

Theoretical Framework
for the
“Ecovillage Design Education”

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The Ecovillage Design Education (EDE) is a timely, pertinent, *global* educational initiative officially inaugurated in the Spring of 2004 at Findhorn, Scotland by a group of twenty-three distinguished ecovillage educators from around the world. While all existing ecovillages – as prototypical models of sustainable human habitat – already have instituted various educational programs according to their temperament and capability, the EDE is being designed as a ‘standardized’ format applicable to all. As such, the EDE curriculum focuses on fundamental principles that are the essence of sustainable community design, and provides a comprehensive overview of issues common to sustainable living irrespective of regional- or place-based particularities. Hildur Jackson of Gaia Trust – a central figure in energizing the organization of the Global Ecovillage Network (GEN) and now the EDE – defines this type of education as “holographic,” in the sense that “It will be an education of its own but may be built on top of [or complement] any other ecovillage education” (Jackson, 2003). She describes the ecovillage itself as “a holographic representation of the society at large. The ecovillage is a model which demonstrates the different elements of society playing together in a microcosm” (ibid).¹ The intended objective is that the EDE may serve as an authoritative reference – sponsored by GEN and endorsed by the UN – for educating the transition to a globally sustainable culture.

The structure of the EDE, as consensused at the Findhorn meeting, embodies four intrinsic dimensions: Ecological, Social, Economic, and Worldview (which is a code name for ‘Spiritual-Cultural’). These four dimensions, in turn, comprise five modules each – further delineating and defining the basic elements in a comprehensive ecovillage design education scenario. The actual titles and content of the modules may evolve and fluctuate over time, and certainly will be adapted to the specific needs of specific projects or circumstances, yet the quadripartite framework of four dimensions

¹ “It is now widely believed that the brain functions in accordance with holographic principles – that meaning is distributed throughout the brain, and can thus be reconstituted from any of the parts...If we could design [our social institutions] in accordance with the holographic principle so that we systematically attempt to build the functions necessary for the whole into the parts, then there is a chance that we could move toward this state of affairs [like the brain]...The aim is to *create systems that are able to learn from their own experience, and to modify their structure and design to reflect what they have learned*” (Morgan and Ramirez, 1983, pp.2,4, emphasis in original).

will remain constant.² By organizing the EDE curriculum in this way, participants will be introduced to an *integrated* ecovillage design; in fact, by presenting and offering the EDE to the world at this time, the GEN education team is forwarding an “integrated ecovillage design theory” (see Jackson, 2004), relevant to issues of sustainable community design and development at any scale or locale.

The art and science of designing and implementing full-featured, sustainable human settlements is a multi-faceted, multi-dimensional, multi-disciplinary, *wholistic* enterprise encompassing the full range of human experience. As such, competent, accomplished ecovillage design educators will have conceptual access to the vision and purpose *as a whole*, and will be able to articulate diverse design considerations as these contribute to or inform that whole. This ability to strategically communicate and direct attention from the whole to the parts and then back again from the parts to the whole is a criterion of proficiency in integrated ecovillage design educating. In other contexts, this interpretive movement back and forth is called the ‘hermeneutic’ circle or spiral. Exclusively emphasizing one or another particular dimension (whether Economic, Ecological, Social, or Worldview) will not adequately address the living fullness of the ecovillage potential, or of sustainable development more generally – where the ‘ecovillage’ could be considered the basic ‘building block’ of settlement in a regional sustainable development model (Zeitlin, 2004).³

And so, the education designed and sponsored by GEN is ‘wholistic’ – meaning that it attempts to address and present the multi-faceted, diverse spectrum of ecovillage design considerations *as a whole*; ‘integrated’ – meaning that the various dimensions of ecovillage design considerations are given equitable attention, especially as they exist *in relationship* with one another and to the whole; and ‘holographic’ – meaning that the essence of the whole is distributed throughout and can be reconstituted from any of the parts, so that essential meaning can be ascertained from incomplete partial exposure. Most importantly, the Ecovillage Design Education seeks to promote a consciousness raising awareness of the purpose of a genuine ‘sustainable community design’ within the context of and as contributing to healthful human and planetary evolution.

In order to ground the EDE in shared language that can be interpreted by professional educators working in the realm of accreditation and curriculum development, “integrated ecovillage design theory” is aligned with and supported by a

² A follow-up paper: “The Quadripartite Circle: An Inquiry into Archetypal Structural Organization” (available from Village Design Institute), illustrates that this four-fold organization is resonant with archetypal structural patterns of wisdom traditions throughout the world.

³ Complementing this perspective, the Village Design Institute (Cascadia, USA) defines ‘ecovillage’ as the “sustainable ‘unit’ of human settlement in a theoretical ekistics for the 21st century.” For elaboration, see: www.villagedesign.org

number of existing theoretical educational frameworks, including (but not limited to): transformative learning theory, experiential learning theory, and action learning theory.

Jack Mezirow is given credit for developing and formalizing the methodology of Transformative Learning Theory. Concisely put, “The formative learning of childhood becomes transformative learning in adulthood” (Mezirow, 1991, p. 3). Formative learning is part of a socialization process: children are inculcated with ideologies, paradigms, worldviews and other cultural norms or assumptions about reality that are internalized. Upon growing into adulthood, these internalizations are automatically tapped to “construe or interpret experience,” that is – *to provide meaning*. A transformative learning experience will uncover and expose these reflexive presuppositions, reflectively assess and critically evaluate them, and then – when found to be lacking, distorted, inauthentic, or otherwise no longer providing adequate meaning for present contexts – work to replace them.

The idea that uncritically assimilated habits of expectation or *meaning perspectives* serve as schemes and as perceptual and interpretive codes in the construal of meaning constitutes the central dynamic and fundamental postulate of a constructivist transformation theory of adult learning (ibid, p. 4, emphasis added).

Elsewhere, these “habits of expectation” are further described as “personal constructs, perceptual filters, conceptual maps, metaphors, personal ideologies, repressed functions, and developmental stages” (Mezirow and Associates, 1990, p. 2). Meaning perspectives, then, can run the entire gamut from rationalized points of view to unconscious psychological complexes. Some people may be attached to these “uncritically assimilated” frames of reference, so bringing the full implications of them to conscious awareness with the intention of replacing them – the goal being to encourage the development of responsible, autonomous adults able to make coherent meaning out of their current life experiences – could be very uncomfortable and unsettling. Dean Elias of the California Institute of Integral Studies addresses this dynamic when he explains:

Since transformative learning experiences touch people deeply, questions may be raised about the boundary between such learning and psychotherapy; and since such experiences expand consciousness, questions may be raised about the boundary between such learning and spiritual practice...While the results of a transformative learning experience may be therapeutic, the process is not psychotherapy...The

purpose of transformative learning is not to seek or experience spiritual reality – although that may happen – but the expansion of consciousness. While the results of a transformative learning experience may be spiritual clarity, the process is not a spiritual practice” (Elias, 1997, p. 6).

Given the intensity of the experience and the potential for profound, life-shaking change – and as Sue M. Scott reminds us (in Cranton, 1997, p. 41), the essential *grieving* that accompanies the loss of the old in a transformation process – the facilitator (or what Mezirow calls the *provocateur* (1990, p. 11)) of a transformative learning process must be able to exercise tremendous maturity, steady equanimity, and must already possess a reservoir of critically reflective self-knowledge; indeed, the provocateur will have already lived through a life-shaking transformation process. Says Patricia Cranton in her book *Understanding and Promoting Transformative Learning*, “the educator must do everything he or she can to ensure that learners have support in negotiating the difficulties they may encounter...If the educator is authentic, fosters healthy group interaction, is skilled at handling conflict, encourages learner networks, gives personal advice when appropriate, and supports learner action, critical self-reflection and transformative learning will be supported” (1994, p. 192).

The Ecovillage Design Education is inherently transformative; after all, the subject matter deals with re-visioning and re-shaping the world. Participants from overly-developed, highly consumptive countries may come to the realization at a deep level that their way of life is not sustainable, cannot be continued indefinitely, and will eventually (sooner than later) need to be radically changed.⁴ Various “meaning perspectives” that these participants have internalized and habitually used to justify the legitimacy of the socio-politico-cultural environment in which they’ve been raised may prove to be untenable or incoherent in light of the new learning. Paradigm shifts or adjustments in worldview can be expected, possibly kindling new aspirations for the future. The potential exists for the arising of a sense of meaninglessness or vacuity when reviewing one’s former conditioned life, with the consequent spontaneous emergence of visions of more satisfying, healthful, equitable, fulfilling ways of living and being.⁵

Participants from under-developed, lesser consuming countries will have different kinds of realizations; yet theirs too could very well be transformative in the “consciousness expanding” manner described by Elias, as they come to understand and familiarize themselves with various methods, designs, strategies, philosophies, solutions, and resources for enhancing the well-being and prosperity of their communities.

⁴ ‘Radical’ is derived from the Latin *radix*, meaning ‘root,’ which is precisely the image I want to convey.

⁵ These kinds of results are already well-documented in the after-course evaluations of existing Ecovillage Design courses. The comprehensive fullness of the EDE, which includes a Spiritual dimension, may prove to be even more transforming.

Transformation may occur with the recognition – nurtured in a mutually-supportive and power-sharing community of learners – that their basic human needs are identical with the basic needs of people living in the overly-developed world, and that an equalizing dynamic may be on the horizon.⁶ Participants from either end of the consumption spectrum may experience a profound shift in the direction of hope and optimism as they find themselves kindly associated with an international network of capable innovators actively taking positive steps to implement sustainable living situations.

In all cases, the EDE educators must be alert and attentive to the affects the education may be having on students. Integral to the transformative learning methodology is ample time for critical self-reflection, and this free time needs to be woven into EDE syllabi. Also crucial is discourse within the learning community, allowing the opportunity for new realizations to be verbalized, validated or confirmed, and thus assimilated. And then, “Action is an integral and indispensable component of transformative learning” (Mezirow, 1991, p. 209), so students will be supported and assisted in developing follow-up “action plans” to implement upon their return to more familiar domains.

Before moving on to Experiential Learning Theory, there is one more issue to address: Transformative learning is sometimes couched in images and vocabulary of “liberation” and “emancipation,” and these themes or energies may need to be given expression in an EDE scenario. Particularly relevant and authoritative in this regard is the work of Paulo Freire:

While Mezirow’s concept of transformational learning is directed toward personal development, Freire’s idea of transformational learning has the ultimate goal of social change...Freire seeks to liberate adults through a dialogic, problem-posing pedagogical style that challenges students to become aware of the oppressive social structures in their world, to understand how those structures have influenced their own thought, and to recognize *their own power to change their world* (Freire, 1973)... Fundamental is his vision of a just society where all people can live freely and with dignity. He understands transformational learning as the means to realize this vision (M. Carolyn Clark in Merriam, 1993, pp. 48-49, emphasis added).

Freire himself affirms: “Liberation is a praxis: the action and reflection of man and woman upon their world in order to transform it” (1970, p. 60), to become more “fully human” as he is fond of saying. This “action and reflection” upon the world “in

⁶ Referred to here is an ethical position of GEN, namely that the purpose and prospects of the ‘ecovillage’ are to simultaneously raise the quality of living in the under-developed world while reducing the level of consumption in the overly-developed world. “Peak oil” may prove to be this equalizing dynamic.

order to transform it” is keenly descriptive of the work of ecovillage designers – consciously creating the living situations they would *choose* rather than passively accepting what is available. While Freire initially formulated his *Pedagogy of the Oppressed* in the context of literary education for the poor of Brazil, a penetrating reading of the text may reveal how remarkably applicable this pedagogy could be when educating, say, middle-class suburbanites or uptown urbanites who are oppressed by an entrenched corporate-capitalist-consumer system and may not even realize it. Would this “revolutionary” pedagogy be effective in these applications?

Here is the kernel of Freire’s pedagogy:

In contrast with the anti-dialogical and non-communicative “deposits” of the banking method of education, the program content of the problem-posing method – dialogical par excellence – is constituted and organized by the students’ view of the world, where their own generative themes are found. The content thus constantly expands and renews itself. The task of the dialogical teacher in an inter-disciplinary working team on the thematic universe revealed by their investigation is to “re-present” that universe to the people from whom she or he first received it – and “re-present” it not as a lecture, but as a problem (1970, p. 90).

Freire is insisting that we customize and streamline the delivery of our educations to accommodate the particular audience of students who will be engaged in the dialogical learning process. This means not belaboring a fixed, immutable, pre-fabricated content of knowledge to be “deposited” into the students’ accounts. Liberating, emancipatory education is directed toward helping the students reveal those underlying patterns and dynamics influencing their worlds that are preventing them from “being more fully human” – from being autonomous actors or “subjects” – and then empowering them to go and shape their worlds as they see fit.⁷ This is wholly consonant with the purposes of the EDE, as is transformation theory in general, whose ultimate purpose is to make learning an expansion of consciousness coupled with the ability to translate that learning into effective action.

Experiential Learning Theory was formalized in the 1980s by educator David Kolb. Drawing on intellectual origins in the works of John Dewey, Kurt Lewin, and Jean Piaget, Kolb systematically formulated an educational approach that centered on “experience as the source of learning and development.” Says Kolb of his work: “Experiential

⁷ “As opposed to the mythicizing practices of the dominant elites, dialogical theory requires that the world be unveiled. No one can, however, unveil the world for another. Although one Subject may initiate the unveiling on behalf of others, the others must also become Subjects of this act” (Freire, 1970, p.149).

learning theory...offers the formulation for an approach to education and learning as a lifelong process that is soundly based in intellectual traditions of social psychology, philosophy, and cognitive psychology. The experiential learning model pursues a framework for examining and strengthening the critical linkages among education, work, and personal development” (1984, p. 3). This approach describes very well the multi-task purpose of the EDE.

The full articulation of Experiential Learning Theory becomes quite complex but it is ultimately founded on the simple physiological interplay between right-brain (apprehension) and left-brain (comprehension) functioning. For experiential learning, both ways of knowing are equally valid and complementary, yet dialectically opposed – and in a wholistic, integrative educational setting, both ways of understanding the world are given equal expression. Kolb calls this a “dual knowledge epistemology” (ibid, p. 49), or “a transactionalism, in which knowledge emerges from the dialectic relationship between the two forms of knowing” (ibid, p. 101). “Apprehension of experience is a personal subjective process that cannot be known by others except by the communication to them of the comprehensions we use to describe our immediate experience. Comprehension, on the other hand, is an objective social process, a tool of culture” (ibid, p. 105). Thus, experiential learning theory, like transformation theory, requires a dialogic process of inquiry whereby the personal knowledge of the participants is transformed into mutually-acceptable, collectively-consensused social knowledge that can be acted upon by the group. This dynamic relation between apprehension and comprehension is considered to be the core of knowledge creation (ibid, p. 106).

The concept of “dual knowledge epistemology” is ingrained in the very fabric of the EDE format, where the presentation and explication of theory is directly followed by opportunities to apply that theory. This is the nature of Ecovillage Design Education: it is intended to promote positive, informed, self-directed and self-reliant action within a community of learners. Each Module of the EDE curriculum contains a section listing recommended “action-oriented experiential activities.” Reflecting the full range of human experience that the EDE is designed to encompass, these activities could be as diverse as planting seeds, practicing non-violent communication, experimenting with a meditation technique, or assessing existing economic resources within the community. In all cases, students are first presented with a theory of knowledge, a particular ‘lens’ through which to perceive their situation; then students are engaged in a dialogic process that can reveal how that knowledge may be useful or instrumental in their own circumstances. Finally, students are given a chance to apply or experiment with that knowledge in an “action-oriented experiential activity.” Thus, experience becomes “the

source of learning and development;" the registering of experience becomes the sort of 'somatic memory' that can consummate or seal the learning process.

Significantly, the fully elaborated experiential learning theory *model* assumes the four-fold, quadripartite, 'mandala' form of structural representation found in archetypal wisdom traditions throughout the world. This is the same move that Carl Jung made in articulating and diagramming his four "psychological types." Explains Kolb: "[Learning] involves the integrated functioning of the total organism – thinking, feeling, perceiving, and behaving" (p. 31). This is explained alternately as: "a holistic integrative perspective on learning...combines experience, perception, cognition, and behavior" (p. 21). This four-fold, quadripartite system is further organized into four principal modes or styles of learning, identified as: accommodative, assimilative, convergent, and divergent. Diagrammatically, these modes of learning are placed within the poles of 1) concrete experience, 2) reflective observation, 3) abstract conceptualization, and 4) active experimentation (see Kolb, 1984, p. 68). While it may not be necessary for the facilitators of the EDE to be fully versed in how all these corresponding themes are overlaid, it is important for these facilitators to recognize that there are diverse ways of learning, diverse ways of experiencing the world, and thus diverse ways of presenting the EDE curriculum in its entirety, to full effect. As mentioned previously, this presentation will be most useful when it is flexibly designed to accommodate the particular perspectives and life situations of the student audience.

In closing, Experiential Learning Theory provides valuable tools for organizing, planning, and delivering a wholistic, integrative educational approach that is wholly consonant with the goals, purposes, and format of the Ecovillage Design Education. While 'experiential learning' is informally implied and currently practiced in the EDE, facilitators will augment their effectiveness and adaptability greatly by studying the rich details of a formalized Experiential Learning Theory.

One more organized educational tradition will complete this survey of the theoretical framework for the Ecovillage Design Education – that of "Action Learning." Action Learning is perhaps more of a process than a formal theory, while "The most common use has been in management development" (McGill and Beaty, 1992, p. 18). So then how does it apply to the teaching of sustainable community design and development? Regard:

Action learning is a continuous process of learning and reflection that happens with the support of a group or 'set' of colleagues, working on real issues, with the intention of getting things done. The voluntary participants in the group or 'set' learn with and from each other and take

forward an important issue with the support of the other members of the set (McGill and Brockbank, 2004, p. 11). Action learning builds on the relationship between reflection and action. Learning by experience involves reflection, [that is] reconsidering past events, making sense of our actions, and possibly finding new ways of behaving at future events...[R]eflection is a necessary precursor to effective action and... learning from experience can be enhanced by deliberate attention to this relationship” (McGill and Beaty, 1992, p.13).

Here, then, is another learner-centered approach to education that explicitly brings to the fore the prior real-life experience of the participants as a resource. As with transformative learning and experiential learning, reflection on past experience is a central feature of action learning; reflection is expected to reveal insights that can guide more effective action in the future. The focus of the learning with all these theories is on real issues and problems that demand resolution in participants’ lives. In the context of an action learning ‘set,’ with the support of a group of colleagues, “The intention to act as a result of the learning is the rationale for the group discussion rather than a by-product of it. The action learning set meetings end with each individual having clear and specific action points which they have committed themselves to as a result of the meeting” (ibid, p. 19). This sure sounds a lot like Mezirow’s “action plan.”

Morgan and Ramirez (1983), in an intelligent article that embellishes action learning by describing it as “a holographic metaphor for guiding social change,” state:

Action learning seeks to create a stance toward the world that is proactive rather than reactive...encouraging individuals to examine and reexamine familiar situations to see what *possible* directions for development emerge. Through these means it seeks to encourage people to be more proactive in the realizations of more desirable futures...An action learning project thus places a great deal of emphasis upon the generation of open-ended systems of inquiry that have the capacity to create new ways of seeing and acting. From a social science perspective this involves an appreciation of the different paradigms, worldviews, or mindscapes that are available for understanding and interpreting problematic situations (pp. 15-16).

One can imagine the value of including an action learning perspective in an EDE scenario: The learning group or community becomes a ‘set’ of colleagues or peers with which to discuss pressing issues or problems in one’s ecovillage project. Based on the learning that has transpired as a result of exposure to new knowledge followed by reflection on how that knowledge may be practically applied, a commitment is made, with the support of the group, to follow-up or consummate the learning with specific, concrete

action projects for the benefit of oneself and one's community. Only after the completion of such action projects can it be said that the learning has been fully integrated and the class is finally over.

In conclusion, the Ecovillage Design Education is being introduced to the world at this time to meet the growing demand for practical, useful, applicable education in this emerging field of Ecovillage Design. The curriculum designed by the GEN education development team can be described as wholistic, integrated, and holographic – attempting to encompass the full range of considerations in a comprehensive introduction to Ecovillage Design. There already exist well-articulated and practiced educational theories – transformative learning, experiential learning, and action learning – which have similarities amongst themselves, which closely align with the goals, purposes, and format of the EDE, and whose study could prove to be extremely valuable for facilitators of the EDE. In my opinion, the most beneficial function of all these educations is to instill in the participants a positive sense of life purpose – encouraging them to accept full responsibility for the creation of their own realities, for shaping their worlds as they see fit instead of passively accepting what has been handed down to them. Of course, those students attracted to the Ecovillage Design Education, in particular, will be anticipating the realization and actualization of these aims within the colorful, nature-encoded, planetary-healing context of the 'ecovillage.'

Here, then, are some explicit guidelines for facilitators (or provocateurs) creating holistic, integrated, student-centered learning activities based on the theoretical framework surveyed in this paper:

- ✘ Actively foster healthy group interaction and learner networks.
- ✘ Encourage discourse within the learning community, skillfully using conflict to demonstrate the validity of diverse perspectives.
- ✘ Engage students in a dialogic process of inquiry.
- ✘ Provide ample time for critical self-reflection. Build on the relationship between reflection and action, recognizing that reflection is a necessary precursor to effective action.
- ✘ Support learner action by assisting in the development of follow-up action plans.
- ✘ Expand and renew content, and customize delivery, to accommodate or re-present the students' view of the world.
- ✘ Present paradigm shifts in students' worldview as problems to be solved.

- ✘ Follow the presentation of theory with opportunities to apply that theory.
- ✘ Continually direct learning toward solving real issues and real problems in peoples' lives.
- ✘ Balance the dynamic interplay between apprehension (perceived through the senses) and comprehension (articulating subjective perceptions to the group).
- ✘ Use students' life experiences as resources for learning.
- ✘ Combine experience, perception, cognition, and behavior into activities, remembering that learning involves the integrated functioning of the total organism – thinking, feeling, perceiving, and behaving.
- ✘ Provide opportunities for each of these: concrete experience, reflective observation, abstract conceptualization, and active experimentation.
- ✘ Encourage open-ended inquiry as a means to envision possible directions for development, with the capacity for creating new ways of seeing and acting in the world.
- ✘ Give personal advice only when asked for.

Addendum

In September, 2005, the educational initiative described in this paper was incorporated as a Scottish Charitable Trust with the name "Gaia Education." Details and ongoing work can be found at www.gaiameducation.org

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