

# **EVOLUTIONARY DESIGN AS A MEANS FOR DEVELOPING THE PSYCHOLOGICAL CAPACITY FOR ADVANCED SYSTEMS THINKING**

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## **ABSTRACT**

Evolutionary design is proposed as a social technology for the development of the cognitive, interpersonal, intrapersonal, and ethical capacity of human systems from a relatively simplistic mechanical world view into a more complex systems world view. Four emerging practices challenge the mechanistic world view and encourage the development of higher orders of thinking: Mindfulness as opposed to intelligence, constructivist education as opposed to traditional instruction, the Eastern development of ethical expertise as opposed to the Western view of ethical reasoning, and the practices of psychology of mind as opposed to the cognitive practices of counseling psychology. A case study of a small nonprofit youth organization demonstrates how evolutionary design is a meta-practice that encompasses these practices. Ken Wilber has called for an "integrative transformative practice" that supports people within the stage of development they may be operating and that, at the same time, encourages and supports their development to higher stages. Evolutionary design is an integrative transformative practice that transcends the limitations of management and results in an Evolutionary Learning Community. It is found to be a meta-practice that allows people to consciously and continually redesign their own systems in order to raise their own consciousness, their own levels of adult psychological development.

Keywords: evolutionary design, systems thinking, integrative transformative practice, developmental psychology, management, evolutionary learning community

## **INTRODUCTION**

Evolutionary systems design is a process that emerges from a systems view of the world. Banathy (1996, 1998) proposes the design of an idealized image of a system based on the aspirations of all of the people within a system. The idealized image is described within nine dimensions of purpose: social action, governance, esthetics, economics, education/human development, ethics, technology, health/well-being, and scientific knowledge. This evolutionary guidance system forms the basis for the continual design

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and redesign of the system. The system uses the idealized images as the guiding ideas for planning and assessing the activities of the system.

Emerging from the practices and concepts of evolutionary design and the evolutionary guidance system is the Evolutionary Learning Community (ELC), described by Laszlo (2001) as “a different educational system—a distributed learning system embedded in our communities, giving meaning to our daily lives, empowering us to make the choices that shape our social systems and our futures.” ELCs expand the notion of education to individuals and groups in order to empower them to respond to social and ecological challenges. ELCs integrate learning with work and life, creating a conscious evolution among its members (Laszlo, 1999).

The ELC is a form of social inquiry that may appear on the surface to be utopian in nature may not seem applicable to existing systems. Evolutionary design may appear to be something achievable only under special circumstances among people who are able to understand this way of thinking. From a traditional world view, it can appear to be too idealistic and not a pragmatic way of doing business.

In fact, evolutionary design has been found to be a social technology that not only has arisen from a systems world view, but, in its practice, effectively and efficiently provides for continual learning that develops a systems world view and systems thinking among the people who participate (Rasmussen, 2000). The following paper describes levels of systems thinking from a perspective of developmental psychology, summarizes a case study of a small youth organization using evolutionary design, outlines four practices that develop systems thinking, and demonstrates how these practices occur in the youth organization in the process of evolutionary design.

### **DEVELOPMENTAL PSYCHOLOGY AND SYSTEMS THINKING**

Developmental psychologist Robert Kegan (1994) describes how we are “in over our heads,” how we as a population are living without the psychological capacity to meet the challenges of modern life. When tradition can no longer tell us how to be, we require a different source of skills to meet rapidly changing cultural demands. We are being asked to not only increase *what* we know but also to transform the *way* we know.

Partnering, parenting and work requires not that we follow the given rules and roles, but that we establish rules and roles. In our families we are being asked to institute a vision of family purpose, manage boundaries, and set limits for childhood. In partnering, we are asked to support our partner’s development, communicate well, have an awareness of the way our personal history influences us, and be psychologically independent from, but closely connected to, our spouse. At work we are required to invent our own work, be self-initiating, self-correcting, and self-evaluating, to be guided by our own visions, to take responsibility for what happens to us at work externally and internally, and to see our relationship to the whole of the system (Kegan, 1994).

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In Kegan's (1994) third order of consciousness people order the world traditionally and mechanically, in terms of hypothesis and proof, with justification through the senses of "what is." This order of consciousness works in a traditional, rather closed society where there is little change over time.

A higher order of consciousness is demanded in these times of rapid change, when traditional rules and roles of relatively closed societies are challenged by diversity and open exchange of information. The fourth order of consciousness sees the self and other as separate, self-perpetuating systems. "This way of being 'aware of my issues' presumes a self that is not only the *experiencer* of a reportable internal psychological life but also the *maker* of an internal psychological life. The demand for this construction of the self—as author, maker, critiquer, and *remaker* of its experience, the self as a system or complex, regulative of its parts—is again a demand for fourth order consciousness" (Kegan, 1994, p. 133). The fourth order of consciousness is found in fewer than half of those studied, regardless of gender, wealth, education, position, and culture. In a composite sample of nearly five hundred professionals, 58 percent had not reached the fourth order (Kegan, 1994).

Current adult developmental theories describe transcendence of the formal operations described by Piaget through such vehicles as the dialectical tradition, relativity theory, moral philosophy, Buddhism, general systems theory and music (Richards & Commons, 1990). The cognitive capacity to organize and understand advanced systems thinking is demonstrated to be a relatively advanced level of adult cognitive development (Koplowitz, 1990; Richard & Commons, 1990; Salner, 1986).

According to Kegan (1994) advanced systems thinking involves thinking in terms of the interrelatedness of systems. It requires a fifth order of cognitive, interpersonal and intrapersonal development—dialectical in nature, trans-ideological, and post-ideological. It involves the "capacity to see conflict as a signal of our overidentification with a single system, for the sense of our relationships and connections as prior to and constitutive of the individual self, for an identification with the transformative process of our being rather than the formative products of our being" (Kegan, 1994, p. 351). Fewer than two percent of our population operates at this order of consciousness.

In contrast, Harvard psychologist Ellen Langer (1989, 1997) shows us through her extensive research on mindfulness that a mindful view of the world transcends the limitations of lower level, mechanical reasoning and lower levels of adult psychological development. Also, Psychology of Mind or health realization practitioners demonstrate that, in lower mood states, when we are feeling insecure, pressured, or unhappy, we think in lower levels, and that, in higher mood states, we transcend limited, mechanical ways of thinking (Suarez, Mills, & Stewart, 1989; Pransky, 2000). Both schools have shown that it is possible for individuals to transcend the limitations of traditional, mechanically-oriented thinking and move into more creative, complex, and systemic modes of thinking.

Higher levels of adult consciousness involve an ever-deepening understanding of our embeddedness and our autonomy, of our oneness and our uniqueness. Higher levels involve post-representational processes, processes well beyond words. This awareness

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can not be transmitted through training or at meetings in a traditional format. Qualifications for expertise are suspect. The “curriculum” is under development. How can our culture provide both the challenge and support required for the development of people? How can we increase the capacity of individuals and social systems to meet today’s challenges to efficiently, effectively, creatively, and continually improve our world?

### **THE DEVELOPMENT OF SYSTEMS THINKING AT PAIA YOUTH CENTER**

This paper proposes that evolutionary design is a social technology that emerges from a systems world view and provides the challenge and support for the development of the psychological capacity for systems thinking and systems learning in people regardless of their current level of cognitive development or order of consciousness.

With virtually no additional expense and very little professional expertise, a small youth organization in Paia, Hawaii transformed itself from a traditional nonprofit organization to a system of people who are coevolving continually together and with their surrounding community. The history and discoveries of this group are described in a case study (Rasmussen, 2000) using both action research and systems research methodologies and are summarized in this section.

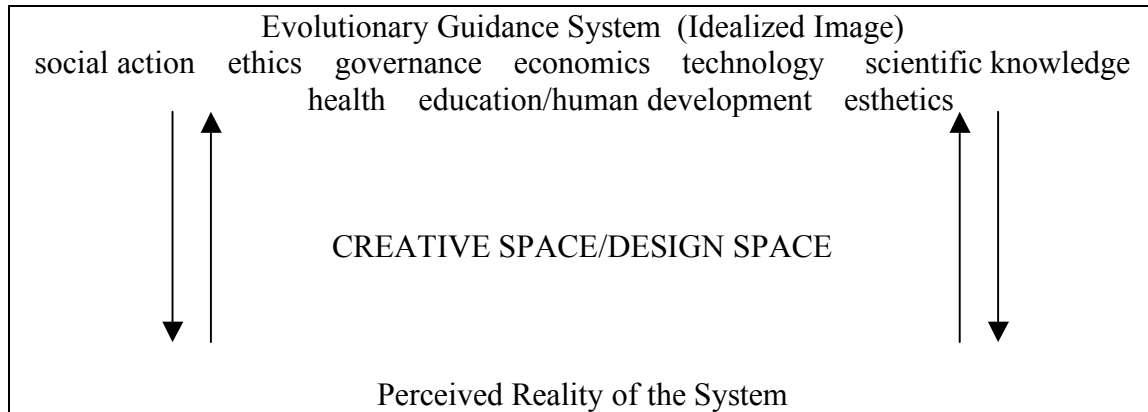
In 1998, in response to a general feeling that their current system was not responsive enough to youth and community needs, the people of Paia Youth Council, Inc. (PYC)—seven staff members, seven board members, and over 30 representative youth—redesigned their system using Banathy’s (1998) system for the evolutionary design of social systems. They designed an evolutionary guidance system (EGS) that consists of ideal images in terms of governance, social action, economics, esthetics, ethics, education, technology, scientific knowledge, and health. These ideals represent the highest aspirations of the people of the system. Over the eighteen months following the design of the EGS significant changes occurred.

Before the design of the EGS, PYC was operated from Kegan’s (1994) third and fourth orders of consciousness. The executive director had an internally generated vision that was independent of the expectations of the environment, which is an indicator of the fourth order of consciousness, but her response to management difficulties was a third order management style. A top-down, in-control management style is an indicator of Kegan’s third order of consciousness, where authority is derived externally from tradition and from superiors and interpersonal exchange is concerned with mutual reciprocity and compromise. The structure of PYC was hierarchical and traditional. Planning revolved around the funding requirements of government agencies. Mutual reciprocity was represented in the way the staff dealt with tasks and job descriptions; they rewrote job descriptions to reflect individual strengths and discussions of who would carry out which tasks.

After its initial design, the EGS was used as both a planning and assessment tool in daily operations of the system. In meetings a creative space formed between the ideal image of

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the system and the perceived reality of the system. Because the dimensions of purpose are fully articulated and encompass the aspirations of the people of the system, the creative space was effectively maintained. Meetings became focused on improving operations based on the highest, collectively held ideals.



In the eighteen months following design of the EGS, design replaced management in a clear leap from Kegan's (1994) third and fourth orders of consciousness to the fifth order of consciousness. Management from Kegan's (1994) fifth order of consciousness "provides a context in which all interested parties, including the leader, can together create a vision, mission or purpose they can collectively uphold" (p. 322). Vision is never complete and always up for re-visioning. Difference is valued and required; absolutes are rejected. This management style indicates the ability to cognitively order reality from a trans-system view that is dialectical, post-ideological, and comfortable with paradox and contradiction. Conflict is believed to result from incomplete work on the dimensions of purpose within the EGS and an indicator for further visioning of the project or purpose. Meetings are highly creative, interactive, and directly involved with the evolution and improvement of the experience of the people of the system.

The staff and youth enjoy this way of working; they are comfortable with it. Everyone's input is focused and valued. Feelings about a project or activity may be clues to further design. Multiple world views and levels of development add important perspectives to the creative process. The EGS and design process provide the support that allows the people of PYC to order themselves cognitively, interpersonally, and intrapersonally at a higher level of complexity.

Evolutionary design is found to be a social technology that promotes the cognitive, interpersonal, and intrapersonal development of the system. It promotes the ability to think in terms of systems, the interpenetration of systems, and the interpenetration of selves. People are able to see how their differences are valuable and that mistakes, failed projects, and conflicts are the result of incomplete understanding. Design is a process for achieving increasing completeness, but reality is never complete and the vision is never complete. It is an ongoing process. The demands of modern life, of the youth and

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the youth center, no longer seem overwhelming and the staff are more effective and efficient and having more fun.

The following questions emerge: How does the process of design result in such significant systems learning? What processes are going on that allow for this evolution? What happens within the design space that supports individuals from whatever world view they may be coming from to grow into more complex, sophisticated ways of ordering their realities? What provides both the challenge and support to allow for this leap?

### **PRACTICES THAT ENCOURAGE A SYSTEMS VIEW**

Four emerging practices arising from a systems view of the world encourage the development of a systems view: mindfulness as opposed to intelligence, constructivist education as opposed to instructionist education, the development of ethical expertise rather than simply an emphasis on moral reasoning, and the principles of psychology of mind as opposed to the principles of cognitive counseling. These practices provide a glimpse of the potential for transcending levels of psychological development found in a culture based on a mechanical worldview.

The following sections define each of these practices and describe them in terms of the experience of evolutionary design at PYC.

#### **Constructivist Education**

Two general approaches to education, instructionism vs. constructivism, are at the center of current educational reform (Kohn, A., 1999; Marlow & Page, 1998). The instructionist organizes the learning plan, presents the material in the workshop or classroom, and the material is learned by the group. The material may be presented in an experiential manner or the material may be applied to “real life,” but the expert is transmitting the material to the learner (Kohn, A., 1999; Marlow & Page, 1998).

Constructivism arises from the philosophical position that the world to be known is constructed by the learner as well as observed. In a constructivist approach in education, learning occurs in the process of constructing real projects, projects that have meaning to the learner. Self-discovery, use of a wide variety of resources, and growth of the project comes from the activity of the learner. The teacher may be a resource and a coach, a source of inspiration, and one that provides a glimpse of a broader view of the world, but the learner constructs the knowledge (Kohn, A., 1999; Marlow & Page, 1998).

The mechanical, rote, controlled format of instructionist education contrasts with the more systemic, exploratory, emancipatory format of constructivist education. In constructivist education, the learner is discovering the complexities of information and selecting information. In instructionist formats, the learner is primarily repeating information. In constructivist education, the learner is organizing meaning, rather than simply accepting what is taught. In constructivist education, the learner discovers a

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variety of points of view regarding the same subject from a variety of sources, while in instructionist education the teacher is the primary source of information. Rather than simply completing planned, fragmented information organized in consecutive, controlled order, in constructivist education the learner's relationship with the material is entrepreneurial, contextual, and creative, coming from the learner's experiences. (Kohn, A., 1999; Marlow & Page, 1998).

While the instructionist format is not necessarily bad or incorrect, it fails to develop the complex, creative, entrepreneurial, and cooperative skills required for negotiating modern life. Constructivist methods are geared toward the development of skills for an emerging culture while instructionist methods reflect the mechanical age in which they were developed.

### *Constructivist Education and Evolutionary Design*

We know that our standard, traditional teacher-driven format for training is not adequate for the development of systems learning in a human activity system (Senge, 1996; Argyris, 1997; Banathy, 1993). Individuals will have different experiences and understandings that do not necessarily add to the cohesiveness of the system. As Senge (Anonymous, 1999) has learned, experiences outside the context of the work of the system may provide insights to individuals but will not result in a learning organization. The learning of individuals that is introduced to a relatively closed system will only result in other processes that will negate the changes in order to maintain the integrity of the system.

At PYC the power of higher purpose, with clearly articulated dimensions, provides the framework for the construction of practical social knowledge. Powerful interpersonal and intrapersonal learning and the development of systems thinking is occurring in the evolutionary design space, in the practice of design itself. Using evolutionary design we can more clearly discern system problems from individual lack of expertise.

Training is limited to blocks of time and attempts to incrementally add to knowledge. It is led by experts. It is unable to effectively address the needs of individuals from where they may be in their learning processes. At PYC training is more concerned with developing technical skills, appropriately concerned with how to run a business or development of fundraising skills or taking lifeguarding and first aid courses.

Design is inclusive; it respects the input of individuals from wherever they may be thinking because their point of view is important. At PYC input from an uneducated, expectant adolescent mother is as important, if not more, as the input of the expert on adolescence. Together we all enrich our experience. Learning is rapid, self-organized, and self-constructed.

Design is the constant process of assessing reality in terms of the ideal, reenvisioning possibilities, and then trying them out. It is a process of constructing knowledge from experience in the design space. The people of the system become a research and development group—an Evolutionary Learning Community.

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### Mindfulness

According to Langer (1989), intelligence has been defined by theorists with certain assumptions about the world which are based on a mechanistic, dualistic construction of reality. Langer describes “mindfulness” as a process that transcends the limitations of the more mechanical view of intelligence and that provides an alternative view of human capacity.

Intelligence is a linear process from problem to resolution completed as rapidly as possible. It defines the optimal fit between individual and environment. Mindfulness considers several perspectives from which any situation may be viewed. It is a process of stepping back from problems and solutions and viewing them as novel. Intelligence involves an expert’s perspective that focuses on stable categories, while mindfulness involves the actor’s ability to experience control through shifting perspectives. Intelligence is a means of achieving desired outcomes, while mindfulness is a process through which meaning is given to outcomes. Intelligence uses facts and skills in contexts that are sometimes perceived as novel while mindfulness appreciates the fluidity of knowledge and recognizes the advantages and disadvantages of knowledge and skills (Langer, 1989).

Langer (1997) promotes the teaching of basic skills using the conditional, or context-dependent, nature of the world and the value of uncertainty. Students manipulate information creatively within different contexts, find different ways of accounting for information, develop an openness to novelty, actively notice differences, contexts and perspectives, and provide an orientation to the present. Students try different ways of looking at the same material, noting changes of feelings, thoughts, and sensations that are occurring. Learning occurs when novelty is enhanced through varying perspectives rather than through memorization through repetition. When students take an active role in determining preferences, mindful engagement increases liking for ideas, words, and people. They become open to information that goes beyond the common instances to exceptions and other contexts (Langer, 1997).

#### *Mindfulness and Evolutionary Design*

PYC’s experience with evolutionary design and the evolutionary guidance system results in mindful learning. Perspectives shift as a problem or planning is viewed through social/political, cultural, aesthetic, technological, human development, health and well-being, economic, and scientific perspectives. Diverse perspectives of individuals add to the creative, mindful consideration of purpose. Individual concerns and opinions provide interesting points of discussion. The question changes from a search for a desired outcome (“How can we accomplish our job descriptions?”) to a process-oriented question that puts meaning to outcomes (“How can we together best meet our purposes?”).

Expertise in given areas can become a disadvantage because the perspective of fixed categories and specific skills can be limiting. With mindfulness, information is sought, but the need to control or direct the process itself is unnecessary. Because the perspective

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constantly shifts to collectively-held higher aspirations, the process is fun and exciting, creative, and non-threatening. Each disagreement, each challenge in the system becomes an opportunity for mindfulness.

The demands of intelligence--rapid, concrete solutions, a stress on an optimal fit between people and their work, and the emphasis on a scientific knowledge base as the only respected means for achievement--create hierarchies of expertise among people. We become reliant on experts for decision-making. Diversity of people and messy emotions interfere with the linear process to solutions. The result is distrust of emotional, intuitive reasoning capabilities. In an attempt to come into alignment with one another, people turn to training and counseling to deal with the difficulties of the system. A system problem appears to be a problem of the individuals within the system. People appear to be dysfunctional when, in reality, it is the system in which they are working that is the problem.

In the case of PYC, people no longer rely solely on experts for social learning and improvement of their practice. After the redesign of the system they could mindfully and safely explore their individual and commonly held aspirations and direct their work toward those aspirations.

The role of experts is put into perspective when scientific knowledge is put into its rightful place as a dimension of purpose rather than a primary guiding force for social change. Creation of a place that provides political freedom, economic viability, and family stability requires the input of much more than an expert perspective. These are not things to be achieved, goals to be reached, but they are a way of living and being, a process to be developed. The role of the expert and the need for control is abandoned in the mindful exploration of possibilities, in the process of design.

The system of design provides the tools for development; the guiding principles of the evolutionary guidance system provide the basis for mindful exploration and ground the system ethically. The executive director is no longer in charge, the expert, the one responsible, the authority. She is able to relax. The beauty of the system emerges as everyone envisions work, family, and community and then purposefully and mindfully designs them. Mistakes, failures, and bad feelings become opportunities for design. People are all capable and qualified. People find their own training needs, their own information as their work unfolds. They are connected with the world and they have access to the experts. People have access to a great deal of information, they have a system that works, and they are free to design quality lives.

### **Moral Reasoning and Ethical Expertise**

Kohlberg describes levels of adult psychological development in terms of moral reasoning while Gilligan describes levels of adult development in terms of care and responsibility (Kohlberg and Ryncarz, 1990; Gilligan, 1988). An Eastern view described by Varela (1999) is primarily concerned with the characteristics of a highly ethical person and the processes for achieving ethical expertise.

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Kohlberg and Ryncarz (1990) theorize seven stages of moral judgment. They state, “This progression is marked chiefly by changes in sociomoral perspective: beginning from a self-interested egoistic social perspective, leading to one that is consciously shared by other group members or by society as a whole, and culminating in an autonomous, prior-to-society perspective where the individual rationally defines his or her own values and principles in a universalizable way” (Kohlberg & Ryncarz, 1990, p. 191).

This hierarchical theory of moral reasoning is concerned with the development of moral judgment, orientation to intentions and consequences, and motives for engaging in moral action (Kohlberg & Ryncarz, 1990). People at the fourth stage of moral reasoning are concerned with the generality and consistency of rules. If an act violates the rules it is categorically wrong. It is wrong regardless of motives or circumstances if it causes harm to others. Actions are motivated by anticipation of dishonor and by guilt of concrete harm done to others. At the fifth stage what is right is being aware that other people hold a variety of values and opinions and that these are relative to a group. Laws and duties are based on rational calculation of overall utility, the greatest good for the greatest number.

The sixth stage of moral reasoning is guided by universal ethical principles that one believes all humanity should follow. This stage is less conventional and more concerned with self-chosen principles that one has seen the validity of and has become committed to. Laws and social agreements are considered valid when they rest on these principles. Motivation at this level arises from self-condemnation about violating one’s own principles.

Kohlberg and Ryncarz (1990) more recently added a seventh level of moral reasoning, which is guided by doctrines of natural law. Natural law theory holds that human ethical actions are objectively grounded as laws of nature and that these laws of nature can be apprehended through reason. Principles of justice and human rights are not only a social contract but a reflection of an order found in both human nature and the natural or cosmic order. Socrates, Martin Luther King, and Ghandi are examples of people operating from this stage of moral reasoning.

For Gilligan (1990) human development is not simply an intellectual reasoning process, but results from the dialectic between intellect and affect, between justice and care, between rights and responsibility, and between conventional morality and relative morality. While not disputing Kohlberg’s hierarchical structures, Gilligan disputes the emphasis on male-dominated intellectual reasoning and interjects the more feminine perspective toward responsibility and care.

A third point of view on ethics and morals is described by cognitive scientist and systems thinker, Francisco Varela (1999). In his recent lectures in *Ethical Know-How: Action, Wisdom, and Cognition*, Varela (1999) begins by saying, “Ethics is closer to wisdom than to reason, closer to understanding what is good than to correctly adjudicating particular situations” (p. 3). He further states, “...the situations in which we exercise ethical expertise far outnumber those in which we must exercise explicit ethical deliberation” (Varela, 1999, p. 23). The Western focus of philosophers and scientists of the mind has been on exploring deliberate, intentional analysis, while ethical behavior is something we

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do from moment to moment. It is an expertise that is developed, and not something we often think about (Varela, 1999).

Varela (1999) further describes the teachings of Confucian scholar, Mensius, who outlines the process of training required to become an ethical person. Three key notions to virtue or ethical behavior are extension, attention, and intelligent awareness. First, people learn to extend knowledge and feelings from a particular situation where the correct action is clear to analogous situations where the correct action is not clear. Second, a process of attention, of perceiving clearly and identifying correspondences or affinities results in ethical training. Third, truly ethical people further transcend the limitations of habitual responses and have cultivated an expertise, an intelligent awareness, that reaches beyond patterns and rules. They become the “wise ones” readily recognizable in traditional cultures.

### *Moral Reasoning and Ethical Expertise and the Design Experience*

The evolutionary guidance system is an idealized image conceived of in terms of dimensions of purpose that are expressed from the highest ethical perspective that the group can imagine. It provides a sociomoral perspective that results in a high level of moral and ethical reasoning within PYC. It encompasses the aspirations of the individuals in the system and raises the standard. Moral reasoning becomes less the outcome of personal hierarchical development and more the outcome of a design culture that uses higher level reasoning in its daily activities.

Before the design of its EGS, PYC reasoned from Kohlberg’s fifth stage of moral reasoning. Staff members had different values and legal points of view and they worked independently on projects to avoid conflict. Diverse points of view conflicted and they were difficult to integrate. Individuals had their own values and rights, their own aspirations, and believed in their expression. Responses to youth behavior were personal responses that were based on individual points of view of the legal system, the needs of youth and community, and individual interpretation of laws and rules.

Eighteen months following design of the EGS, PYC is guided by its idealized image that is grounded by universal ethical principles--clearly the sixth stage of moral reasoning. Universal ethical principles are the basis for the dimensions of purpose and provide the basis for decision-making for those at PYC. Equality of human rights and respect of individuals is indicated by the flattening of the hierarchical structure and the respect of, and need for, diverse points of view. Modeling and response to the youth is now grounded in a higher level of moral reasoning reflected in the EGS.

Gilligan’s (1990) emphasis on the development of caring and responsibility rather than simply intellectual moral reasoning is reflected in the process of evolutionary design. Evolutionary design puts PYC directly into the dialectic of relationship: the interaction with others, the dialectic between PYC’s idealistic, ethical aspirations and the individual’s and group’s perceived reality. The dimensions of purpose incorporate the esthetic, the feeling people want to get in the experience with this system, as well as the care aspects of social action. In the exploration of purpose, particularly with the inclusion of the esthetic, the people of the system become connected with what they really care

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about, with their dreams and ideal images. The affective and the intellectual are both valued and incorporated into the process of design.

But moral reasoning and the emphasis on care and responsibility does not fully describe the process that occurs at PYC. The development of ethical expertise occurs at PYC in the three ways described by Mensius: First, the process of creating an evolutionary guidance system consisting of the ideal image of the system in nine dimensions of purpose sets up a series of ethical standards that are directly applied to all situations. The way is not clear, not defined, and must be explored. Second, all interactions, plans, assessments are viewed in terms of ethical ideals. Direct attention is given to ethical consideration of actions. Third, habitual responses are transcended for creative, innovative, and direct responses to daily concerns. The evolutionary guidance system and the process of design provide a field for the exploration and development of ethical expertise of the system's people.

Evolutionary design becomes a training ground for the development of ethical expertise for the system as a whole and the people within it.

### **Psychology of Mind**

Cognitive methods of counseling psychology emerged from the limitations of behavioral therapy (Beck, 1979). The focus of treatment is on the thoughts that occur between an event and an emotion or a reaction. The emphasis of treatment is to observe one's own thinking and recognize and address the kinds of thinking that cause inappropriate, ineffectual, or counterproductive emotions and actions. The model is primarily mechanical in nature. The problematic thinking is diagnosed and then therapy focuses on changing the thoughts that precede the undesirable response.

The psychology of mind (POM) or health realization model teaches the principles of thought, mind, and consciousness as a means of achieving mental health (Suarez, Mills, and Stewart, 1987; Pransky, 1999). In this model, thought is described as transient and illusory. Mind is the innate wisdom, inner knowing, the God within described in all religions. Consciousness is the ever-changing awareness of the interplay between thought and mind and one's perceived reality.

Higher consciousness is the experience of higher mood states, where thoughts are few and one reasons clearly and simply. Lower levels of consciousness are indicated by lower mood states, where thoughts are circular, recursive, many and one's reasoning is distorted by confused thoughts and assumptions from the past. This model tells us to go toward the good feelings—toward gratefulness, love, openness—that will guide us away from distorted thinking (Suarez, et al, 1987; Pransky, 1999; Banks, 2000).

POM emphasizes experiencing higher levels of consciousness, higher mood states, as the means for improving thinking. Cognitive therapy takes a mechanistic approach—breaking processes into parts, identifying the problem parts, and then fixing the parts. POM transcends the concerns of individual thoughts and focuses instead on the immediate feeling, moods, emotions that create thought. When the focus is on an ideal

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image that creates higher mood states, thinking and actions flow toward the ideal. POM operates on a positive feedback process while cognitive therapy operates primarily on negative feedback processes. POM represents an advanced systems understanding that transcends the limitations of the mechanical world view.

### *Psychology of Mind and the Design Experience*

PYC's evolutionary guidance system consists of words like appreciation, synergy, positive, vital, unity, creative action, trust, beauty, and caring. This movement toward the ideal promotes good, expansive feelings and lifts one's level of consciousness. One's understanding of causality grows as one further taps in to this source of wisdom.

In the process of design, in the dialectic between the ideal and reality, and in the complexity of multiple viewpoints and input, one begins to see the separate realities of people and the illusiveness of thought. In the design of a system based on the highest collective aspirations, one begins to see that "the way the world is" is subjective, changeable, easily deconstructed, but the world can be reconstructed in any way the people of the system want to construct it. The system moves in the right direction when it moves toward the highest ethical ideals and it tends to have problems when it gets "off track."

In the process of design the people of the system begin to see that there is a universal "mind" that is synchronized with their own—That the "mind" has something to do with the commonly held purposes, ethical values, aspirations of the people of the system. It arises and unfolds from an inner knowing and that that inner knowing can be trusted. Consciousness or awareness fluctuates, opening in the higher mood states created when one works toward one's highest aspirations and closing when one is not going in the direction of one's aspirations. In design affect is used as an internal and systemic guidance system that signals the need to revisit the fundamental purposes of the EGS.

## **EVOLUTIONARY DESIGN AS AN INTEGRAL TRANSFORMATIVE PRACTICE**

Wilber (2000) calls for an integral transformative practice that supports persons at their level of development and that supports their development to higher levels. He calls for a practice that integrates the development of the interior/subjective self; the exterior/behavioral/physical/objective self; the interior/cultural worldview/subjective and collective "we"; and the exterior/social system and environment/collective/objective "its." He describes an "integral" level of adult consciousness that transcends the traditional, modern, and postmodern stages of human social and cognitive development and integrates and values the contributions of each of the lower stages of development.

Evolutionary design is an integral transformative practice. Evolutionary design of social systems requires the input of the people of the system from whatever their level of cognition or moral reasoning may be. Input is required from all points of view in order to meet the needs of the whole. Learning is rapid and self-organizing, integrating the individual and the system of which the individual is a part.

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At PYC the evolutionary guidance system and evolutionary design is a social technology, an integral transformative practice, that helps its people to find their way. What once seemed utopian, now seems straight forward and obvious. The old ways of management and control give way to an enormously freeing system. It guides the people to work in higher mood states, in creative modes, openly and freely. Affective responses to experience indicate whether or not further design is needed. Problems become opportunities for design.

No longer is the system confined by the limitations of the mechanical world view. Evolutionary design allows us to transcend the limitations of traditionally managed organizations. At the same time, this process, emerging from advanced systems thinking, honors the insights from all orders of consciousness as not only important for design, but essential.

The people at PYC have become an Evolutionary Learning Community. They are finding the evolutionary guidance system and evolutionary design to be an effective way of doing business, an efficient process for experiential, on-the-job system learning and development. Management is a discouraging, disheartening, uphill task, while design is fun. Management is about controlling the uncontrollable, while design is about constructing better ways of getting the job done together. Design is a wonderfully accessible way of doing business that provides a framework to effectively, optimistically, and creatively deal with challenges. Evolutionary design is a meta-practice that allows people to consciously and continually redesign their own systems in order to raise their own consciousness, their own levels of adult psychological development.

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