply appreciative.

The Group, the Organization and Beyond

"It takes two to know one." Gregory Bateson

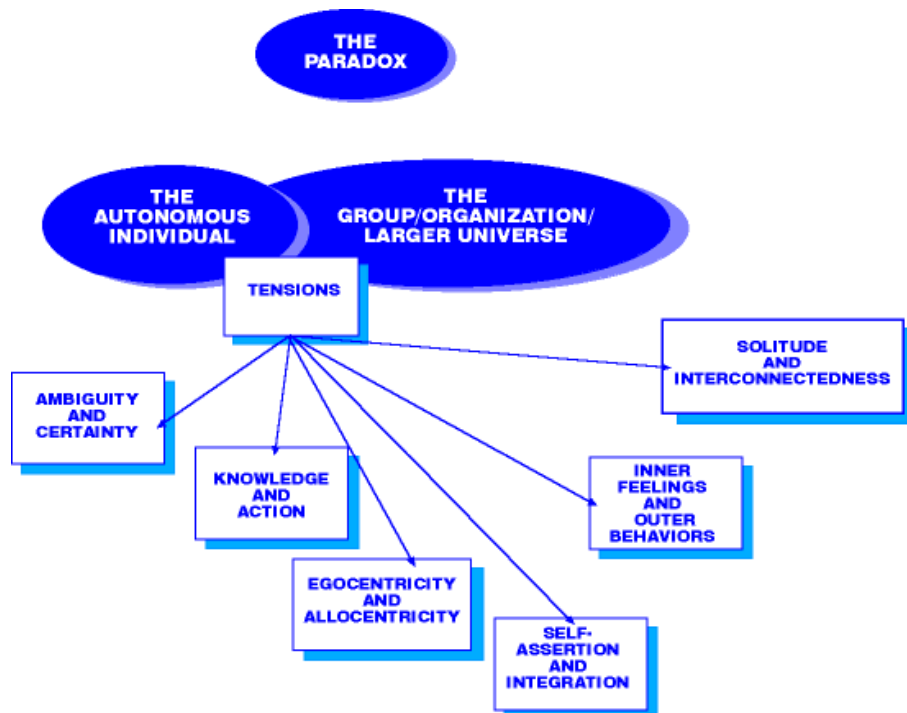
There is, however, no such thing as a purely autonomous, independent entity. All individuals are simultaneously autonomous and in reciprocity with their environment and with other individuals. Even the most effective, self-modifying, self-authoring, autonomous individual holds membership in numerous larger environments and communities: a family, a religious group, a workplace, a community, a nation.



In the case of educators, we are autonomous selves interacting at multiple levels of organization: The teacher, the class, the school, the district and the community. Each level influences and is influenced by those around it.

The Paradox: Dynamic Tensions

The part/whole dualities inherent within a holonomous system produce a paradoxical conflict. This paradox arises from the dichotomies inherent within humans that give rise to tensions or conflicts between the individual and external forces, as well as between opposing internal drives. The source of these tensions stems from the system's search for balance, or equilibrium. For example, humans strive for self-identity and assertion while simultaneously striving for reciprocity and affiliation with others. We will address six such dichotomies, or the dynamic tensions:



Ambiguity and certainty. Humans have a passion for certainty. The human mind strives to make sense, to seek patterns and assign meaning. As a result, our mind, both consciously and unconsciously, tends to distort meanings to fit our own biases, assumptions and theories. The positive aspects of this tendency has ensured our survival, the danger is that we engage in self-sealing logic without suspending judgment, while we remain open to new data and fresh interpretations.

Developing comfort with ambiguity allows us to be open to the possibility that our information may be inadequate, that additional information may dispute our conclusions, that we have not analyzed or defined our conflict thoroughly. Numerous examples can be found in scientific progress as more recent and conclusive evidence disputes obsolescent theories.

My self-imposed rule is to retain the courage of one's doubts as well as one's convictions, in this world of dangerously passionate certainties. - Eric Sevareid

Knowledge and action. Human beings strive for congruence between what they know and believe and how they behave. While we may possess rich knowledge about a subject, we don't always apply that knowledge to govern our actions. Educational practice holds an abundance of examples. For instance, a strong body of research and our own practical experience indicates that most boys mature later than girls in certain developmental areas (i.e. manual dexterity). Yet we teach a uniform curriculum simultaneously to both. Compelling research about the effects of tobacco on health is well known, many people, however, remain addicted.

Egocentricity and allocentricity. It is possible to take multiple stances, or positional outlooks on the world. One such stance is egocentric; that is to view an event from a personal (or first person) perspective. For example, when a teacher is planning a lesson, the activity can be constructed based on that teacher's actions, locations in the room, specific language choices, etc. However, that lesson (or any event) could also be considered from an allocentric stance. *Allo*, meaning "other", suggests that the teacher is shifting perspective to consider the lesson from the students' standpoint—or from one or several particular students' standpoints.

Even when we are able to shift between these perspectives, a tension between our personal stance and an understanding of others exists. The tension arises as we work to ameliorate our own perspectives with other's perspectives. We perceive situations or events from our own point of view, but may find we are at odds with the point of view held by others. Any married couple or parents of teenagers can cite numerous examples of differences between individual perspectives.

Self-assertion and integration. Humans strive to become autonomous, self-initiating, unique individuals and, at the same time, hold membership and allegiance to the larger community. In meetings, for example, we may ask ourselves: "Is this the time when I need to assert my ideas or should I choose to go along with the will of the group even though the group's decision may be contrary to my own views?"

Transparency between inner and outer lives. What one thinks and feels inside may not be presented on the outside in their behavior (Paulson, 1995). As humans, we have the unique capacity to mask our emotions. We experience feelings, thoughts and opinions, but choose not to expose them to others. Examples might be when someone tells an offensive joke. We may feign a smile overtly, but we feel hurt or put off inside. Or, while we may be experiencing rage inside, we wish to convey to others the appearance of calmness and rationality.

Solitude and interconnectedness. At times, humans, desire to be alone and introspective and yet are driven by the basic need to be interactive and collaborative. We wish to be alone but are exhilarated by the interpersonal interaction with groups. There are times when we wish to retreat to our cave and other times when we wish to visit the commons. Those who are adept at presenting to large groups draw energy from their audience but then find solace in being alone. Most humans dread the thought of being deserted or abandoned, yet we often search for seclusion.

Solitude is a silent storm that breaks down all our dead branches. Yet it sends our living roots deeper into the living heart of the living earth. Man struggles to find life outside himself, unaware that the life he is seeking is within him. Nature reaches out to us with welcome arms, and bids us enjoy her beauty; but we dread her silence and rush into the crowded cities, there to huddle like sheep fleeing from a ferocious wolf. - Kahlil Gibran

Tensions such as these can be sources of either reward and strength or misery and impotence depending on one's resourcefulness. The amount of effort to resolve them is the same.

The Promise: Enriched Capacity and Continual Growth

We provide both irritation and inspiration for each other—the grist for each other's pearl making. - Stephen Nachmonovitch

The resolution and balancing of these tensions and conflicts may be seen as catalysts for growth, learning and maturing. Over time, the continual search for equilibration, which these tensions produce, demands the emancipation of certain internal resources. These internal capacities may be described in terms of five mind states (Costa and Garmston, 1994). They may be thought of as forces which human beings access as they strive for increasingly authentic, congruent, ethical behavior. They are the tools of disciplined choice making which guide human action toward resolving these dynamic tensions. They are the primary vehicles in the lifelong journey toward integration. We categorize and define them as follows:

Efficacy: The quest for mastery of our environment, control, self empowerment and continuous, life-long learning.

Efficacy, a particularly catalytic state of mind, is a determining factor in the resolution of complex problems. Such problems, tensions and conflicts provide opportunities for learning to become more efficacious: finding that personal action produces outcomes, that performance anxiety can be controlled by accessing personal resources, and the recognition that previous experiences provide a reservoir of knowledge to be drawn upon when encountering new problems. The resolution of such conflicts can create the awareness of what is not known by the self and what other resources are needed to complement and enhance our knowledge. With minimum efficacy, such problems are resolved through blaming, withdrawal and rigidity. With robust efficacy, more energy must be expended to persevere longer, set more challenging goals, continue in the face of barriers and learn from experiences. Thus, over time and with reflection, the capacity for efficacy, as an internal resource, may be enhanced.

Flexibility. The uniquely human capacity to perceive situations from multiple perspectives, and endeavor to change, adapt and expand a repertoire of response patterns.

Edward deBono (1969) reminds us that when dealing with conflict, only the human brain can deliberately alter perceptions, change patterns, invent concepts and tolerate ambiguity. Flexible resolution of tensions requires that problems be approached from new angles using novel approaches (lateral thinking). Alternative points of view must be considered and several sources of information must be dealt with simultaneously. Sustaining a process of problem-solving over time requires practice of tolerating ambiguous situations. Minds must be kept open to change based on additional information and data or reasoning which contradicts existing beliefs. Alternative ways of solving the same problem must be evaluated and the merits and consequences of two or more alternate courses of action must be explored. Working to resolve conflicts in groups through dialogue, demands a willingness to experiment with another person's idea, and strive for consensus.

Thinking flexibly develops confidence in our intuition. Confusion and ambiguity require a willingness to let go of a problem trusting the subconscious to continue creative and productive work. Manifestations

of flexibility also include problem resolution through humor, creativity and repertoire. Becoming increasingly more conscious of flexibility in problem solving informs the need for a fluidity of flexible perspectives. The flexible mind is activated by knowing when to shift perceptual positions. Flexibility of mind is also developed when working with social diversity, enabling an individual to recognize the wholeness and distinctness of other people's ways of experiencing and making meaning.

Craftsmanship. The drive for clarity, elegance, precision, congruency and self-integration.

Since language and thinking are closely entwined, precision of language is an important characteristic of the effective problem solver. Language refinement plays a critical role in enhancing a person's cognitive maps, and their ability to think critically which is the knowledge base for efficacious action. As humans acquire more exact language for describing their work, they begin to recognize concepts, identify key attributes, distinguish similarities and differences, and make more thorough and rational decisions. Developing craftsmanship, therefore, enriches the complexity and specificity of language and simultaneously produces effective thinking.

Consciousness. The capacity to project, envision, manage, monitor and reflect on thoughts and actions.

Consciousness is the central clearinghouse in which varied events processed by different senses can be represented and compared and, therefore, has particular catalytic properties 'or the other states of mind. It is the state of mind prerequisite to self-control and self-direction. Consciousness means that we are aware that certain events are occurring, and we are able to direct our response to the events.

The function of consciousness is to represent information about what is happening outside and inside the organism in such a way that it can be evaluated and acted upon. Without consciousness we would still "know" what is going on, but we would have to react to it in a reflexive, instinctive way. Consciousness provides a distinctive characteristic of the human nervous system in that we are able to affect our own emotional or mental states. We can make ourselves happy or miserable regardless of what is actually happening "outside", just by changing the contents of OUT consciousness,

Intentionality keeps information in consciousness ordered. To have intentions and to be conscious of one's intentions is to live in two different worlds. To be conscious of one's intentions is to have choice to focus attention at will, to be oblivious to distractions, to concentrate for as long as it takes to achieve a goal and to align thoughts, feelings and behaviors with that intention. Practicing effective conflict resolution, therefore, requires the development of this priceless resource, consciousness.

Interdependence. The need for reciprocity, belonging and connectedness; and the inclination to become one with the larger system and community.

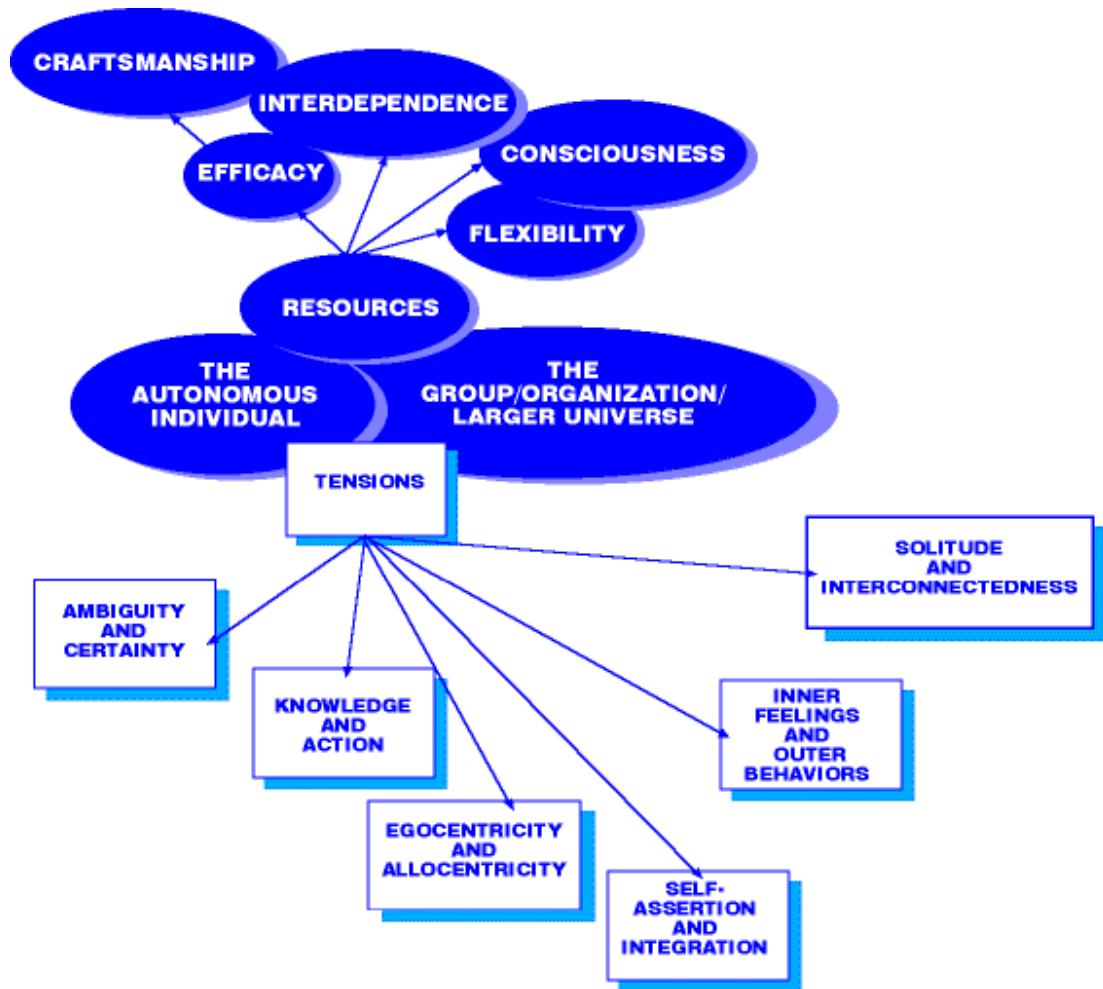
The inevitability of conflict among and between individuals in a community provides valuable potential for experiencing benefits of conflict resolution and finding new and different ways of solving problems. Endowed with the passion for interdependence one can focus on ways to let a conflictual relationship transform the parties rather than on the parties resolving the conflict.

As individuals become more interdependent, they may experience a sense of interconnectedness and kinship that comes from a unity of being, a sense of sharing a common community (class, school, neighborhood) and a mutual bonding to common goals and shared values. Interdependent individual's sense of self is enlarged from a conception of me to a sense of us (Sergiovanni, 1994). They understand that "as we transcend the self and become part of the whole we do not lose our individuality but rather our egocentricity."

We believe these five mind states offer rich capacities from which individuals and groups can draw to produce effective thought and action when confronted with problems, tensions and conflicts. Self-

modifying, self-authoring, autonomous individuals are members of a larger community. It is through our interaction with the larger universe—the environment, the organization and other people—that the states of mind are disclosed, exercised and expanded. Through our interaction with others we develop efficacy, mastery and control. Consciousness emerges as a social phenomenon out of our encounters with others. Craftsmanship grows as a result of feedback from others and from the environment. Flexibility is expanded as a result of repeatedly encountering the diversity of other humans and situations. What begins as a source of conflict, therefore, can result in a form of continuous learning. The processes of resolving the tensions are the very processes that produce growth.

Resolving the Paradox of Holonomy



Resolving Tensions as Mediated Learning Experiences

Over time, with reflection on our repeated opportunities to resolve these conflicts, we can develop our resourcefulness in coping with future conflicts and tensions. The Russian psyche-linguist, Lev Vygotsky (1978), suggests that intelligence grows in two ways. One is the intelligence that develops through our own experience. The other is when our intelligence is shaped through reciprocity with others. Explicating reasons, resolving differences, actively listening to another’s viewpoint, achieving consensus, and receiving feedback actually increase our intelligence. Growth in holonomy, therefore, may be accomplished both internally within individuals, and through mediative interactions with others (Feuerstein, Feuerstein and Schur, 1997).

The five states of mind described above, however, are transitory—our state of mind varies depending on a variety of factors including experience, knowledge, fatigue, emotional state, etc. While these capacities are always with us, like any other form of energy they come and go; they peak and plateau.

Becoming Intentionally Holonomous

We believe that holonomous people not only self-mediate, they also hold an identity as mediator of others' growth toward greater holonomy. A mediator recognizes conflict, or problems as opportunities to enhance growth toward holonomy for self and others.

Self-Mediation

Intentionally holonomous persons are aware of their dynamic tensions, and consciously and consistently draw upon these five mind states as internal resources, or habits of mind, toward resolution. People who intentionally become more holonomous, engage in self-mediation by conducting an internal dialogue. They have the capacity to:

- Draw from prior knowledge, sensory data and intuition to guide, hone and refine actions. They might ask, What is the most efficacious thing I can do right now; what might I learn from this problem, what are my resources, how can I draw on my past successes with similar problems, what do I already know about the problem, what resources do I have available or need to generate?
- Seek perspectives beyond self and others to generate adaptively resourceful responses. How can I approach this problem flexibly? How might I look at the situation in another way, how can I draw upon my repertoire of problem-solving strategies; how can I look at this problem from a fresh perspective?
- Pursue ambiguities and possibilities to create new meanings. What is the most craftsman-like thing I can do? How can I illuminate this problem to make it clearer, more precise? Do I need to check out my data sources? How might I break this problem down into its component parts and develop a strategy for understanding and accomplishing each step?
- Explore choice points between self-assertion and integration with others, what feelings am I aware of? What do I know or not know; what questions do I need to ask, what strategies are in my mind now, what am I aware of in terms of my own beliefs, values and goals with this problem. What emotions am I aware of which might be blocking or enhancing my progress?
- Balance solitude and togetherness, action and reflection: Who else might I turn to others for help and feedback? How does this problem and its solution affect others? How can we solve it together, and what can I learn from others that would help me become a better problem solver? How would my role-models and mentors approach this problem?

Furthermore, people who intentionally become more holonomous learn from these experiences. They view and reflect on these conflicts and tensions as opportunities for growth. They employ feedback spirals (Costa and Kallick, 1995) as a means of continuous growth and learning.

Mediating Holonomy in Others

A mediator holds the clear intention of supporting others in accessing the potential of the states of mind, facilitating self-directing, self-referencing, self-analytical, self-evaluating and self-modifying behaviors. Many opportunities can be found for a mediative relationship: parent-child, teacher-student, teacher-teacher, administrator/teacher, etc. The mediator employs strategies for relationship building and linguistic tools designed to enable others to access one or more of the states of mind. Four capacities and skills needed by a mediator include: 1. Reciprocity, 2. Intentionality, 3. Vision, and 4. Linguistic Tools.

- Efficacy: “When you have been faced with similar situations in the past, what has worked for you that you could apply in this situation?”
- *Efficacy and Consciousness*: “What were you aware of in your own behavior that caused the students to be successful?” Consciousness: “As you envision this lesson, what will you see students doing as indicators of success?”
- *Flexibility and Consciousness*: “How do your questioning strategies take into account your student’s various learning styles?”
- *Consciousness and Interdependence*: “What will you be aware of in your own decision making during your interaction with these students?”
- *Craftsmanship*: “When you say you want the students to enjoy the music, how specifically will they exhibit their enjoyment?” Craftsmanship and Efficacy: “What learnings will you carry forth from this experience and apply to future events?”
- *Interdependence*: “To whom might you turn for help with this problem?” “How might we secure the other staff member’s thinking about this policy change?”

Taken together, these five states of mind are a force directing us toward increasingly authentic, congruent, ethical behavior—the touchstones of integrity. They are the tools of disciplined choice making. They represent the continuing tensions and resources for acting holonomously. They are the primary vehicles in the lifelong journey toward integration and wholeness. Through mediating ourselves and others, we can modify the capacity to access these states of mind. The ultimate goal of the mediator, however, is to modify other’s capacities to modify themselves.

The degree to which I create relationships which facilitate the growth of others as separate persons is a measure of the growth I have achieved in myself. - Carl Rogers

References

- Costa, A. and Kallick, B. (1995.) *Assessment in the Learning Organization: Shifting the Paradigm*. Alexandria, VA. Association for Supervision and Curriculum Development.
- Costa, A. and Garmston, R. (1994.) *Cognitive Coaching: A Foundation for the Renaissance School*. Norwood, MA: Christopher Gordon Publishers.
- Feuerstein, R. Feuerstein, R. and Schur, Y. (1997.) Process As Content In Education Particularly For Retarded Performers. In Costa and Liebmann, (Eds.) *Supporting the Spirit of Learning: When Process is Content*. Thousand Oaks, CA: Corwin Press.
- Koestler, A. (1972.) *The Roots of Coincidence*. New York, NY: Vantage Books
- deBono, E. (1969.) *The mechanism of Mind*. New York: Simon and Schuster Paulson, D. (1995). “Finding the soul of work”. *At Work: Stories Of Tomorrow’s Workplace*: 4, 1 (January/February).
- Sergiovanni, T. (1994.) *Building Community in Schools*. San Francisco. Jossey Bass.
- Vygotsky, L. (1978.) *Society of Mind*. Cambridge, MA: Harvard University Press.